

SOCIAL EXPENDITURE IN CHILE: ITS ORGANIZATION AND REGIONAL IMPACT  
IN THE LATE 1980'S

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## ABSTRACT

The thesis aims to analyse how Social Services are organised and financed in Chile, with a special focus on the regional impact of social policies.

In the first place, the study concentrates on describing the procedures and strategies that each social ministry or sector, (Health, Education, Housing, Social Security) has for financing its programmes. This makes possible for the first time in the Chilean case an intersectoral view of the organization of social services.

In order to address this issue it was necessary to investigate the formal sectoral organization and its functions. Special emphasis is given to the analysis of the ministerial budgeting and planning procedures discussing its links and problems. The study also gauges the discretionary powers that the regional social services have; this was approached through the analysis of different models of decentralization and government functions. To obtain information in this area, interviews were undertaken with social sector planning and budgeting specialists.

Since 1975, the Government has advocated a new "regionalization" policy, aimed at decentralising the power of national Government, eliminating regional inequalities, and reducing poverty.

In the second place, therefore, the study analyses the patterns of the regional allocation of social expenditures testing its relation to regional well-being, urbanization and needs. To address this issue it was necessary to define some standard criteria to allocate the actual social expenditure figures. However, to obtain the social expenditure figures it was necessary to study the inter- and intra-ministerial transfers and price indexes. Estimates of regional social expenditures per capita are produced for the first time for Chile; they cast light on the present pattern of regional allocation of social expenditures. These figures are then compared with regional social indicators of need in order to determine the relationship between these variables. The results are presented and conclusions drawn.

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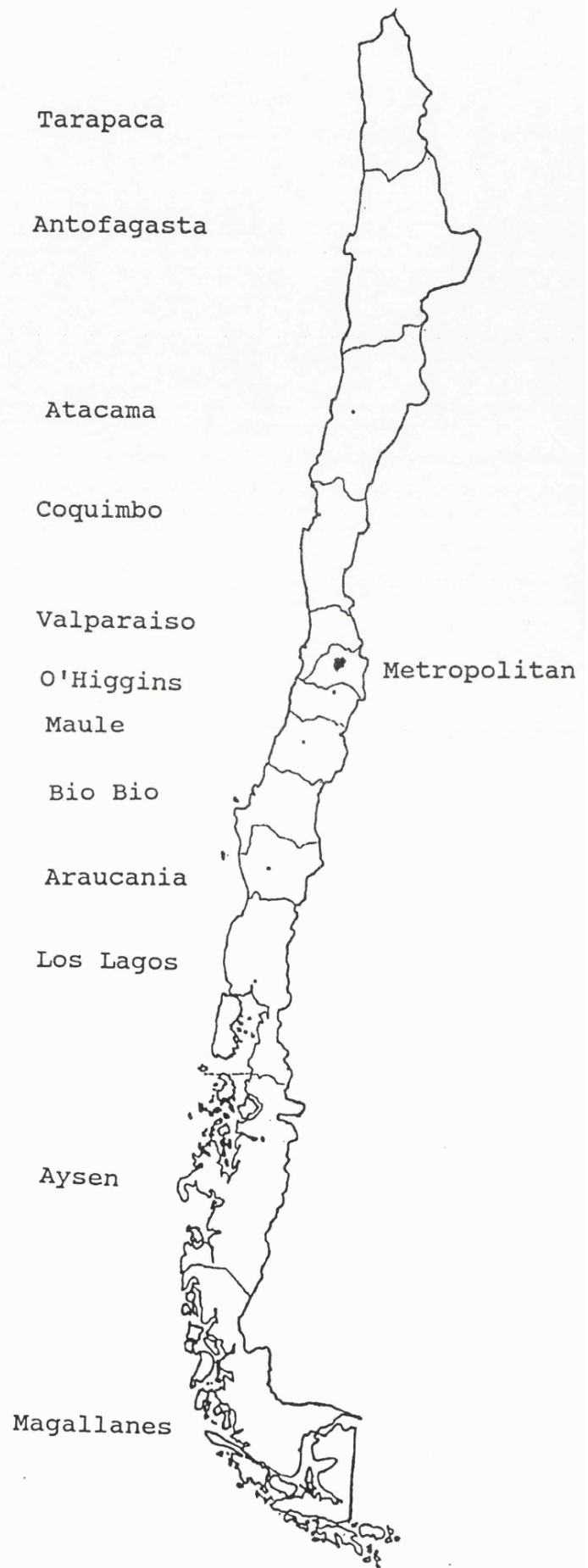


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MAP OF CHILE



## INTRODUCTION

During the late nineteenth century, soon after the Chilean independence from the Spanish Crown, the country experienced a rapid development of the nitrate and other mining industries. One of the most important effects of this early export oriented growth was a rapid development of the urban population and the organization of the labour force. These two factors are often quoted as the determinant factors leading to the creation of the first social services. In fact, by the end of the century some organized pressure groups such as railroad workers or civil servants had obtained special benefits from the government such as pension funds and health insurance schemes.

By the 1950's the state was financing a variety of social programmes covering a significant proportion of the population but with significant differences in the levels of provision. Some groups of population acquired considerable services and benefits whereas others, specially the poor rural workers, obtained very few of them. In sum, it can be said that the early developments of the social services in Chile cannot be clearly conceived as a conscious and global government effort to increase the well-being of the families, but rather as isolated pieces of legislation resulting from specific pressures or influences.

It was not until the 1960's that governments begin to really take the initiative in the organization of the social services and define an overall strategy for their development. At this stage, social planning started to be approached in a broader view encompassing additional issues such as the necessity of stopping the increasing regional inequalities or the unnecessary growth of cities.

As a result of the specific developments of the social services in Chile there are some interesting accounts about the evolution of them. But, they have usually taken a rather sectoral approach describing the details of the origins and progress of each programme, not considering the common aspects of them. Moreover, earlier research has been concentrated mostly on

historical reviews or specialised sectoral studies, about the nature and levels of benefits provided on each sector. This has been an important constraint for planning and assessing the impact that this important area of government has had.

Therefore, the first main goal of the present research is to analyse how the social services are organized and financed in Chile. This issue is particularly relevant in the light of the important transformations that the social services experienced in the early 1980's. This study concentrates on four sectors of social services: health, education, housing and social security.

In other words, we analyse the organization and finance of each social sector using the same conceptual and methodological framework. As a result of this it is possible to discuss the common and specific features of each of them and study the transformations that have been imposed on them.

In order to pursue this main objective it is necessary to describe the institutional and functional organization of each of the social sectors or ministries. In addition to this, a special effort was made to understand the planning and budgeting procedures in each of them. The purpose of this exercise is to assess the existing types of links between the financial and organizational aspects of the social services.

An additional issue discussed in pursuit of this first objective is the discretionary powers that the regions have in relation to the management of social service resources and decisions. We discuss the discretionary levels that each of the social services and their agencies enjoy in relation to the three forms of government intervention: regulation, finance and production. We also attempt to locate the services or their agencies along the decentralization continuum.

This issue is approached in a qualitative and exploratory way. The information to address this issue was obtained through a number of semi-structured interviews with planning and budgetary specialists in each of the social sectors and the Budget Office.

A second main goal of the research is to assess the redistributive impact of social programmes. This issue is considered in the research as a result of the government strategy to target social programmes towards the poor. Therefore, our aim is to evaluate to what extent the government is fulfilling this important strategy.

The third main goal is to explore the regional allocation of social expenditures. The regionalization and decentralization efforts initiated by the Chilean government in 1975 have been directed not only at giving more discretionary powers to the regions but also at redressing the historical regional inequalities and allocating proportionally more expenditures to those regions showing relative higher levels of basic needs insatisfaction.

The study defines three hypotheses concerning the patterns of regional allocation of social expenditures based on earlier studies in Latin America. While governments attempt to channel their resources to those regions showing higher levels of unmet basic needs, often in reality more regressive patterns are found. Rich regions tend to demand and obtain higher levels of social expenditure per capita or social expenditures are concentrated in urban and more industrialized regions.

In order to test alternative hypotheses it is necessary to estimate the regional social expenditures. This is done by allocating the actual social services expenditures according to four standard criteria of allocation.

The research is organized in four parts. Part One is related to the theoretical background of the research. Chapter One is a bibliographical review of the most important theoretical and applied studies relating to the present research; it includes a discussion about the concepts of planning and social planning, an introduction to budgeting and other elementary public finance concepts and it concludes with a discussion of the concept of decentralization and its relation to social policy. Chapter Two

gives a background to social planning in Chile, including an historical review of state involvement in the social sectors, and a discussion of the present organization of the public sector. The chapter ends with a review of the regional aspects of social policies.

Part Two is concerned with the definition of the research aims. Chapter Three contains the definition of the main topic of research. Chapter Four dicusses the most important methodological aspects involved in tackling the research aims.

Part Three contains the analysis of each sectors involved in the study: Chapter Five: Health, Chapter Six: Education, Chapter Seven: Housing and Chapter Eight: Social Security and Assistance Programmes. Each of the sectoral chapters is approached considering the three main issues of the research; the finance and organization, the redistributive effects, and the regional impact of social expenditures.

Finally Part Four comprises a single chapter with the conclusions of the study. Chapter Nine is organized in a similar form to the sectoral chapters bringing together the earlier findings; the chapter then reviews the research carried out and discusses future research and finally dicusses the implications of the research for regional polic\_y and the social services.

## CHAPTER ONE

### SOCIAL POLICY FINANCE AND ITS REGIONAL IMPACT: An approach to the concepts

#### 1.1. INTRODUCTION

This chapter intends to provide a conceptual background to this research; many of the issues raised in this review will be considered as areas to be analysed in respect to the Chilean case. At the same time, some of the questions raised in the literature may be considered as hypotheses to be tested in the present study.

The first section of this chapter provides the basic approach to planning and social policy, enabling to better understand the Chilean planning situation. It will also help us to compare the Chilean situation with the theory of planning and the practice of planning in Latin America.

Section 1.2. is divided into two parts. The first part reviews the main planning traditions described in the literature. A special effort was made in trying to delineate, for each of the traditions, the major strengths and weaknesses. The traditions reviewed are: Rational Comprehensive Approach, Incrementalist Approach, Mixed Scanning, Transactive Planning, Advocacy Planning and Radical Planning. In this section, we also discuss three alternative approaches to Social Planning: Social Planning as Social Service Planning, as Social Developmental Planning and as Social Welfare Planning and Community Organization. This first part concludes by defining Social Planning as a process of policy formulation, plan design, implementation and evaluation which attempts to meet basic human needs, solve social policy problems and promote Social Justice.

The second part of this section is dedicated to a review of the planning styles of the Latin American countries, and the main problems that the practice of social planning has in that continent.



Section 1.3. reviews the main features of the budgetary process. Budgeting is approached here, not as an accounting or financial subject, but rather as a means for policy implementation (Goode 1983) or as the link of social policy to social service delivery (Glennerster 1983). Therefore, we discuss the type of problems that may arise throughout the budgetary process, in each of its phases, (formulation, authorisation, implementation and execution). We also consider how these problems may affect the finance of a social service. This section offers us an important framework for the analysis of social service budgets in Chile.

Section 1.4. discusses some works in the area of Fiscal Incidence Studies. This involves questions such as, what is the net effect of government intervention, how much do persons or income brackets pay in taxes, and how much is received in benefits from government expenditures. Drawing from some specific fiscal incidence studies for Latin America and Chile, we establish some interesting methodological approaches for the analysis of government expenditures, which will be of great use in the subsequent chapters.

From the findings of the studies described in this section, some issues will be taken as hypotheses to be tested in the present research.

Finally, section 1.5. introduces the regional dimension of social policies. It begins, in the first part, by presenting the concept of decentralization and its alternative meanings and uses. The second part is dedicated to some more technical aspects related to the treatment of national revenues and expenditures in a regional dimension, (This has been called regional accounting). Finally, we conclude this section by describing the Chilean studies in this area.

## 1.2. PLANNING THEORY AND THE PRACTICE OF PLANNING IN LATIN AMERICA

### A. Planning and Social Planning Models and Definitions

#### A.1. Review of the Main Planning Traditions

Planning does not occur in a vacuum. It is related to the philosophy of the government in office. Although the majority of the definitions are elaborated without attachment to an ideology, it is the way in which a government executes its mandate which determines ultimately the planning approach that is chosen.

The rise of planning in the western world started after the great depression of the thirties and the second world war, although the first attempts at planning were made in the Soviet Union with its five year plan in 1929. Planning is now understood as a deliberate attempt to shape economic phenomena by public authorities.

We may begin this section by reviewing some different definitions of planning given by different authors in the last twenty years:

- Planning is the process by which an actor selects a course of action for the attainment of his ends. (Banfield 1959).
- Planning is a process for determining appropriate future action through a sequence of choices. (Davidoff and Reiner 1962).
- Planning is the application of the scientific method to policy making. (Faludi 1976).
- Planning is defined as foresight in formulating and implementing programs and priorities. (Hudson 1979).

This summary shows that there is a common point of departure in all the definitions given, which is related to systematic analysis for the attainment of certain outcomes.

However, despite the common background of rationalism in each of the definitions quoted, there are important differences in the practice of planning and the way the planning problems are solved. Therefore, we need to have a more practical view of how planning is approached in reality; we will do this through a review of the main planning traditions .

In this short review, we will try to answer for each of the traditions, the following questions: What kind of activity is planning?, What do planners do?, How do planners do this?, What are the main criticisms of each tradition?.

### 1. Rational Comprehensive Approach

The Rational Comprehensive Approach is the most dominant tradition, and the point of departure for most planning traditions. It perceives planning as an orderly, logical progression from diagnosis to action based upon analysis of the relevant theories and facts (Gilbert and Specht 1977). The designation of the best plan is primarily a technical problem that will be solved through careful analysis of the relevant data. Planning is then a technical activity which applies the "scientific method" to the achievement of aims.

According to Hudson (1979), the rational or synoptic tradition has, four elements:

- Goal setting
- Identification of policy alternatives
- Evaluation of means against ends
- Implementation of decisions

Traditionally goals or objectives are set at the inception of the planning process. They are a part of the planners ideals or preconceptions and his knowledge of the relevant aspects of social reality. Then, for the identification of policy alternatives, resources and obstacles are weighed against the social goals; in this sense planning seeks to satisfy social needs. However, needs represent the views of what an individual or group require, therefore there is an implicit value judgement

embodied in this step. The evaluation of means against ends is done from a systems viewpoint, using conceptual or mathematical models relating objectives to resources and constraints, with heavy reliance on quantitative analysis. Such evaluation procedures include cost benefit analysis and models from operation research such as deterministic or probabilistic models.

One of the main advantages of the Rational Comprehensive Approach is its transparency of procedures, which are clearly stated and therefore able to be discussed. Another bonus of rational comprehesiveness lies in the feasibility of the model, which is oriented always to produce an outcome, which in some cases is only the plan. It is perhaps the fact of relying so deeply on quantitative models which gives to the Rational Comprehensive Approach its feasibility; in this way this tradition avoids many of the complexities produced by clashes of interests.

With regards to the weaknesses of the rational approach, there are a number of problems. The first one is the problem of knowledge, as it has been named by Friedman and Hudson (1974). It derives from the fact that decision makers do not possess the assets or the time to collect the information required for a perfectly rational choice. Many of the decisions to be made about specific circumstances and information are isolated situations, and this implies judgements that are essentially subjective. So, despite the <sup>p</sup>arent rationality, values are nevertheless present. Therefore many of the social models used for estimating the impact of certain decisions have a limited and partial validity.

In the second place, because of the heavy reliance on quantitative methods, it usually does not include sufficient refe\_rences to other realities such as political concerns, cultural and psyc<sup>h</sup>ological considerations. Thus, the human dimension is considered only partially. Finally, this approach is criticised for its bias toward central control in the definition of problems and solutions, in the evaluation of alternatives and the implementation of decisions.

## 2. Incrementalist Approach

The Incrementalist Approach derives principally from a series of criticisms of comprehensive rationality, mainly its insensitivity to existing institutional performance capabilities and its failure to appreciate the cognitive limits of decision makers (Hudson 1979).

The main advocate of the science of muddling through, or disjointed incrementalism, is Lindblom, who argues that the rational comprehensive method is impossible, since it cannot be practiced except for relatively simple problems, and even then in a modified way.

The chief principles of the model are summarized as follows (Lindblom 1977):

1. Social objectives do not always carry the same relative values, depending on the circumstances. The administrator must choose between policies in which values are combined in different ways; he cannot first clarify his values and then choose among policies. The value problem is always a problem of adjustment at a margin, there is no way to state marginal objectives or values except in terms of particular policies. Therefore the administrator focuses his attention on marginal or incremental values, he does not find general formulation of objectives very helpful.

2. In the incrementalist method the analysis of the relationship between means and ends is absent. Here means and ends are simultaneously chosen.

3. The test of a good policy is whether all the analysts have agreed on it. This agreement ought to be on the policy itself, which remains possible even when agreement on values is not.

4. In the incremental approach, simplification is achieved in two principal ways:

- i. Firstly it is achieved through the limitation of policy

comparisons of those policies that differ in a relatively small degree to the policies presently in effect. It is necessary only to study those respects in which the proposed alternative and its consequences differ from the status-quo.

ii. Simplification is also achieved through the practice of ignoring important possible consequences of possible policies, as well as the values attached to the neglected consequences. The virtue of this strategy is that every important interest or value has its watchdog, and these watchdogs protect the interest in their jurisdiction.

5. Policy-making is a process of successive approximation to some desired objectives in which what is desired itself continues to change under reconsideration.

The main advantage of incremental planning is its simplicity and reliability. Although it comprises a complex process of bargaining for the "marginal additions", this is not far from what politicians and decision makers do anyway; this dialogue and bargaining among plural interests also helps to find where public interest lies.

Despite the practical and attractive approach to decision making presented in incremental planning it has been criticized because it does not apply to fundamental decisions, arising from other areas not included in the chain of successive policy steps leading up to the present. While it is true that incremental decisions outnumber fundamental ones, the significance of the latter for the society is not expressed only in the number of occurrence. Therefore it is a mistake to consider non incremental decisions as exceptions, although there always is a doubt of what is fundamental and what is a common decision to make.

### 3. Mixed Scanning

The third planning model to be reviewed , Mixed Scanning, is a response to the extreme approaches presented above and combines elements of both.

In a mixed scanning strategy, scanning may proceed in several levels with varying degrees of detail and coverage. But it seems most effective to include an all encompassing level, which covers all parts, leaving no major part unconsidered, and a highly detailed level. In this way, the option selected in the first level can be explored as fully as is feasible (Etzioni 1977).

In this approach it is important to differentiate between two types of decisions:

- i. Fundamental decisions are made by exploring the main alternatives in relation to the goals established. The aim here is an overview, so that details and specifications are omitted, in contrast to the rational approach.
- ii. Incremental decisions are made in the contexts set by fundamental decisions.

So, each of the two elements helps to reduce the effects of the particular shortcomings of the other.

Mixed scanning is characterized by its flexibility. Etzioni suggested that the strategy followed is determined neither by values nor by information but by the positions of and power relations among decision makers. When deciding about strategy, it is also important to take account of the environment. For example, an incremental approach would be adequate in a stable situation and where the decisions were made from the start. This approach is less acceptable in rapidly changing conditions and when the initial course was wrong. Another further consideration is the capacity the actor has for mobilising power; the greater the control capacities the more encompassing scanning the actor can undertake, which produces a greater effectiveness in its decision making.

In summary, in mixed scanning, planning is not a technical matter, as was the case in the rational comprehensive method and incrementalism. Planning here is acknowledged to be influenced by outside factors such as environment or planners' capacity.

#### 4. Transactive Planning

Transactive Planning belongs to a new paradigm in planning originated in the early seventies, which put man's psycho-social development as a central focus of planning (Friedman and Hudson 1974). The new paradigm rejects the bureaucratic model of organization in which traditional planning had been moulded. Planning is in this case understood as a form of social learning.

In the transactive approach, planning is not carried out in relation to anonymous beneficiaries, but in a face to face consultation with people affected by decisions. The traditional system of exchanging documents has proven to be unsuccessful; there is a barrier between planner and client, the planner has a highly abstract language, whereas the client has a simple and experience related vocabulary. Transactive planning tries to break this communication barrier with a continuous series of personal transactions between planner and clients.

The main principles of transactive planning are explained by Friedmann (1977), using the taoist philosophy:

1. All systems obey their own laws of internal change.

The planner must respect the laws of transformation and be mindful of his limited abilities to control the flow of events. This principle applies also to mutual learning, the more the planner assimilates the client's knowledge, the greater the complexity of which he is aware.

2. The planner needs to use the natural forces at work in society to produce the desired results.

This means selective intervention and methods of indirect or field control.

3. Under conditions of mutual learning, the planner appears to be doing nothing; he learns, and in learning he imparts new knowledge.

4. Mutual learning cannot be compelled; the planner cannot accelerate the process of understanding and behavioural change.



5. In mutual learning, the property of learning is held in common trust: no one is the master, each has something to give and something to receive.

In summary, the main achievements of transactive planning are its special attention to psychological and institutional processes facilitating mutual learning, and its potentiality to really focus on public interest. The transactive approach is not applicable to every situation; it is inappropriate where expertise carries sufficient authority to act without the benefit of mutual learning.

## 5. Advocacy Planning

Advocacy Planning also does not form part of the traditional planning paradigm. It derives from adversary procedures modelled upon the legal profession, usually applied to defend the interests of the weak against the strong.

Within the planning profession in general, there are some attempts to reduce the importance of attitudes and values, because it seems that the major public questions are themselves matters of choice amongst technical methods and solutions. The practice of advocacy planning invites the examination and debate of political and social values. Davidoff (1977) suggested that appropriate planning action cannot be prescribed from a position of value neutrality, because prescriptions are based on desired objectives. Therefore, the planner should not only explain the values underlying his prescriptions, but should be an advocate of his propositions.

Another important feature of advocacy planning is the proposition of alternative plans to the "official one", thus breaking the monopoly of the "unitary plan", planning will be stimulated in a number of ways (Davidoff 1977):

- The existence of alternative plans will create a better informed public.
- The public agency will have to compete with other planning

groups to win support.

- Those in opposition will be forced to produce plans, rather than simply criticizing the official propositions.

The advocate's plan will have the features of a legal brief, proposing specific substantive solutions:

- It will present the facts and reasons supporting one set of proposals.
- It will show the values underlying the plans, which will help the process of evaluating the plan.

In summary, advocacy planning produced a shift in the formulation of social policy from backroom negotiations out into the open; this constitutes one of the key elements of the advocacy movement.

## 6. Radical Planning

Radical Planning shares with advocacy planning the aim of promoting a socially just type of society. The difference lies in the analysis of capitalist societies and the rejection of ameliorative policies as mechanisms of long-term structural change.

Planning according to this approach is focused less on ad hoc problem solving, and more on the theory of the state which determines the structure and evolution of social problems. State planning is seen by many marxists as assisting capital to collect profits; general social welfare programmes are interpreted as either serving the reproduction of needs of the capitalists or as maintaining support for the system as a whole. Planning can only serve the interests of the working class if it possesses sufficient political power or pressure to obtain what it wants.

It is not the purpose of this introductory section to describe in detail the different schools of thought in planning. Any list of planning traditions and models could be extended almost indefinitely. Those presented above are probably the most

important traditions, and therefore sufficient to show the variety of concerns that planners address and the range of conceptual tools they bring to their tasks. In listing the planning traditions as totally separate from one another, it was meant to facilitate an understanding of them. This could lead to the idea that most practising planners are concerned with their school of thought only, but the blending of planning styles more commonly occurs in the practice of planning than an adherence exclusively to a single style. In this regard, Cartwright (1977) has suggested that rather than different planning styles or blends of styles, there are different types of planning problems, distinguishable in relation to the planner's perception of them and the consequent strategy to be followed. He classifies planning problems in relation to the number of variables entailed in the definition of the problem and in relation to the nature of those variables (calculable or incalculables), arriving at a categorization of four types of problems ranging from simple problems to metaproblems. For each type of problem there is a strategy that better suits it, for example: in simple problems it is possible to use the rational comprehensive method, since there are a defined number of variables, all of which are calculable; whereas in the case of metaproblems, with an unspecified number of variables, the majority of which are incalculable, the only possible alternative is incrementalism.

To summarize this section, it is important to consider that to define the planning problem, which is the planner's main task, the planner must keep in mind two considerations: i) what role the government in office gives to planning, and ii) according to his or his client's perception of the problem, he must define a strategy to tackle it, which will probably use elements from more than one of the planning traditions.

With this brief background of planning theory, we now move to a more specialised field of planning, i.e. social planning.

## A.2. Approaches to Social Planning

Let us begin by mentioning that the word social has at least three main uses. Firstly, social as part of the natural characteristics of man, living in company and organized into communities; in this sense social planning can be defined as planning that involves people (societal planning), as opposed to planning that involves things, or "physical" planning. Secondly, social can be equated with sociability, meaning companionship, friendship; social planning is then the provision of certain resources to promote sociability, such as youth centers, playgrounds, etc. Finally, in the context of applied Social Sciences and Administration, social is usually understood as an antonymus of economic; in this narrow sense social activities are those associated with the general quality of human life, in opposition to other activities such as monetary matters, production or physical output.

We prefer here to use the term social planning in its broader meaning, that is, as societal planning, which includes a sense of both social planning as opposed to economic planning, and of sociability. Furthermore, it is expected that this approach will make clear that there is no competition between economic and social aims, since all ends of planning are social, and economic development and planning are means for obtaining these ends. As Abel-smith (1966,10) has argued, why does a society need economic growth if it is not to promote social rather than economic ends. This conception of social ends as enveloping economic ends is more clear in developing countries, whereas in the developed world the two remain fragmented.

Before giving the specific definition of social planning to be used in the rest of this work, it is relevant to give a short enumeration of the ways in which the term social planning has been used in the literature.

## 1.- Social Planning as Social Service Planning

The development of social service planning emerged soon after the second world war in Britain and other developed countries. At that time social services began to plan for reconstruction, following the instructions of the central government. But it was with the introduction of the Public Expenditure Survey Committee (PESC), in 1961, that each department was forced by the Treasury to justify their bids for resources with complete forecasts of the costs and demands on their services, thus generating a medium term planning system, which spread from the central departments to the regional and local divisions. In this background social planning began to be understood in two ways:

i) Firstly, it was understood as the coordination of existing social services, rather than a response to day-to-day pressures. The need for coordination was becoming more acute since there was an increasing fragmentation of the planning machinery and service delivery. Of particular importance in social service planning was coordination between the planning of strategic and operational priorities, (Walker 1984,9), both concerned with the allocation of resources, the former overall allocation, the latter specific allocation.

Social service coordination takes place in two dimensions:

- Each social service must elaborate its budget and programmes in relation to the treasury's requirements, in order to produce a coordinated action.
- An institution must be created to design the overall strategic social priorities, the framework of ideas, and coordinate between social services.

ii) Social planning is also seen as a variety of rationing procedures which are fundamental to the achievement of social priorities. As Glennerster (1983,3) has pointed out, "those procedures are not automatically incremental, ..... they imply some conscious choice of alternatives or priorities. Social planning as rationing tends towards higher rationality, visibility and predictability of the decisions taken".

## 2.- Social Planning as Social Developmental Planning:

This approach to social planning is linked to developing countries. In such countries the role of the state in the provision of social welfare is small, in comparison to developed countries. There are some reasons for this. Many of the services are provided through the traditional social structure, (for example: care of the mentally handicapped within the family). The type of social problems characteristic of industrialised economies are different than those of developing countries, for example those associated with the way of living ("urban stress"), or the demographic structure (young population needs less health care). Although some of the features of industrialized countries can be found in developing countries, with high urbanization, etc, the development and demand for social welfare services is in relative terms smaller. In this case, therefore, social planning as a discipline cannot emerge from the need to coordinate or ration those services which are less organized. The rise of social planning in the third world can be explained mainly by the move to broaden the scope of development planning by placing much more emphasis on social change and the achievement of social goals (Conyers 1982,10).

Development planning is conceived as the conscious governmental attempt to increase its rate of economic and social progress. Planners in the third world realized that plans were unlikely to be implemented successfully unless there was a full consideration of "non economic" variables, and especially, social aspects should be regarded as justifiable ends in themselves. These two elements are characteristic of third world developmental planning.

As in the case of planning as coordination of social services, there are two approaches to social developmental planning. These are sectoral and unified. The former is related to each social service only and is not very much concerned with social development as a whole, whereas the latter recognizes the interdependence of social and economic measures. Despite this academic distinction, most common in social developmental

planning is the synthesis of the two approaches. Hardiman and Midgley have defined social planning as "a process of policy formulation, plan design and implementation, which attempts to meet basic human needs, solve specific social problems and bring about greater equity and social justice" (1982,22).

### 3.- Social Planning as Social Welfare Planning and Community Organization

Social welfare in broad terms, includes all the activities related with social work, such as day care services, child welfare services, care of the aged, rehabilitation services for the disabled or for offenders, group activities for young people, etc. Therefore, social planning is seen as planning for the types of services listed. At the outset, all these activities were undertaken by philanthropic organizations, but with the involvement of social workers and their subsequent professionalization, planning procedures were introduced for the achievement of these goals.

Community organization attempts to increase community participation and strengthen community identity, by providing opportunities for local citizens to become involved in welfare activities. In this sense, social planning as community organization is aimed to improve the delivery of social work services to the local community. Again, social planning is seen as planning for the type of activities just described. This is the way in which social planning has been understood in the North American social work literature.

The term social welfare planning is also sometimes used to describe the coordination of local voluntary welfare activities.

Thus far we have described the three main interpretations of social planning separately; let us briefly mention some of their common features. The models preferred in these social planning traditions are rational comprehensive and incrementalism. In the case of social welfare planning it is true that the synoptic approach has been successfully used, but social workers have

proposed the use of advocacy planning, which attempts to advocate and promote the interests of the disadvantaged members of the community.

Another important common interest of the different interpretations of social planning is the promotion of geographical equity, since every social priority determined and implemented has some territorial implications.

Finally, it should be noted that despite having described separately three interpretations of social planning, it is clear that all of them are part of the same aim: the determination of social priorities. All the interpretations are subsets of a broader one: social developmental planning.

This section concludes with the definition of social planning that will be used throughout the work. It is elaborated from the previous definitions given by Glennerster (1981), Midgley and Hardiman (1982) and Walker (1984). Social planning is a process of policy formulation, plan design, implementation and evaluation which attempts to meet basic human needs, solve social policy problems and promote social justice.



## B. Planning and Social Planning in Latin America

This section is based principally on the reports prepared by, Economic Commission for Latin America (CEPAL- UN) and the Latin American Institute for Economic and Social Planning (ILPES) concerning the present situation of planning in Latin America (L.A.)<sup>(1)</sup>. The information was gathered as a special request of the 2nd. conference of L.A. Ministers and Chiefs of Planning Offices (1978) and presented to the 3rd. conference in 1980 for revision and updating.

The report envisages planning rather as a process than a mere blue print; and so planning involves a variety of institutions and sectors, and therefore is beyond a technical exercise or theory. It is a practice that evolves in relation to the new objectives of development and structural transformations.

Although the report gave no details about the operational planning models most used in L.A., it is possible to conclude from its analysis that the whole conception of planning in the region is derived from the rational comprehensive model in theoretical terms and incrementalism in practice.

### Planning in Latin America

The planning styles were defined in relation to the variables appearing in table 1.1.

.....  
1.  
Estado actual de la Planificación en América Latina y el Caribe.  
Cuadernos del ILPES No 28  
CEPAL - ILPES N.U. 1982

TABLE 1.1.

PLANNING STYLES IN LATIN AMERICA

| Plan. Style               | Nat. Proj. of Development   | Notion of Planning                                 |
|---------------------------|-----------------------------|--|
| -----                     |                             |  |
| FREE MARKET               |                             |  |
| STYLE 1                   | *Subsidiary State           | Subsidiary   |
|                           | Subsidiary Social Policy    | Comprehensive or<br>proj. and progs.               |
|                           | Wide external openness      | Normative  |
| -----                     |                             |  |
| PARTIALLY REFORMED MARKET |                             |  |
| STYLE 2                   | Market partially corrected  | Regulatory<br>Comprehensive or<br>proj. and progs. |
|                           | Complementary Social Pols.  | Normative  |
|                           | Regulated external openness |  |
| -----                     |                             |  |
| REGULATED MARKET          |                             |  |
| STYLE 3                   | Regulated market            | Regulatory   |
|                           | Clear pursuit of Soc.Pol.   | Comprehensive                                      |
|                           | Restricted exter.openess    | Normative or<br>Adaptative                         |
| -----                     |                             |  |
| CENTRAL PLANNED           |                             |  |
| STYLE 4                   | State resource Allocation   | Centralised<br>Comprehensive                       |
|                           | Pre-eminence of Soc. goals  | Adaptative   |
| -----                     |                             |  |

SOURCE: Estado actual Plan. en A. L. pp.9; adapted

\* Subsidiary policy means working through subsidies in a sporadic form, when the need appears, rather than a continuous subsidiary situation.

PLANNING STYLES OF LATIN AMERICAN COUNTRIES

1. The First Style is featured by a state that has a subsidiary role in the allocation of resources, the market is the first mechanism for it, and it is recognised as the most efficient device. The economy is widely open to foreign investment,

therefore external agencies also influence the national plans. In the social context, this planning style is featured by a prominence of economic growth over other policy objectives, though it does recognize certain specific areas, such as poverty, on which the state must to intervene.

In the case of Argentina, the government declares that "All public sector activities should be to enhance the market forces as the engine of the general activity" (ILPES, 1982:10). The Chilean government advocates the principle of subsidiarity in many of its plans: "The state field of action is constrained and limited to those functions that because of their nature or interdependence cannot be carried out adequately by the private sector" (ILPES, 1982:10).

In this style there is a clear correspondence between growth and development. This is clearly stated in the Uruguayan National Plan of Development (1973-77).

The approach to planning in this style is that of national indicative plans of development, which at times is complemented by sectoral operational plans. A radical approach in this area was taken by Argentina in acknowledging the inexistence of national planning and recognizing sectoral planning as the only one in use (ILPES, 1982:20).

During the early seventies Colombia and Brazil also adhered to this style.

2. In the Second Style of "partially reformed market" there is a joint planning effort by private agents as well as the state. It protects private initiative but also recognises the necessity of promoting and implementing some actions to offset private insufficiencies, especially in relation to the social objectives of the country. Within the social context, in this style the state plays a more active role, through redistributive programmes to solve some specific problems.

This style has been used by a variety of countries, with different population sizes and stages of development; they can be

presented in three groups:

The majority of the Caribbean countries are included in one group of which the components have a common feature: The planning system is dedicated almost exclusively to the formulation of projects and programmes. This is part of the development plans of Barbados and the Dominican Republic.

Another group of countries have the common feature of a potential desire to have a comprehensive type of planning, but in practice it is basically the formulation of projects and programmes again. The objectives of the Salvadorean plan are achieved through the execution of fifty one strategic programmes, the plan defines the responsibilities of each institution and coordinates and assess their action.

Finally, we can find countries in a more developed stage, such as Colombia which in its National Integration Plan for 1979-82 proclaimed that the objective of economic growth is the improvement of the quality of life, which is a mean for the moral and spiritual improvement of the community. The second development plan of Brasil gives some autonomy to the social objectives and the instruments for achieving them, but it defines the total expenditure to be spent in different areas of action. Venezuela is also included in this group.

3. The Regulated Market Style estimates that the overcoming of the big development problems requires some structural changes, which is the only way for obtaining a more equal society. In this case the whole planning is defined in relation to social goals. There are some variations within this style in respect to the state property of productive means.

The Mexican plan for 1980-82 was aimed to transform the economic growth into social development, which was part of the national project for social transformation. The Peruvian plan was very similar: "development is conceived as a planned process for structural transformation and the enhancement of the productive capacity aimed to overcome the socio-economic disequilibriums and external dependency" (ILPES,1982:24). Costa Rica considered

that the objectives of social equity not only included the distribution of income but also the distribution of wealth through new forms of property. Similar objectives were found in the reconstruction plan of Nicaragua and Jamaica.

4. Finally, The Fourth Style is characterised as promoting a national development of a socialist type, so this style was limited to Cuba and Nicaragua (During the Sandinista Government); "the planning of the national economy, based in the social property of the means of production, is the form by which the socialist state directs in effective form the development of the national economy. The improvement of the level of living of the population is the principal goal of the socialist productive system".

Having analysed the different planning styles found in L.A., we now move to a description of the social planning approaches implemented in the continent.

#### The Problems of Social Planning in Latin America

Demo (1983) has argued that the practice of Social Planning in L.A., was far from the formal governmental declarations of good. The practice of planning in reality remained in its traditional form, it was basically defined by economic policies and therefore, it happened that social planning was usually paternalistic, residualist and compensatory. Some developments have been seen in this area in the form of planning through social projects and programmes, this new approach can be seen to be less paternalistic. Although it was possible to manipulate the social reality through projects, there still remained the problem of compartmentalization and the lack of an interdisciplinary approach.

##### 1. Lack of Coordination of the Social Programmes.

There were many institutions that generated partial actions, and therefore did not have the necessary impact for fighting poverty (Franco, 1983). The problem of unsatisfactory coordination also produced a waste of resources, since often

different institutions were trying to solve the same problem but through their own networks.

2. There were also problems in relation to the way in which social services operated.

The policies were usually designed by qualified bureaucrats who did not consider that their policies would be put into practice by other bureaucrats, who in turn did not have the aggregate view of the creator or simply did not understand the ideas. This sometimes produced the abandonment of the policy; lower tier bureaucrats always prefer rutinary work rather than innovations.

3. The institution that designed the social policies must obtain the necessary resources, and must confront other parts of the bureaucracy.

In the implementation phase, these requirements of the institutions were assessed by more powerful departments, such as the central bank, the ministry of finance, which were likely to use their authority to control public expenditure. These central departments used devices that had no relation to the social objectives of the policies but had proven to be effective, for example approving the budget in a fragmented way, discussing every new addition, etc. (2).

4. The phenomenon of having a clientele was also very common.

In some services dedicated to specific problems a relation between the bureaucrats and their customers appeared, which was not only part of their role, but a tool for promotion within a particular service or to different jobs outside the institution. Clientelism can be seen in two lights: it can be harmful for anti poverty policies since it helps to maintain the status quo with the present relationship between the bureaucrat and "customer"; on the other hand an agency that recognises the poor as their real customer can work much closer and better for them.

.....  
2. More details about these techniques is given in section 1.3.

## THE PRACTICE OF SOCIAL PLANNING IN LATIN AMERICA

There was a relationship in Latin America between some socio-political and socio-economic contexts and the type of statements involved in the planning strategy; for example ILPES (1982) considered that in cases of general crisis the planning system produced non relevant responses, usually using more rhetorical devices. On the other hand a stable context could produce a coherent plan, but it might also have been entirely trivial. It should be kept in mind that there was always the possibility of deducing the existence of a development strategy from the actions of the government and some specific statements about the subject.

It has been commonly assumed that to solve the development problems the main requirement is political will, but the patterns of social development are generally related to the level of economic development. We see from table 1.2., that for the period analysed the more developed countries of L.A. had maintained their levels of social expenditure. It is arguable that there are some structural factors and elements of social inertia which do not allow for radical changes; in some cases the level of expenditure was maintained despite important ideological changes. For example, Uruguay, which was considered to have subsidiary social policies, had not only maintained their social expenditure levels but also experienced some increases in particular sub-periods. At the other extreme, Mexico and Peru had steadily maintained their levels of social expenditure despite that both had prioritised social objectives before economic policies.

In contrast but less clear, countries with lower economic development seemed to have a differential response in their social expenditure levels in relation to the policies advocated. Countries with a complementary social policy approach, such as Bolivia and the Dominican Republic, had maintained their levels; whereas countries of the third style with a clear commitment to the implementation of social policies had increased their social expenditure, as in the case of Ecuador and Nicaragua. In summary, in countries with more development a great influence of past

social policies was felt in determining the present expenditure strategies.

| TABLE 1.2.   |         |         |         |         |
|--|---------|---------|---------|---------|
| GOVERNMENT EXPENDITURE IN THE SOCIAL SERVICES IN LATIN AMERICA<br>(As % of G.D.P.) |         |         |         |         |
| Country  | c. 1973 | c. 1976 | c. 1981 | c. 1986 |
| G.D.P. + US800   |         |         |         |         |
| Peru   | 5.8     | 5.5     | 3.5     |         |
| Mexico   | 5.8     | 7.3     | 8.0     | 6.4     |
| Panama   | 7.3     | 7.2     | 13.7    | 15.6    |
| Chile  | 25.5    | 15.2    | 19.1    | 18.1    |
| Uruguay  | 13.5    | 15.7    | 15.5    | 14.1    |
| Venezuela  | 8.6     | 9.2     | 9.8     | 10.5    |
| G.D.P. +US400 - 800  |         |         |         |         |
| Bolivia  | 4.5     | 5.5     | 4.2     | 6.2     |
| Ecuador  | 4.0     | 4.3     | 6.6     |         |
| Guatemala  | 4.0     | 4.6     |         |         |
| Nicaragua  | 5.7     | 8.7     | 9.8     |         |
| R.Dominicana   | 6.7     | 6.6     | 6.3     | 5.2     |

SOURCES:

1973-1976 Cuadernos ILPES No.28, Santiago 1982

1981 Statistical Yearbook 1982

1986 Government Finance Statistical Yearbook - IMF

The social planning practice in L.A. showed that past social commitments have a very important role in the present implementation of social policies. This was specially true for more developed L.A. countries, although (at some point) they may desire or be compelled to change their social strategy. The practice also shows that countries with a clear social priority had increased their social expenditures, some faster than total public expenditure, denoting the importance of their aims. The different ideological approaches and their subsequent planning styles are difficult to assess in relation to total social expenditure only.



### 1.3. SOCIAL EXPENDITURE AND BUDGETING

Public expenditure can be defined as the dispensation by the state of non-market criteria for economic resources which it had acquired from firms and households (Heald, 1983) <sup>(3)</sup>.

When analysing the different levels of expenditure between and within countries, it is necessary to consider that there are theoretical explanations which explain the growth of public expenditure. Among others theoretical hypotheses; the "Wagner Law" <sup>(4)</sup> states the the share of the public sector in the economy will increase as economic growth proceeds, owing to the intensification of existing activities and the extension of new ones. The "public Choice School" enunciates that the government set both revenues and expenditures to maximize its chances to win re-election.

According to Glennerster (1979), there are a number of factors that influence the specific different levels of public goods and services provision .

- Firstly, the ideology of the party in power is important. According to the different ideological approaches a decision is made about the proportion of public provision in relation to private.

- Demographic factors are determinant for the type and amount of services provided. Example: an aged population will require different services than a younger population.

- There are other factors such as tastes, substitutes and opportunity costs, which influence the provision of public

.....  
3. There are a number of obstacles in the operationalisation of the definition of public expenditure; there are confusions between gross and net expenditure. This is how charges and other sources of sectoral revenues are treated. There are also problems with the different transfer payments made by the state, does, which are basically redistributions between the taxpayer and the beneficiaries; there are overlaps depending upon the type of transferences. Finally, for comparative purposes there are important differences between the type of functions or agencies included or not included within the public sector.

4. See: R. Musgrave and A. Peacock (1958) Classics in the theory of public finance.

goods the same way they influence the provision of private goods.

- Finally, some factors related to the public finances of the country are influential as well, such as tax structure, the government expectations of economic growth and inflation, etc.

Having said that there exist these different factors influencing the government expenditure levels, it is also possible to identify some common trends of expenditure within developing countries in opposition to industrialised. (see table 1.3.)

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TABLE 1.3.

GOVERNMENTAL EXPENDITURES - Functional Classification  
(1978-80 AVERAGES)

| TYPE OF EXPENDITURE | DEVELOPING COUNTRIES | INDUSTRIALISED COUNTRIES |
|---------------------|----------------------|--------------------------|
| Defence             | 14.0                 | 13.9                     |
| Soc.Sec.& Welf.     | 18.0                 | 37.6                     |
| Education           | 10.9                 | 5.4                      |
| Health              | 4.8                  | 11.7                     |
| Housing             | 2.3                  | 2.5                      |
| Econ.Servs.         | 24.9                 | 11.3                     |

SOURCE:

A.Prest Public finance in developing countries pp. 18  
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The major contrast is between the proportion of expenditure devoted to social security, welfare and health in the two sets of countries. Developing countries spend proportionally more on education and economic services due to the necessity of these countries to promote capital formation, whereas industrialised countries, with usually an older population, spend

more on health care and the finance of social security.

One practical way to assess the real significance of social policy objectives is through the analysis of the public budget. From it we can determine whether the objectives stated in the plans and policy proposals are to be put into practice or not. In the next part of this section we describe the most important features of budgeting.

## BUDGETING

The budgetary process is what links social policies and plans to service delivery (Glennister, 1975); there are many forces influencing the shape of the budget, such as bureaucrats, beneficiaries of public policies, etc. But the budget is basically a political process, and it principally reflects the political priorities of those in power.

To understand who gets what and why they get what they do, it is important to approach resource allocation not as the passive response of economic agents to external stimuli, but rather as a political and economic process by which central authorities and competing spending departments make their decisions about scarce resources. An examination of the composition of different public budgets reveals that within the total budget, the expansion in expenditure has not been uniform between programmes. The questions arising therefore are: what factors determine the relative expansion of different programmes, who or what determines the national priorities (Jackson, 1982). There are many individuals who can influence the budgetary outcome: voters (clients), politicians and bureaucrats.

In this section we will describe the most important features of budgeting and its consequences.

### Practical Purposes of Budgeting

According to Goode (1983) budgeting has at least four practical purposes:

1. The budget sets a framework for policy formulation. This is related to specific sectoral policies rather than national ones.

2. Budgeting is a means for policy implementation. The budget is a guide for management and at the same time an instrument for administrative control.

3. Since the budget is usually based on laws or decrees, it prevents the abuse of power and diversion or improper use of public funds.

4. The budget document can be used as a source of public information on past activities, current decisions and future prospects.

The budget performs various economic tasks, related to the allocation of resources between public and private sectors and among competing demands within government. It also performs a stabilization function which requires an assessment of the economic impact of government operations in the economy and a consequent adjustment of the budget. Finally, distributional aspects require attention to the incidence of public expenditure and the income groups that are expected to be served. The first and the last tasks are usually considered as the social implications of budgeting, whereas stabilization is related to the economic implications.

#### Budget Coverage

The first and most important rule in the formulation of a budget is the necessity for a comprehensive statement of estimated revenue and expenditure of the central government<sup>5</sup>. If this rule is broken, there is no assurance that the scarce resources will be allocated to the uses judged as most urgent,

.....  
5. See:

A. Prest op. cit. pp.149

R. Goode op. cit. pp.11

also it is not possible to exert a proper public accountability.

This principle is often not observed. Governments sometimes set aside specific revenues which are earmarked to finance specific expenditures; the range of these funds is variable. For example: import taxation was used to finance Defence expenditures in Peru. This practice was very common among Latin American countries, and reflects the lack of confidence in the government system, especially in its allocation procedure. On the other hand, it is easier for spending agencies to ask for an increase in the proportion of an earmarked tax for a specific use, whereas for the government it is more difficult to justify a general increase in taxation to finance public expenditure as a whole (6).

Other forms excluded from the budget are some autonomous or decentralised agencies set up outside the scope of the central budget, but they still receive important grants from public revenue. In some African countries foreign aid or loans are not included in the budget.

Caiden and Wildavsky (1974) have called "Fragmented budgeting" the problem of earmarking and autonomous funds outside the budget. They have established a relationship between fragmented budgeting and "repetitive budgeting"; they state that the larger the proportion of public expenditure not included in the budget, the less able the finance ministry's to meet prior commitments and more likely to reconsider the budget every month.

Comprehensiveness does not mean total and absolute consolidation. A comprehensive budget includes only the agencies that are under the effective financial control of government budget. Therefore, as an example, a national budget should not include the transactions of local governments if they have their own resources and responsibilities but it should include the government grants to them.

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6. Taylor (quoted in Prest) has pointed out that earmarking revenues constitutes a built-in guarantee that government expenditure will vary (increase) regardless of need.

## Budget Form and Classification

It is common to find a distinction between ordinary or current expenditures and development or capital expenditures; in some countries this distinction takes the form of two different budgets. Although the distinction is initially attractive in political terms, since the government in office can show publicly how much they are "investing", in practice it does not make much sense, because the division is essentially arbitrary and it would mean that nothing in the ordinary budget has anything to do with development (Prest, 1985). For example, where does one place education, usually included in the current budget, since it can be considered as investment expenditure as well. According to Caiden & Wildavsky the separation of public expenditure into two budgets is a way of avoiding the conflict between planners and finance. Both groups are struggling for funds and each one has a different approach. Planners are basically spenders and at the moment of choice they prefer growth, whereas finance always prefers stability. So, it seems that the case of capital budgeting must actually rest on whether it helps the government in its functions of policy making and management.

With regards to the different classifications the budget may have, it depends again on how the government operates; the most common alternative is a combination of objective, functional and economic classifications. The objective classification distinguishes between the type of expenditure, personnel, supplies, etc. Functional classification distinguishes the different government functions such as health, education, etc. Finally, economic classification separates capital from current expenditures.

## Budgetary process

The budgetary process involves four phases: formulation, authorisation, execution and evaluation. Each one follows a number of stages (7).

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7. The budgetary process discussed here is following (principally) American literature, and the stages described are not necessarily universal.

## 1) Formulation:

Formulation is the first phase of budgeting, it has been traditionally considered as the whole budgetary process itself. In this phase we can recognise 9 stages.

1. Preparation of policy outline: This is the first attempt to compatibilize reality with the desires or expectations included in the national plans. There is a time horizon problem for this compatibilization -the budget commonly only encompasses the public expenditures for a sole year, whereas the plan is made for a period of years incorporating broad policy priorities.

2. Preparation of initial estimates: There are some countries which include in the budget only expenditure and revenues are prepared in a totally different procedure . Although many of the original estimates may change during the execution of the budget, it is necessary to have a correct estimate of the public revenues before imposing certain expenditure ceilings. This will achieve a better organised and integrated budget.

REVENUE ESTIMATES are formulated in two ways (Premchand, 1983). First, an accounting approach of forecasting receipts, based on the rate of growth recorded for the previous years, may be adopted for each major source of revenue. A second more organised approach is to provide for an explicit recognition of national economic parameters including the likely increase of GNP, the rate of inflation, and the impact of increased government expenditure on taxation. In countries which derive most of their revenues from the sale of a few commodities, revenue estimation may be less complex.

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**SOURCES:**

- N. Caiden & A. Wildavsky: Planning and Budgeting in Poor Countries.
- R. Goode: Government Finance in Developing Countries.
- A. Premchand: Government Budgeting and Expenditure Control.
- A. Prest: Public Finance in Developing Countries.
- A. Wildavsky Budgeting: A Comparative Theory of the Budgetary Process.

**DETERMINATION OF PUBLIC EXPENDITURES:** The determination of public expenditures takes place in two ways (Premchand,1983). In a model of devolution, totals are decided by the central finance or planning agency and communicated to all other agencies. In an aggregative model, the individual expenditure requirements of each programme are compiled and consolidated. A combination of these practices is usually found.

An important outcome of these two previous stages is the **BUDGET CIRCULAR**, which is the basis for sectoral or ministerial budget formulation. It contains a description of the national goals and economic prospects of the country. It promotes a better understanding of the budget, indicating causes of resource constraints and their impact on the budget. On the practical side, it should also include methods for computing maintenance costs, interest payments, estimated inflation rate and other necessary information for the formulation of the budget.

3. Preparation of revenue and expenditure estimates by agencies: In this stage a number of considerations are taken. First of all it is necessary to distinguish between continuing charges and new services, and also the changes in the costs of the services. After this has been done, there are some elements to consider in relation to the nature of each programme, for example demographic changes, the ageing of the population, etc. The most common approach by far to solving the allocation problem is what has been described in the first section of this chapter as incremental budgeting. In this approach the expenditure allocations for the next year are based on the previous allocations plus some marginal variations which are the points most critically assessed and discussed.

Spending departments employ some tactics to obtain greater shares in the expenditure, (some of these tactics and problems have been described by Caiden and Wildavsky (1974) and Goode (1983)). One common practice is called "padding" by which some "additions" are included in an



original project in order to prevent future cuts from the budget office or to prevent uncertainties arising from possible price changes. An opposite practice to padding is also possible: "camel nose" appears when only the first part of a project is submitted for approval, and then additional supplementations are requested. Another technique proceeds is that when cuts are requested, the spending department reduces considerably an important programme but assures the finance of the remaining programmes with this move the department knows that sooner or later the pressures for keeping the original important programme will be made from outsiders to the budget office.

A problem does arise because of different approaches between spending agencies and the budget office. The agencies do not have an overall view of the public expenditures and therefore they think that a small increase in their own expenditure allowances will not affect the country; but if every agency has the same approach the effects will be devastating for the public finances.

4. Review and consolidation of agency requests: In this stage the Ministry of Finance collects the agencies' requests, and makes the initial analysis and comparisons between the requests and the expenditure ceilings.
5. Discussion of requests between spending agencies and budget office: The budget examiners do not have time to check every item of the departmental budget, so they usually take an incremental approach by which the previous experience is taken granted and only the new additions are discussed. Here the problem of different approaches appears again; the main concern of the budgeters, who are outside judges, is to have solvency, whereas spending departments are concerned with their departmental priorities.

6. Draft budget: After the discussion with different agencies a draft budget is prepared by the budget office according to the ministerial estimates and the changes initiated by the discussion; this draft budget is presented to the upper level of decision: The Minister of Finance.
7. Spending Ministers' final appeal. After a draft budget has been produced the spending ministers usually have an opportunity for a final appeal directly to the Minister of Finance.
8. Final decisions by the President or Cabinet: The draft budget is presented to the President or the Cabinet for the final decisions: at this stage usually no changes are made.
9. Submission to legislature.

## 2) Authorisation

The authorisation phase is not a lengthy one, but it varies enormously according to the practice in different countries. As Prest (1985) has shown there are some countries such as the UK where over the years there has been an increasing tendency to rubber stamp the proposals, whereas in countries such as the U.S. there is always the possibility of a mutilation of the executive proposals; there are also some intermediate situations such as Latin American practices, where the executive is empowered to spend each month amounts not exceeding those spent in previous years, in case budget approval is delayed.

There are difficulties related to the different approaches between the legislature and the executive. Caiden and Wildavsky (1975) have pointed out that despite their responsibilities the legislature does not often worry about how the revenues they distribute are raised. Secondly, they are not responsible for a consistent budget since they are not responsible for its application. These practical problems of partial understanding and responsibility towards the budget often make delays and unnecessary discussions for its approval.

### 3) Implementation or Execution

Budget execution is the use of the spending authority of the expenditures granted by the budget law or decree. In some countries a detailed control to spending departments is exercised by the Ministry of Finance before entering into commitments, usually this does not involve a re-examination of the merits of the expenditure. In the majority of the systems the budget office apportions the annual authorisation by time periods (months or quarters) and establishes limits on the amounts that can be committed within each period. These apportionments help the budget office to maintain control of the expenditure by not allowing the departments to spend their budget during the first part of the year and then expect supplementations.

Special concern in the execution phase is put on the changes occurring during the course of the year. These changes are unavoidable and in some way or another are part of the execution. The four more important sources of change in the budget execution are:

- New additions or supplementations to approved expenditure plans due to underestimation of costs or deliberate exclusion of certain items (8).
- The budget may also be change products of a smaller yield of taxation. This is very possible in the case of earmarked taxes financing special programmes, or an incorrect estimation of operational revenues in the case of certain services.
- The budget may also be changed because of unexpected transfers of funds between or within the spending authorities. The degree of formalisation of these transfers may vary according to their magnitude and function.

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8. Sometimes spending departments have deliberate policies to obtain additional supplementations during the year, especially for dubious areas of expenditure since the supplementations are usually scrutinised less carefully.

- Finally, one of the most important sources of change in the budget is inflation. Governments commonly include their estimates of inflation in the budget circular, but since it is a highly political issue the chances of having a low estimate are great.

This practice of constant changes to the original budget, has been called by Caiden and Wildavsky (1974) "Repetitive budgeting", the process of budgeting is repeated and remade over the course of the year. The entire budget is treated as if each item were supplemental, subject to last minute renegotiation. This practice is not seen at a central level but at the level of spending agencies. The finance department wants to ensure a cash flow during the year as well as a provision for uncertainties, therefore the original apportions are reduced to insure that there is cash when needed. Wildavsky (1975) criticised this practice since it basically promotes uncertainty and eliminates the planning purposes of the budget, it also encourages lobbying and manoeuvring by departments; he proposed to replace "repetitive budgeting" by "continuous budgeting", which is analysed later in this study.

#### 4) Evaluation

This is the phase on which the budgets of many countries are weaker. There are three aspects to be considered here. One is the accounting evaluation of revenues and expenditure; this can be done by the budget office or finance ministry, and it basically provides statistical information about the fulfilment of the budget. Secondly, there is a necessity for a financial auditing, which is intended to check the compliance with the budgetary law and other legal requirements; any irregularities should be reported to the legislature. Auditing should be carried out by an independent agency not linked with the accounting function<sup>9</sup>). Finally, there is a necessity for a performance audit (or comprehensive audit) which comments on the effectiveness and efficiency of the programmes. In many

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9. According to Goode (1983) this is the case in Latin American countries, where the Comptroller general has both accounting and auditing functions.

developing countries it is common to find that financial auditing is non existent and there is no possibility to glimpse a performance audit.

Budgeting is a part of politics, it can never be a purely technical exercise; this is very important to remember since evaluation is not exempt from political analysis. But, despite the influence of the ideology in power, many of the external conditions for budgeting remain the same. About this point Goode (1983) argued that it is easy to exaggerate the differences in budgeting between (developing) countries with authoritarian regimes and those with democratic governments. The economic uncertainties are identical and the technical problems are almost the same.

## 1.4. FISCAL INCIDENCE STUDIES

### Introduction

This section is concerned with the literature on the effects of government intervention. We will review works covering issues such as the distributive aspects of public expenditure or redistribution in state welfare spending; these are generally grouped under the broader title of Fiscal Incidence Studies. These studies try to determine who is actually paying the taxes, considering all possible shifts, and who is receiving the benefits from the government. The final intention is to determine the net incidence; this implies the assessment of certain groups -income bracket or social class- to determine if they are made better off or worse off, as a result of the state's policies of redistribution. In this section we will look at the studies done in the U.K., in Latin America, and conclude with some works in this area based on Chile.

The aim of this section is not only to introduce the reader to the theme of fiscal incidence studies, (which is related to the main issue of this research), but to be able to obtain some methodological approaches for the treatment and allocation of public expenditures.

### Fiscal Incidence Studies

The post war period was characterised by a continuous increase in public expenditure; this trend lasted until the early 1980's. It was believed then that economic growth would allow increasing social expenditure, which in turn would produce greater equality (O'Higgins 1983). A similar pattern was attempted in developing countries during the same period, with the clear intention of raising the level of living of their people as quickly as possible.

Unfortunately, the expected results of these policies did not appear clearly, and therefore, produced a loss of consensus about the role of the state as a service provider. Much

of the debate in this area has been concentrated in the area of social expenditure; here the evidence has not been favourable to it. As Le Grand (1982) pointed out for the case of Britain, almost all public expenditure on the social services benefits the well off to a greater extent than the poor.

These facts, and basically the necessity to assess the policies undertaken, produced a growing interest in fiscal incidence studies.

#### FISCAL INCIDENCE STUDIES IN THE U.K.

The analysis of the distributive effects of public expenditure and taxation has been an issue in the UK from the beginning of this century. According to Barna (1945), the first studies of this type were undertaken in 1919, but covered only the distributive aspects of taxation, after the first world war. The first comprehensive fiscal incidence study was done by Barna in 1945.

One of the best known modern sources of information on the distributive effects of taxes and benefits is a series of studies prepared annually since the 1960's by the Central Statistical Office (CSO). Their general purpose is to show how taxation and public expenditure, on the Social Services, cash benefits and consumer subsidies, affect the observed distribution of income between households.

CSO studies do not attempt to calculate the effects of every tax and expenditure, but deal only with those taxes and benefits clearly applicable to individuals. There are considerable difficulties in moving from the aggregates of government expenditure and finance published in the National Income and Expenditure Blue Book to apportioning taxes and benefits to individual households. Therefore, areas of public expenditure such as defence, roads and public parks are not considered, since there is deemed to be insufficient information to calculate who benefits. In the case of 1982, for example, the estimates given covered only 48% of total government

expenditures and 59% of its receipts.

For the analysis of the redistributive effects of government intervention, it is necessary to compare original income of each household, with the final income each recorded after paying taxes and receiving certain benefits. This comparison is carried out in different stages; each stage is analysed separately, giving great attention to the methodological procedures. This serves as a basis for the discussion below.

Stages for calculating final income:

Original Income

- +Cash benefits
- Direct Taxes
- Indirect Taxes
- +Benefits in kind
- = FINAL INCOME

TABLE 1.4.

SUMMARY OF THE EFFECTS OF TAXES AND BENEFITS

Quintile groups of households ranked by original income

| Average per household<br>(pounds per year) | Bottom | 2nd  | 3rd. | 4th.  | Top   | Average |
|--|--------|------|------|-------|-------|---------|
| Original income                            | 150    | 2620 | 6690 | 10440 | 17390 | 7380    |
| +Cash Benefits                             | 2690   | 1970 | 890  | 680   | 540   | 1350    |
| Gross income                               | 2830   | 4580 | 7580 | 10720 | 17920 | 8730    |
| - direct income                            | 10     | 430  | 1430 | 2280  | 4100  | 1650    |
| Disposable income                          | 2820   | 4160 | 6150 | 8440  | 13820 | 7080    |
| - indirect taxes                           | 740    | 1220 | 1710 | 2190  | 3050  | 1780    |
| +benefs.in kind                            | 1140   | 1200 | 1360 | 1420  | 1450  | 1320    |
| Final income                               | 3220   | 4130 | 5790 | 7670  | 12260 | 6620    |

SOURCES:

CSD Economic Trends, Nov. 1983 p.84

- Original income: is pre-tax income from earnings, investments and private pensions.



The distribution of original income is highly uneven, with a clear concentration in the top fifth quintile group.

Original income depends on the time period and income unit used for its definition; there are many conceptual problems that make the use of original income very dependent on the assumptions made.

- Cash Transfers: are state pensions , unemployment benefit, child benefits, and all other transfers from the government.

Overall cash transfers are highly redistributive, the bottom 20% receives considerably more cash transfers than any other group.

- Direct Taxes: are income tax and national insurance contributions.

Direct taxes are meant to be very progressive, in that they are paid in relation to income. This is clear from Table 1.4. , the bottom quintile pay very little in the way of direct taxes, but in the next quintile the tax is already a tenth of gross income. It is important to bear in mind that there are some areas of income not included, such as capital gains, imputed rent of owner occupied houses, fringe benefits, home production, etc. The consideration of these may alter the distributive role of direct taxation.

- Indirect Taxes: are payments of local rates and estimates of payments of other indirect taxes such as VAT, duty on tobacco, etc.

Indirect taxes do not have an effect of reducing income inequality; their overall impact is very similar in both the lowest and the highest quintile groups.

- Benefits in Kind: are the imputed benefits from public expenditure on education, health, housing, etc.

The average value of all benefits in kind tends to increase with income, but not in proportion to original income, therefore they tend to be progressive. However, the method of calculation of each benefit is open to question; for example in education, each person of school age is allocated an amount equal to the average expenditure on that type of education. In the case of the health service, estimates are made according to the average use according to age and sex, and the total expenditure is allocated based on the estimates (Atkinson, 1983).

- Final Income: is the end result of these calculations. As a final result of the stages analysed, Table 1.4. suggests that the main redistributive impact of government intervention is from direct taxes and cash benefits. Overall, CSO studies show that redistribution does take place through government intervention.

#### FISCAL INCIDENCE STUDIES IN DEVELOPING COUNTRIES AND LATIN AMERICA

Fiscal incidence studies in developing countries and Latin America have been reviewed through surveys of these types of studies prepared by Bird and De Wulf (1973) and De Wulf (1975).

Fiscal incidence has two components, tax and expenditure incidence; both are summarised in the net fiscal incidence. In relation to tax incidence De Wulf points out the existence of two different approaches, effective and formal approaches. For the former approach, there are some Latin American examples, which attempted to pinpoint the final locus or the resting place of the tax, taking in consideration all shifting of the tax. As to the formal approach, there are good examples in the case of India, which were concerned only with estimating the burden of taxation as it was "intended" by the legislator. In this case direct taxes are assumed not to be shifted, while indirect taxes are assumed to be fully shifted forward, burdening consumers' incomes.

The general impression of the studies of tax incidence surveyed is that the tax system in developing countries tends to burden the income of the rich families relatively more than the incomes of the poor. While the majority of the studies suggest proportionality of the tax structure, there are only two exceptions (two countries out of the twenty-two surveyed). This conclusion is interesting, since the majority of the research surveyed by De Wulf suggested beforehand that tax structures are regressive in developing countries because they rely very heavily on indirect taxes.

Looking now to the other side of the equation, i.e. expenditure incidence, there also exist a few different approaches:

- Money flow approach: concentrates on the recipients of direct payments made by the government, without considering who ultimately benefits from the services supplied through public expenditure.

- Benefit approach: emphasizes the services rendered by public expenditure and those who in the final analysis benefit from these services.

- The third approach considers how the transfer of purchasing power from private to public sector modifies the expenditure pattern in the economy, and how this affects factor and output prices.

- Finally, some studies concentrated on the urban rural classification, using money flow approach and benefit approach at the same time; in this sense very little shifting of benefits between sectors is allowed. Money spent on a certain region was assumed to benefit only that region.

Apart from the different approaches to analyse the distributional impact of government expenditure, it is necessary to spend some time reviewing the allocation procedures used in some specific areas, as this may cast light for similar steps to be undertaken in this research.

- Expenditure pure "public goods" are those goods for which private allocation of resources is inefficient because they are consumed jointly by all. Usually defense, justice, foreign affairs and general administration are considered in this category.

There is no agreed formula used for the allocation of this type of expenditure, although some alternatives seem to have set a trend. Several authors distribute this expenditure in proportion to income, since people with greater wealth and assets are the most benefited by governmental protection of their property. The other alternative is to assume that each family benefits equally from general government expenditure.

- For the analysis of specific benefits, De Wulf points out two important considerations:

i) Studies generally attempt to estimate the distribution of expenditure benefits in a given period of time, and it is usually forgotten that the benefits generated from that investment accrue in future years. The most common assumption here is that benefits received by a family from past investment expenditure are reasonably well approximated by allocating this year's capital expenditure.

ii) Government expenditure in some areas such as education, health and transportation not only provides benefits to identifiable individuals, but at the same time increases the overall efficiency of the economy. For example:

- Expenditure on health: In some studies, the expenditure on this area was treated in the same way as the expenditure on pure public goods. Others have used the income distribution of patients derived from a household sample survey.

- Expenditure on education: The expenditure on this area is allocated according to its beneficiaries, which in this case are clearly identifiable. The usual procedure was to estimate the average cost per student for the different types of education provided, and then to allocate the

benefits.

- Expenditure in agricultural programmes: This was oftenly allocated according to agricultural incomes.

De wulf recognises that the conclusions of the studies are questionable, because of the many allocation and valuation choices that the researcher had to make at his own discretion. The general conclusion to appear from these studies is that upper income groups receive benefits from government expenditure which are a smaller share of their incomes than that of their lower-income counterparts (De Wulf 1975).

The final step of incidence studies is to determine the net fiscal incidence or budget incidence. This is obtained by summing algebraically both the tax (negative) and the expenditure (positive) incidence estimates for each of the sub groups.

The budget incidence studies clearly suggest, according to De Wulf, that the government budget has considerably redistributed post tax, and its expenditure favours the lower income class. In many cases, the upper income classes are net contributors to the government budget and lower income classes are net gainers.

In summary, De wulf concluded that the results of incidence studies are highly variable depending on the assumptions and the methodologies used; thus these results are only approximate. However, they show at least the broad direction of the distributional effects of budget policy, which is very useful for policy making, especially if referred to specific policy areas.

A recent contribution to fiscal incidence studies in Latin America is a case study for Colombia, sponsored by the World Bank, directed by Selowsky (1979). The study is concentrated on publicly provided services, of which consumption by individuals or households can be identified and measured; so public goods such as defence and justice are omitted. It measures the consumption of public services as a final commodity, rather

than tracing the distributive effect when the services are consumed as a factor of production. In practical terms the study he intends to identify the beneficiaries of publicly provided services, and to measure the subsidy received by household consumption of some of these services, and it attempts to explain the present distribution of consumption.

The methodological approach is rather different to the other studies reviewed, since this study obtained the data from a country-wide sample survey taken in 1974. The survey was made for the sole purpose of the study, instead of using an already existing survey. This has the advantage that it provides information on households not consuming particular services; from a policy point of view, it is fundamental to determine whether the present situation arises from a lack of supply of the service or from a demand phenomena governing the use of that supply. The sample was stratified in the first stage by urbanization (city size); this resulted from two hypotheses. The first hypothesis claimed that urbanization is highly correlated to the consumption of government services. The second hypothesis was that the higher the degree of urbanization, the more consumption varies across households, this variation being associated with the level of household income (Selowsky 1979). These hypotheses are very interesting since they represent phenomena common to many Latin American countries. The survey was able to trace the beneficiaries of one third of total government expenditure. The data presented a breakdown by urban and rural population.

The results showed, overall, that income was more evenly distributed in rural areas and particularly at low levels of income. They also showed that the total subsidy per household for education and health was remarkably constant across income groups. This pattern disappeared when subsidies were broken down by type of education and by type of health provision. Subsidies for primary education were much larger for low income households, and those for higher education were much smaller. The constancy of the subsidy as expressed per household did not hold if expressed per capita, because household size was substantially larger in the poorest quintiles.

## FISCAL INCIDENCE STUDIES IN CHILE

The best known fiscal incidence study for Chile, was produced by Foxley, Aninat and Arellano in 1979. This study is in practice more than a conventional fiscal incidence study, since they were also looking at some policies that are not commonly considered in this sort of study, (these are the land-reform programme and the nationalization (<sup>10</sup>) of industrial enterprises).

With regards to the distributive incidence of taxation, they started by analysing the Chilean tax structure, they found the following features:

- Low importance of taxation levied on income flows generated in the capital market, contrasting with the cumulative impact of taxation on labour income flows.
- Direct taxation collected directly from sources of earnings.
- Low taxation on independent economic activity.

The overall conclusion of direct tax incidence was that the pattern of such levies was progressive, with upper-income families bearing a higher burden than the poor.

The overall conclusion about the incidence of taxation was that the Chilean taxation structure was of a semi-proportional nature: "Our findings indicate that the high degree of progressiveness reported in the case of direct taxation is almost completely compensated for by the regressiveness of indirect taxes, and this is especially so in the case of the lower and middle income classes"(Foxley et al, 1975:48).

The analysis of government expenditure incidence was focused on poverty groups, defined as the poorer 30% of the .....

10. Nationalization is the transfer of an industry from foreign ownership to state ownership.

population. In the assessment of fiscal incidence of government expenditures on poverty groups, it was necessary to distinguish between two different types of programmes: progressive programmes and poverty programmes.

Progressive programmes improved the relative income position of the poor, although their absolute expenditure might still have been less than rich families; whereas poverty programmes implied not only improvement in the position of the poor but also more government expenditure on them than the average household.

This study concluded that around two-thirds of the total expenditures were involved in programmes increasing the relative income share of poverty groups, but this figure did not take account of the "leakages" from progressive programmes. On the other hand, around one third of public spending programmes were largely concentrated on poverty groups. Overall expenditure programmes in the social sectors were oriented to the poor in a larger proportion than public spending in directly economic activities. More than 80% of public expenditures in the social sector (public health, public education and housing programmes), had a progressive character as compared to only 49% in the economic activities.

The analysis of poverty programmes showed that one hundred of them, had an asset creating effect, in comparison to those which were used purely for consumption; these latter included mainly expenditures in social welfare, social security and public transport.

In summary, Foxley, Aninat and Arellano (1979) found that budget expenditure showed a progressive effect on income distribution, in that the position of poorer groups improved significantly at the expense of families in the higher income brackets. On the other hand, the tax system showed an allocation of the tax burden almost proportional to the structure of income distribution by brackets, with the exception of the highest bracket, whose contribution to financing state expenditure appears to be more than proportionate. Another element not



considered previously was that the state obtained from the external sector a considerable margin for financing the redistributive process.

The latest two Chilean studies to be reviewed are not strictly fiscal incidence studies, in the sense that they do not cover the impact of all public expenditure and taxation; they rather concentrate on the redistributive effects of social expenditure itself, with some detail for each ministerial programme.

In the analysis of the redistributive role of social expenditure, Rodriguez (1984) attempted to assess the impact of the programmes in this area. For this task he designed a 3900 household sample survey, representing grouped regions. He also used as a secondary source of information data obtained directly from the beneficiaries of certain social programmes. Therefore, the methodology used here is closer to the one used by Selowsky, needing fewer assumptions about the allocation of benefits overall. The poverty line was defined as twice the value of the minimal basket of goods as defined by the Economic Commission for Latin America (UN).

The results clearly suggested the "urban bias" of the majority of the social programmes, and the widespread difference in the regional coverage of certain programmes, especially in social security; this conclusion was consistent with that of Selowsky. He concluded that in relative terms poverty affected more families in rural areas, since 80% of rural families are poor. However, in absolute terms, there are more poor in urban areas. The most important cause of poverty was the unemployment of householders.

The objective of Yanez's studies (Yanez 1983 and Yanez and Aguilo 1986), was mainly the estimation of the social expenditure figures for the last fifteen years (1970-1985). The

figures were compared with performance indicators to assess the achievement of the programmes. He concluded that the level of public social expenditure has been maintained throughout the decade below the levels of 1970; only in 1980 was there a rise in real terms. Among the programmes with major increases were social assistance and the programmes related to the absorption of unemployment. On the other hand, housing was the programme to diminish most.

One of the main achievements of Yanez's work is the clear methodology he followed, especially in relation to the different items or programmes to be considered as a part of social expenditure. This is an important contribution since there has been some disagreement between government officials and researchers about the areas to be included in social expenditures; the majority of authors do not give a clear reference on this issue. Yanez provides a methodology transforming nominal figures into real ones; this is again a big contribution, since the official deflator underestimates inflation during part of the period. Finally, he also includes a methodology for consolidating transfers between and within ministries, this allows analysis of the "true" expenditure figures, avoiding double counting.

As the reader can observe, Yanez is an important contribution for the present research because he produced a methodology that helps in a crucial way to arrive at the regional expenditure figures, which is one of the aims of the present study. Therefore, the more technical aspects of Yanez's work are discussed in Chapter 4.

This section has helped us to understand what fiscal incidence studies are or, in other words, how the net effect of government intervention can be assessed. However, at the same time, it has also served to warn about the necessary assumptions and difficulties that may arise in undertaking such studies. It has also provided some interesting findings that may be tested in the Chilean case. Finally, it has introduced some insights into

the methodological approaches for analysing government revenues and expenditures.

So far, we have been reviewing studies about the redistributive impact of government intervention, without considering the regional effects of these policies although some hints were given by Selowsky and Rodriguez; this issue will be addressed in the next section.

## 1.5. DECENTRALIZATION AND THE REGIONAL IMPACT OF SOCIAL POLICIES

### Introduction

As was mentioned in the Introduction, one of the main topics of this research is to analyse the discretion that the Chilean social services and its regional offices have in managing public decisions and resources, and to test to what extent the regional allocation of social expenditures is related to regional needs. Therefore, we need to concentrate on enquiring about the meaning of decentralization and how to obtain regional figures of social expenditures.

This section is divided into three parts. In the first part we discuss the meaning of the concept of decentralization, its alternative definitions, and its relation to resource allocation. In the second part we introduce some works related to the attempts to define a system of regional social accounting, which gives a regional dimension to the national accounts. These studies give a framework for the treatment of government expenditure at a regional level, which is one of the tasks of this research. Finally, we describe the main findings of two Chilean works in this area.

## A. Decentralization and Social Policy

### A.1. Introduction to a Concept

At first inspection it may appear somewhat puzzling, to link in a straightforward manner Social Policy and Decentralization. However, it must be said that in the last three decades there has been a constant critique of the performance of public and social services in meeting people's needs. Some critiques have come from the rigid structure of service delivery, the difficulty in adapting national programmes to local needs, the strictly sectoral approach (partial), and the gross inequalities in the levels of service provision. The solution that many authors have suggested for these problems is to decentralise social services (<sup>11</sup>).

Let us start by clarifying that the literature uses the term of decentralization in a variety of ways, which that makes it appear as a very diffuse concept. Unfortunately this study is not free from these influences. In a broader definition, the concept of decentralization involves the delegation of power to lower levels in a territorial hierarchy (Smith, 1985). The present discussion approaches decentralization in its territorial dimension, rather than the decentralization of parastatal or non government organizations (Functional Decentralization) (Conyers, 1984).

Decentralization is a process which can take many specific forms throughout a continuum of different alternatives; there are at least four types of decentralization models defined in the literature (<sup>12</sup>):

Centralized Decisionmaking: In a centralized government structure, the social sector programmes are financed and managed from the centre. Regional services are only able to make routine decisions with none or very little control over

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11. For a more detailed bibliographical background of decentralization, see: Borja, J. 1987; Cheema, G.S. and D. Rondinelli 1983; Conyers, D. 1984; and Smith, B. 1985.

12. This section draws on Winkler (1981).

resource allocation.

**Delegated Decisionmaking:** Delegation is the transfer of government tasks or functions to semi-autonomous organizations such as public organizations and many regional development agencies, which may then receive public funding and are ultimately accountable to the government.

**Deconcentrated Decisionmaking:** Deconcentration refers to the transfer of administrative and management powers to lower levels within central government agencies. It most frequently takes the form of creating or expanding powers of regional directorates.

Deconcentration has usually received a pejorative meaning of simply not being fully decentralized. However, as Borja (1987) has pointed out, the decentralization process has elements of simple administrative deconcentration; therefore, the two concepts cannot be presented as antagonistic values.

**Decentralized Decisionmaking:** Decentralization implies that the institutions have autonomy to exercise their own authority, and have their own resources either raised by them or transferred to them for their own free use in all their programmes and functions (Borja, 1987).

Countries adopt decentralization policies for a number of reasons. The literature presents two main threads of discussion on decentralization.

From the point of view of economics, it is said that decentralization improves efficiency. It is claimed that a centralized government is incapable of managing all the levels of service delivery, and this results in high costs of provision (Winkler, 1989). It is also expected that decentralization enables service provision to be more responsive to local preferences, producing an efficiency gain, in that the same amount of resources generate a more highly valued output (Heald, 1983). This social efficiency gain can be considered as part of

the public choices open to a citizen. In a decentralized system of social services a citizen must be able to express his preferences by "voting with the feet", which means having the opportunity to select the service delivery which matches his preferences.

Politically, decentralization is said to strengthen accountability, political skills and national integration. It brings government closer to the people (Smith, 1985). Redistribution of political power is rarely stated as an objective of decentralization, but democratization or inclusion of marginal groups in society is a frequently stated goal (Winkler, 1989).

The tremendous growth of state activities since the Second World War, their growing complexity and diversity of functions, has many times provoked a real crisis of political representativeness; the natural channels of participation are insufficient or not able to incorporate other dimensions. As a result of this situation there is a growing demand for political participation from the base (Borja, 1985). Therefore, many governments have resorted to the decentralization of services in order to produce a greater participation of the public.

The existence of large inequalities in the provision of public services, which appear in the form of territorial disequilibriums, has also made a way for pressing to obtain regional power for developing policies to redress these tendencies.

## A.2. Decentralization and Resource Allocation

While decentralization is an important concept in terms of the management of social services, it can be too broad to have a practical meaning in terms of the actual allocation of resources from the national point of view. Therefore, it is necessary to spend some time discussing some concepts used in this regard.

Firstly, it is important to clarify what the central government is trying to achieve through the central provision to

regional services. On the one hand, if the government is concerned with the treatment of areas and the desired aim is that each area should have an equal standard of service, then a situation exists in which territorial equity is the desired objective. On the other hand, if government is concerned with the treatment of individuals, the desired objective is interpersonal equity.

In the case of Territorial Equity, Heald (1983) has distinguished between the different points of view that this concept may have. If the focus is upon actual outcomes, territorial equity requires that there are actually equal standards of provision in all areas. If, however, the focus is upon potential outcomes, territorial equality requires that there might be equal standards of provision. In this case local choices determine whether the standards are in fact equal; some communities prefer to spend more in some programmes and less in others, whereas, in the former case equal standard of provision should be entrusted.

It should be noted that if the specified objective is in terms of actual outcomes, it is immediately clear that this is an extremely centralist concept. The territorial equity objective defined in terms of potential outcomes means that the preferences and perceptions of need of the centre and the locality both count. This situation may provoke a set of intergovernmental tensions as a result of contrasting interests.

It is possible to achieve territorial equity whilst maintaining local autonomy. According to Heald (1983, 244), "equalization grants have developed as a policy response to the problem of reconciling decentralization with territorial equity". The centre can obtain territorial equity through the payment of equalization grants, which can be designed to eliminate the effects of low resources and high needs.

Grants from central governments to regions or other subnational levels can be categorised in a variety of ways. An important distinction must be made between specific grants and general or block grants (Smith, 1985):



Specific grants are related to particular services and are calculated according to the expenditure incurred on a particular function; this means that they are earmarked funds. The revenue for such a source may only be used for the function specified, and often there are strings attached.

General or block grants can be spent in any of the functions that a subnational level of government is legally empowered to perform.

Another distinction can be made depending on the objective for which grants were created; Smith (1985) suggests three alternative criterions:

Service: Grants for education, health, etc.

Specific purpose: For example, grants for meeting special needs.

Basis of distribution: Grants can be distributed according to different criteria such as percentage of local authority expenditure or units of benefits supplied.

The conventional wisdom suggests that as subnational governments are more dependent on central financial allocations, the whole system becomes more centralized. However, as Smith (1985;p.115) has suggested "there is a sense in which grants strengthen decentralised governments by enabling them to perform functions that they would otherwise be unable to perform". The same author has mentioned that there appears to be a widespread move away from specific grants to block or general grants; this provides subnational governments with more freedom in deciding how to spend the money. Examples of these types of grant allocations can be found in the British National Health Service and the Rate Support Grant.

Finally, a further, but related, concept may help to judge the fairness of the allocations. The concept of Territorial Justice has been introduced as the territorial dimension of

social justice; this states that the most appropriate distribution of resources between areas must be "to each area according to the needs of the population of that area" (Davies, 1968; 16). The statistical condition of territorial justice, was defined by Davies (1968, p.39) as "a situation in which there is a perfect positive correlation between indices of standards of provision and the index measuring the relative needs of each area for the service, the relative inequality of the standards indices being the same as that of the index of relative needs".

The purpose of introducing this last concept is not to confuse the reader, but to introduce him to an issue that will recur throughout the entire research. As stated in Chapter 3, one of the aims of this study is to assess to what extent the regional allocation of social expenditures is related to the regional need, in other words, to what extent it can be said that the regional impact of social policies in Chile corresponds to a case of territorial justice.

### A.3. Decentralization in Latin America

It seems convenient to conclude this section by presenting a brief description of the way in which Latin American countries have approached the problem of decentralization.

The present bureaucratic structure of Latin America has been partially inherited from the colonial times. During this period centralization was functional to the interests of the Spanish crown. After independence, many countries maintained the same government structures, because as new emerging states it was necessary to consolidate the territorial unity of the country; therefore centralisation was still a useful instrument.

During present times (<sup>13</sup>), many Latin American countries have adopted national decentralization programmes to overcome the long existing over-centralization trends of the continent. However, it must be noted that the term decentralization has had

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13. This section draws from an analysis of the Latin American process of decentralization prepared by R. Harris (1983).

a variety of meanings. It has frequently been related to the efforts to deconcentrate decision making from the central headquarters of central government ministries to their field offices. According to Harris (1983), the term has also been used for the establishment of a relatively autonomous public organization in specific functional areas (decentralized agencies), or for the transfer of public enterprises to private ownership and control (often referred to as "debureaucratization" or privatization).

The Latin American bureaucracies (suffer at the time of this research) from a lack of coordination between state agencies and from a frequent overlap between them and the national government. To overcome these flaws some governments called for administrative reforms emphasizing "sectoralization", grouping and coordination of agencies by related functions and "regionalization", the coordination of all government agencies operating within a designated geographical area (Harris, 1983).

The same author has argued that sectoralization and regionalization were both centralizing reforms, since they attempted to coordinate or consolidate diverse governmental agencies operating in various functional sectors or geographical regions. It is usually claimed that regionalization means decentralization, but in practical terms the only form of decentralization present in such a case is deconcentration, since it involves a better coordination of the regional field officers of the central ministries (<sup>14</sup>). Nevertheless, the net effect of these reforms tends to result in a greater centralization since central government through its field offices coordinates and controls some previously uncoordinated agencies.

The evidence quoted by Harris (1983), shows that, despite the significant decentralization efforts made by Brazil, Mexico and Venezuela, many of the attempts at deconcentrating government have failed due to "unpredicted" factors, such as the lack of confidence in the ability of officials in the regions, the

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14. In this aspect there is coincidence between Harris and Borja who both argue that deconcentration, although not the same as decentralization, may lead to decentralization.

slowness of many central governmental agencies and the lack of regional support, as in the Argentinian case of "forced decentralization".

In sum, it must to be said that decentralization and centralization tendencies coexist despite the important efforts to overcome the latter.

Despite the limitations of the decentralization process in Latin America, some positive results can be mentioned:

Firstly, many distant regions have obtained better access to central government resources and institutions.

Secondly, the administrative and technical capability of regional and local organizations have improved.

Thirdly; new organizations have been established at regional and local levels to plan and manage development (15).

## B. Regional Social Accounting

In the early 1960's, there was much discussion on the validity of designing accounts at the sub-national level, since the impossibility of applying the national accounts system to the local level was clearly recognised. The intention was to design an accounting system to help the analysis of policy issues at a regional level.

One of the earliest works in this area was produced by Stone in 1960 (P.A. Stone 1961); he provided estimates of the regional accounts for the U.K. at aggregate levels for consumption, production and accumulation in each region, as well as the region's account with the central government. Stone treated the public sector in the following manner: consuming and accumulating functions of the central government were abstracted from the regions in which they were placed and were accorded the

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15. The decentralization process of Chile is discussed in section 2.4.

position of a separate region, whereas government producing activities were included with all other forms of production in the region concerned. The armed forces were entirely removed from the regions and were entered on a separate government account.

Stone did not consider some central government expenditures which form part of the regional domestic expenditures, such as schools, hospitals, etc; this is one of the main weaknesses of his work. In fact his contribution is more as a way to use the existing data, rather than as a complete new system of regional accounting.

Although various parts of the G.D.P. were estimated by Stone, the work of Woodward (1970), was the first attempt to disaggregate the majority of the components of regional G.D.P.

The purpose of Woodward was two-fold, to supply an estimate of regional accounts for the U.K., and to provide some suggestions for improvements in the statistical sources. He distributed the components of the G.D.P. and domestic expenditure shown in the National Accounts Blue Book. One important achievement of Woodward's book is the consideration of the "net beneficial expenditure" by the public sector, which corresponds to the regional division of the Blue Book public sector combined current and capital account. Here he excluded all the expenditures which do not directly benefit the residents of the region; this includes most of the central government current expenditure, important parts of its capital expenditure, and all military expenditure in goods and services. Many items of capital expenditure were omitted as well, leaving in the regional account only those items related to environmental and social services, such as schools, hospitals, sewerage and roads; he also included capital expenditure on universities. All these exclusions produced a rather narrow definition of public expenditure in the regional context. For example, the exclusion of capital expenditure on housing seems to bias the figures, as some regions are dependent on the provision of housing by the public sector. His final figures were a result of the available data and data generated by various proxy methods, some of which included strong assumptions.

An alternative approach that avoids many of the problems described earlier was developed by The North Region Strategy Team, under the direction of J. Short. This work was part of a broader work in the United Kingdom.

The emergence of the regional strategies in the early 1970's provided a new impetus for regional data; these strategies were concentrated on the public sector. Some of the strategies such as the West Scotland Plan and the Strategic Plan for the North West attempted to provide data on public expenditure relating to their regions, but their approach made no distinction between the use of public expenditure as a contributor to gross regional product on the one hand, and supplying services on the other.

Public expenditure at a regional level was best approached by the North Region Strategy Team (NRST) They used the annual review of public expenditure made by the government (Public Expenditure Survey Committee PESC). They considered PESC as a framework for their report because:

"It provides the only systematic and comprehensive method available for classifying public expenditure on a consistent programme-by-programme basis, both over time and across all spending authorities" (NRST 1976, 8).

One of the key features of the NRST classification was the distinction made between: a) public expenditure made in a region supplying the services, which were of benefit to the residents of the region rather than the nation as a whole (expenditure made "in and for " a region or regionally relevant expenditure); and b) expenditures which were made " in " a region and contributed to gross regional expenditure. In other words, expenditure in a region was an analysis of total public expenditure, while the analysis of expenditure "in and for" the region covered that part of total public expenditure which was relevant only to the region which directly benefited in social welfare terms. According to Short (1978), for the period 1970-74, regionally relevant public expenditure accounted for 68% of total public expenditure; he also showed that Scotland received 92.3 pounds sterling per capita more of regionally relevant public expenditure than the

average of the country, whereas West Midlands received 73.6 pounds sterling less than the average.

### C. Regional Effects of Public Policies

In this final part of the bibliographical review, it is important to refer to two works which are not directly related to those of the previous section. Both have a comprehensive approach, which is closer to the purpose of this research. Nevertheless, it should be noted that because of some constraints in their methodologies the results are not comparable to the outcomes of this research.

One study of the regional effects of fiscal policy in Chile was undertaken by Boisier (1982). It had the intention of demonstrating the lack of regional neutrality of the fiscal policies in Chile, and the inconsistency between fiscal policy and the national strategy for regional development. In practical terms, it was an attempt to undertake a fiscal incidence study at a regional level.

Boisier started by analysing the relationship between fiscal revenue and expenditure per region, showing that there was a large variability between regions in the amount contributed to the fiscal revenue and the amount spent on them; some regions obtained as much as three times their contribution to the public fisc from government expenditures, whereas others obtained from the government only one quarter of their contribution to it. He then constructed an index, to determine which regions were subsidised from the process of government intervention. The outcome is very clear: only two regions are benefited in net terms from the fiscal process; the rest were made worse off, especially the Valparaiso region, which encompasses the main port, and the majority of the import taxes re concentrated there.

The differences in the regional tax burden originated mainly in their intersectoral composition of economic activity; thus even a "homogeneous or neutral" tax policy induces a differential impact in each region. The regional tax burden is

mainly determined by the proportion of the value added tax in relation to total tax revenue. This proportion is variable depending on the size of the economic sectors.

Boisier's conclusions follow straightforwardly from the preceding arguments:

- Chilean fiscal policy is not neutral, from the regional point of view.
  
- Therefore, fiscal policy does not accord with the regional development policy. This states that the services and social benefits given by the government should be similar in the different regions and geographical areas of the country.
  
- The tax policy is regressive in inter-regional terms, since the tax burden for the richest region is similar to the national average, but the richest region receives more than the average in public expenditures.

The main constraints of Boisier's work is that he took the regional tax and expenditure figures just as they appeared in the Treasury accounts (Tesoreria). This information was gathered by the Tesoreria's field offices with a clear "in a region" criteria; this means that it did not consider really who is actually paying the taxes but where from the taxes are payed. In the case of the Valparaiso region this was be a serious flaw, in that it has the two main ports of the country and, therefore, the majority of the import duties were registered in that region, but those imports were considered for the whole country and not for that single region; for this reason the fiscal revenue arising from those taxes should have been allocated to all regions by a specific criteria. A similar situation can be said to have arisen in relation to government expenditures, since most of them were allocated in Santiago (the capital city), because most ministries had their supplies centre in the capital, but their purchases were distributed throughout the country.

A second study of regional inequalities in social welfare in Chile has been carried out by Raczynski (1986). Her study was



based on the (publicly) available information of the regional expenditures provided by the ministeries. This has two drawbacks:

i. The information is limited only to those areas on which the social ministeries produced regional information of their expenditures. For example, in the case of the Ministry of Health, it included only the expenditures on the National System of Health Services (only two thirds of the total sectoral expenditures), in the case of Social Security, there were no regional estimates at all. This means that overall Rackzynski's social expenditure figures covered only 26% of the total expenditure figures estimated in the present research.

ii. An additional constraint is related to the fact that each ministry prepared their estimates of regional expenditures according to their own methodology. This means that the figures produced were not comparable between ministeries.

iii. Finally, the time periods covered on these series are different.

Raczynski (1986) points out that public expenditures had not benefited equally each of the social sectors nor each of the Chilean regions (<sup>16</sup>). Although she acknowledges that there has been a decrease in health inequalities, measured in terms of infant mortality rates, she claims that there are important inequalities in secondary education. With regards to housing, she points out that housing expenditures had benefited mostly the extreme regions of the country (extreme north and south), but not the regions that had initially a worse situation in this area.

The study concludes by stating that the regional developmental efforts of the country from 1930 to 1973 were based on a strategy led by a planning state aimed at substituting imports; this situation contributed to the concentration of economics and population resources in the big cities, helping to

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16. Raczynski's sectoral conclusions, for health, education, and housing are be considered in each relevant chapter.

increase more the regional inequalities in levels of living. Although she does give some credit to the regionalization process in which the country was involved since 1975, she argues that central government kept its vertical control of the regions and did not transfer authority to them; therefore, she argues that there was a case for deconcentration of central government to field regional offices but not for real decentralization. Raczynski also claims that the regionalization process has been governed by a policy of National Security, privileging the extreme border regions.

Although Raczynski's work does provide a very valuable insight into the theme of regional inequalities in Chile, there are some constraints in her data that may affect some of her conclusions. We expect through this research to be able to produce more accurate estimates of the regional social expenditures and discuss some of the issues raised by her.

## CHAPTER TWO:

### THE CONTEXT OF SOCIAL PLANNING IN CHILE:

#### 2.1. REVIEW OF CHILEAN SOCIAL POLICIES

##### A. Early Social Policies

Prior to the independence of the country (1810) there was no collective effort for the prevention or alleviation of poverty. However, there were some isolated attempts that showed concern for social issues; the Catholic Church promoted from the outset an equal treatment of the native Chileans (aborigenes), providing them with education and culture.

The date of Chilean National Independence coincides basically with the peak of the Industrial Revolution in Europe. The period is characterised by the appearance of the urban wage earner, who worked under severe adverse circumstances and later promoted the social laws in Europe, starting with the Poor Laws in Britain.

By the end of the Nineteenth Century, Chile suffered the effects of its own Industrial Revolution. In contrast with other Latin American countries, Chile had an early industrialization process. The two wars in which Chile was involved during that century, forced the rural peasant to move from the country side to the battle fields through the cities, and many of them never returned to the fields but were overwhelmed by the new discovery of the city. On the other hand, the rapid development of the Nitrate Industry in the north of the country promoted urban concentrations and a growth in the proletariat of the labour force. Under these circumstances, the urban population rose from 27% in 1875 to 38% in 1890. The urbanization and industrialization processes contributed in an important way to the development of the services (Lavin 1987).

## B. The "Social Problem"

At the beginning of the twentieth century, Chile had a large proportion of industrial urban workers, i.e., an early proletariat, whose working conditions were very bad. The main social problems were those related to the working conditions and labour organization. There were also problems involving the family environment, such as inadequate housing facilities, lack of hygiene, malnutrition and illiteracy. This period came to be referred to in Chile as the "social problem", and it marks the beginning of the social legislation of the country.

The only institutions which provided social support were some workers cooperatives and associations, similar to the British Friendly Societies. However, at this time the political parties began to endorse the social demands of the workers.

The election of Alessandri in 1924, marked the beginning of state legislation in the social sector.

### The constitution of the Welfare State and the Middle class

In the period from 1932 to 1973 a variety of new social institutions and services were created, the Labour code (1931), the Popular housing fund (1936), the National Health Service (1952), The Medical Service for Employees, the National Board for School Meals (1953). At the same time, there was an important increase in the number of workers covered by pension funds. The result of this "institutionalization" of the welfare state was a huge increase in the public social expenditures during the period, which rose more than 10 times in real terms and almost four times as a percentage of the G.N.P.

However, the important increases in terms of benefits and beneficiaries of social expenditure did not favour equally the various sectors of the population and ended being financed in an inflationary way. According to Arellano (1985) the increases in social expenditures were a result of the workers demands and pressure groups, which produced a very complicated legislation with a variety of benefits and contributions, according to the

type of work performed or the area of economic activity. There are many examples, to cite two such instances: in the area of social security, family allowances were established in 1937 for private employees, but only in 1953 for blue collar workers; the minimum wage for the workers of the Nitrate Industry was created in 1934, but was made extensive to all industrial workers only in 1956.

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TABLE 2.1.  
THE EVOLUTION OF PUBLIC SOCIAL EXPENDITURE  
1935 - 1981

| YEAR | EXPENDITURE           |          |
|------|-----------------------|----------|
|      | Thous. of Mill.(1981) | As % GNP |
| 1935 | 12.3                  | 5.2      |
| 1945 | 23.3                  | 8.0      |
| 1955 | 55.1                  | 14.9     |
| 1961 | 85.4                  | 17.0     |
| 1965 | 124.2                 | 20.0     |
| 1970 | 206.9                 | 19.9     |
| 1975 | 153.2                 | 18.3     |
| 1981 | 202.1                 | 14.3     |

SOURCE: Arellano (1985).

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By the end of this period, under the government of the Christian Democratic Party (1964-70), the social expenditure reached its peak as 20% of the G.N.P. For the first time in history the government stated a clear social policy, known as the "Redistributive Strategy", which was a global proposal for the social sector in which the state took an important role (Lavin,1987). One of the main aspects of the strategy was to incorporate important groups of the population which had not been assimilated into the "formal" welfare institutions, like the peasants and the urban poor. Nevertheless, despite this good intention, it was not possible to stop the relative improvement of the middle class (Arellano, 1985).

The redistributive strategy of the late 1960's turned into a more radical redistributive strategy in the early 1970's. The political programme of the Popular Unity Government stated from the outset that it was necessary to conduct the country into a transformation process to lead it to a socialist economy (Martner, 1971). The main areas of interest were not only social policy goals, but also the transformation of the Chilean economy into an economy less dependent and less monopolistic; this implied the nationalization of the main foreign industries operating in the country, state control of the banks, and serious attempts to achieve a better distribution of income and wealth.

In relation to social policies and their organization, an important achievement of the period was the elimination of the legal discriminations between blue and white collar workers in the access of each to social services. An additional interesting contribution was the creation of planning and budgeting offices in the Ministries of Education and Health.

Selectivity and technicality in Welfare: The retreat of the state.

At the end of 1973, Chile experienced a coup d'etat, by which the Socialist Government was overthrown and a military Junta took over. In 1974 the new military government made a study of poverty named "The map of extreme poverty", which showed that an important proportion of the poor did not benefit from the social programmes. Therefore, the government with its neo classical economic policy began to restructure the universal programmes. In 1978 a universal means test (ficha C.A.S.) was introduced.

The move towards a selective social policy was now accompanied by a policy of restricting social expenditure, which in 1987 was 19% of G.N.P. . At the same time, a number of changes in the legislation were introduced, the aim being now to eliminate the "artificial" barriers of the social legislation and

to decrease discrimination favouring the different pressure groups.

The principal aspects of this new legislation are reviewed in the next section.

### C. Present Social Policies

The social policies of the Military Government are placed in the context of a neo-classical economic policy, which promotes economic growth and stability with a limited participation of the state.

According to ODEPLAN Social Reports (1982, 1983), the Chilean Social policies are based on the "Principle of Subsidiarity". This means that larger institutions (i.e. The State) should intervene only when the common good cannot be properly attended to through the activities of smaller institutions. In other words, each individual should freely choose his own aims and objectives in life, if these are not contrary to the public good. However, in conditions of poverty the individual is not able to choose, therefore a subsidiary society needs a policy for equality of opportunity.

Equality of opportunity is the final aim in social development, it implies equalizing opportunities from "below to above", through a social net of programmes and benefits. This net will not allow people to be below the minimum established (ODEPLAN 1982).

The principles are defined from the proposal of the government to eliminate extreme poverty and promote equality of opportunity.

The main principles in relation to social policies are <sup>(1)</sup>:

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1.  
According to: Informes Sociales - ODEPLAN 1982 -1986.

1.- To achieve a high and sustained level of economic development:

Social development must be harmonious with economic development, this is the only alternative for eliminating poverty in the long term.

It is impossible to approach social development without economic development, if the latter does not happen only poverty will be distributed.

2.- Subsidiarity:

The state must intervene only in the areas in which the private sector is not interested; this is especially relevant for the alleviation of poverty and the promotion of equal opportunities.

3.- Subsidy and subvention:

The state will transfer a grant in money or in kind to people living under special social circumstances. There are two alternatives:

- Subsidy: A grant of money transferred to a specific individual. Example: Unemployment subsidy.

- Subvention: A grant of money transferred to an institution to provide for a service. Example: Educational subventions.

4.- Progressiveness (Targeting):

State help should reach the poor, avoiding spillovers to other groups of the population. Social policies should be targeted on the poor.

The main elements of the strategy are the following (ODEPLAN, 1982):

1.- Direct Subsidies (2):

Subsidies must have known beneficiaries and known benefits,

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2. In this case the word "subsidies", is used as an equivalent meaning to the wording "social programmes". The word subsidies, is used here by ODEPLAN to stress that these programmes involve no costs for the beneficiaries, i.e., they are a free state transfer to them.



this is in contrast to indirect subsidies, which do not define specific beneficiaries, such as a price subsidization of bread.

2.- Progressive subsidies:

Subsidies should be greater for those in poorer conditions. Subsidies are regressive when they benefit rich families.

To achieve the aim of targeting the social subsidies on the poor, the government designed a national means test, which consists of a survey that asks each poor family about their living conditions - housing, sewerage, overcrowding, occupation, income and wealth. With this information an index is calculated to stratify the population and therefore determine if they are or are not potential beneficiaries of state help.

3.- Decentralized subsidies:

Subsidies should be decentralised in order to offer a benefit closer to local needs and resources. Under the heading of decentralization, ODEPLAN (1982) emphasizes an efficiency element. Through decentralization the government attempts to reach people with higher levels of benefits, as bureaucracy and intermediaries will diminish.

4.- Integral Subsidies:

Subsidies should be linked since poverty is a multifactorial phenomenon, therefore it is important to attack simultaneously all the elements causing poverty.

5.- Rationalize the administration of social services

A further element is included in the 1986 Social Report (ODEPLAN 1986). It is claimed that the quantity and the quality of the programmes and services will also depend on the costs and procedures for producing them. For this reason it is necessary to operate with low costs of administration and efficiency in the use of resources. Coordination between services should also be achieved.

In summary, the present Chilean social policy is a selective strategy intended to achieve efficiency in eliminating extreme poverty. Therefore, it is not a universal welfare state but corresponds more closely to a Basic Needs strategy.

The selectivity and targeting aims of the Chilean social strategy appear as a move to a residualist model of welfare, with a strong commitment to selectivist forms of welfare provision, supplemented, where necessary, by universalist services (Pinker, 1971). This model fits the neo-liberal policies adopted by the government. In contrast to other Latin American countries, Chile did have an incipient institutional model of welfare, with an important disposition for universal forms of welfare provision and equality. Therefore, what we are seeing now is a retreat of state finance in the social sector, but the country is still trying to maintain (or even improve) the traditional forms of welfare provision for the poor. For the middle class, the state is basically regulating the provision of welfare to other institutions like the private sector. To some extent the evolution of the Chilean social policies are similar to those of Britain after the introduction of the neo-classical model.

It is difficult to qualify Chile under one of the social planning models described earlier. According to ODEPLAN there is an important aim of achieving coordination between social services, but this seems to be a desire more than a reality. As we will describe in the next section, there are no specific institutions performing this task except for ad hoc meetings; therefore it is not possible to envisage Social planning as social service planning.

At the same time, the government has stated that social policies should be linked to economic ones and that there is no social development unless there is an economic one. This gives an idea of social developmental planning, since the two areas should be considered simultaneously. However, in practice there is usually a primacy of economic aims over social ones.

## 2.2. PLANNING AND SOCIAL PLANNING IN CHILE

Early attempts at planning in Chile may be traced to the late thirties. Two elements interacted in the creation of the Corporation for Production (CORFO) in 1939, the earthquake of January, that year, and the election of the Popular Front (united front of the left). These two elements helped in the creation of solidarity consciousness and an environment for state intervention.

The depression of the thirties also helped to convince pressure groups of the need to be less dependent upon external conditions. As a result, the state assumed a more active role in the organization of the national economy. Under these circumstances, one of the first tasks of CORFO was the preparation of a general plan to promote production (1939), its main purpose being to raise the living standards of the population.

Despite efforts of CORFO, it was impossible to formulate a plan due to data constraints and the lack of adequate professionals (Contreras, 1971). Therefore by 1943, one of the main objectives of the institution was to research into population and national income.

The Department of Planning and Studies was created in 1950, and was commissioned to elaborate the Ten-Year Plan (1961-1970). The plan was to be coordinated by a new institution: the Corporation for Economic Programming and Reconstruction (COPEPE), which linked CORFO with other ministries, such as Finance, Public Works, and Economic Affairs. Nevertheless, attempts to produce a formal planning scheme failed again. In contrast to the Plan to promote production, the main cause of failure did not lie in administrative problems, such as data constraints, but in the government's lack of conviction in planning. In fact, the plan did not influence much, and national policies continued to be dominated by short term considerations (Sunkel, 1969). The plan was used mainly as an instrument to obtain international funding, as this was a requirement for obtaining economic aid. Perhaps,

one of its major achievements was to demonstrate for the first time that a public institution was capable of formulating a plan.

Although the achievements of the planning initiatives were not appreciated by the people, the efforts of CORFO helped to create a more systematic approach to decision making in the public sector. The presidential election of 1964 revealed that there existed clear consensus in all the political parties concerning the necessity to establish an institution with clear tasks in the area of planning.

The government of the Christian Democrats began the study of a bill for the creation of a National Planning Office (ODEPLAN), which was presented to Parliament in 1967. The bill suffered some important changes before approval; ODEPLAN lost a mandatory right to control the execution of the plans as well as control over its budget. In other words, the Ministry of Finance held primacy over the new planning institution. In fact, as a former minister of Finance acknowledged (Molina, 1972) there has been a tradition in Chile by which the Ministry of Finance has the main responsibility in formulating and applying the economic policy. He goes further to mention that sectoral planning offices will have only an advisory role in decision management unless the minister is a charismatic person who can influence the Minister of Finance.

In contrast to previous governments, the Christian Democrats had a clear commitment to planning, both in national and in regional terms. According to their ideology they wanted to create more popular participation and social welfare. As a result of this, planning was viewed as an "innovative" tool to legitimize the new social objectives and as an alternative means to translate the general value propositions into institutional arrangements (Friedmann, 1966). However, in practice it was apparent that the planners basically followed the traditional Rational Comprehensive Model of planning, and therefore there was a mismatch between the ideology and the proposals developed from this ideology, and the practical policies and strategies of the

government. The same situation arose in regional planning-to solve the "the regional problem" was attempted on a national scale, where interesting national proposals existed without clear operational references for each region.

During the period of the socialist government (1970-1973), the basic aims and proposals of the planning system were maintained, although its rhetoric changed to a socialist one proposing areas of social property. The government tried to make planning a more participatory task by publishing the National Plan of the Economy (1971-76) in a popular edition for discussion. Nevertheless, the efforts proved insufficient and the activity continued to be an elitist one, dominated by qualified professionals.

Although the country was one of the first in Latin America to establish a National Planning Office at a Ministerial level, the outcome of many years of work is still doubtful; the majority of the National Development Plans are kept in different libraries where they are hardly ever consulted. The most surprising feature of the plans is that, despite the enormous ideological differences separating the past three governments, they include, in broad terms, similar policies. This seems to be a clear reflection of the scant relevance that national planning has had (3).

The military government has followed the same planning pattern and style as the previous governments. It prepared enormous plans, including sections for each area of the economy and each region. On each of these sections, it included a diagnosis, a description of general and specific policies, actions and goals. However, these were prepared in the same way as previous governments, despite important ideological differences. From the early 1980's many of the plans made in the earlier years are now "under revision", an elegant name for dismissal. Since 1979 there has been a clear change in direction: the economic liberalization of the country is evident, and

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3. Boisier (1978) reaches a similar conclusion with regards to regional plans.

therefore it is no longer possible to match an "interventionist" type of planning with the neo-liberal economic policy. In fact, according to the description of the planning styles made in the previous chapter, the country passed through at least three of the four planning styles reviewed for Latin America, from a market partially reformed, to a regulated market which was almost centrally planned, and then to a free market, in which the state has a subsidiary role in the allocation of resources.

There are three new planning instruments in this period that are worthy of explanation:

1. The abandonment of the National Development Plans, produced a gap in the field of policies at a national level. This gap is filled from 1979 with the Socio-economic Programme, which is a general description of the sectoral policy priorities of the government for a couple of years, which are reassessed <sup>(4)</sup> after each year. These Socio-economic Programmes only provide policies at a ministerial level, there are no general policy statements about government aims.

2. There is a change in regional planning, too. The Regional Plans no longer define areas of development, growth poles, areas of selective migration, etc. Instead they are a crude diagnosis of the socioeconomic regional situation, together with a list of projects that are meant to alleviate the problems analyzed in the diagnosis. Despite the practical approach of the new regional plans, it is very difficult to regard them as such, considering that the structure of the plans is defined centrally, and that the regions have no discretion on it. At the same time most of the statistical information to be used in the diagnosis was also provided centrally. Therefore, the major achievement of the regional plan, as it was with the first attempts at planning in Chile, is their capacity to motivate regional bureaucrats and help them to understand their role as planners. As for the practical results of the plans, the regional diagnosis usually comprised issues unfamiliar to the centre, and yet it has to be acknowledged that most of the projects identified and listed on

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4. Rolled-over.

the plan, are not a result of it, but were commonly identified before the plan.

3. Finally, the Ministerial Programmes are prepared annually by ODEPLAN in conjunction with each ministry. These programmes comprise the most relevant tasks to be undertaken during the following year. These tasks do not include normal or current activities, and cannot involve additional expenditures. Their utility lies in that state clear tasks which must be completed before ad deadline. They remain the only planning instrument of the government to be periodically assessed and also monitored exclusively by specific personnel. Therefore, the ministerial programmes can be described as the only planning procedure of real use in the last eight years.

In the present organization of the country, there is no official body assigned to Social Planning as such. In ODEPLAN, the sectoralists of the planning department work in conjunction with the ministries to which they are assigned. But coordination between them is not part of their current activities, and consists only of ad hoc meetings to deal with specific problems. Other ministerial planning offices do not have regular joint meetings. The only body that could claim to have the power to coordinate the social services is the Council of Social Ministries, integrated by the ministries of the social area (Interior, Education, Housing, Social security, Health, ODEPLAN and other general administration bodies). In practice, the Council of Social Ministries only meets three to four times during the year to discuss the allocation of the Social Fund, which is dedicated solely to investment in the social sector, and is a small proportion of the expenditure in the sector. However, since 1984, due to financial constraints the resources available for the fund decreased considerably, ending up to be less than 2% of the social sector expenditures. This change occurred the same time that the meetings of the Council became less and less frequent.

In 1984 the Government created the Secretariat for Social Development and Assistance, to fill the void in the area of Social Planning. Despite this well intentioned initiative, the

new institution does not have a clear place in the bureaucratic structure of the public sector. Therefore its instructions or recommendations are subject to the criteria of the people in charge of the Secretariat. There is no legal support.



## 2.3. PUBLIC SECTOR FINANCE AND ORGANIZATION

### A. The Organization of Public Sector Finances and Expenditures

To understand the Chilean public sector finance and organization it is necessary to start by developing a broad idea of the different sources of revenue and expenditure available to the country.

In Table 2.2. we can observe the Chilean public finances with an economic classification of revenues and expenditures. The structure introduced in this table is based on the year 1987, but it has been very stable for the last 10 years. As might be expected, the main source of revenue for the public sector is taxation, which accounts for almost 60% of total revenues. After tax revenues, operational revenues obtained from the receipts of State enterprises and the charges from the use of certain public services, comprise 13% of total public revenues. Other important areas of revenue are social security contributions (5%), and the sale of assets (7%), which is a programme for disposing of areas of public property.

In relation to the expenditure side, we note in the first place that social security imposes the biggest burden on the budget, accounting for 23% of total public expenditures, this includes the payment of all types of pensions and labour injuries compensation. After social security, current transfers comprise almost 17% of total public expenditures. Current transfers are all outlays for which there are no reciprocal retributions; these comprise principally transfers to the private sector and to some other public institutions. Transfers to the private sector may usually involve a contribution to private institutions rendering a service to the public sector, like a ministerial nursery, or to international agencies with which the state is affiliated. Transfers to public institutions are contributions that a public institution will make to finance other public institutions related to it; for example, the National Fund of Health transfers financial resources to finance the National System of Health Services. In this case, it is necessary to elaborate the actual

expenditure figures, since the same money can be counted twice, in the "donor" and the "recipient" institution; a procedure to deal with this problem is described in Chapter 4.

Personnel is the other important area of expenditure, since public sector activities include a variety of services that are highly intensive in labour. For 1987, capital investment in personnel was almost 9%. This area of expenditure has ranged from 5.5% to 10% of total expenditures during the last ten years.

| TABLE No. 2.2.                              |                  |              |
|---|------------------|--------------|
| CHILEAN PUBLIC FINANCES - ECONOMIC CLASSIF. |                  |              |
| (Millons of Pesos - 1987)                   |                  |              |
| REVENUE                                     |                  | %            |
| Operational                                 | 211,204          | 13.4         |
| Social Security Contrib.                    | 84,532           | 5.3          |
| Tax Revs.                                   | 933,005          | 59.0         |
| Sale Assets                                 | 106,916          | 6.8          |
| Loans Recover.                              | 27,370           | 1.7          |
| Transfers                                   | 16,917           | 1.1          |
| Other Revs.                                 | 84,383           | 5.3          |
| Debt  | 111,134          | 7.0          |
| Prev. Years                                 | 4,864            | 0.3          |
| <b>TOTAL</b>                                | <b>1,580,325</b> | <b>100.0</b> |
| EXPENDITURE                                 |                  |              |
| Personnel                                   | 235,511          | 16.3         |
| G.&S.Consump.                               | 120,786          | 8.4          |
| G.&S. Produc.                               | 24,153           | 1.7          |
| Soc.Sec. Payments                           | 332,619          | 23.1         |
| Curr.Transfers                              | 241,965          | 16.8         |
| Transf.Servs.                               | 3,943            | 0.3          |
| Capital Inv.                                | 128,192          | 8.9          |
| Financ.Inv.                                 | 93,348           | 6.5          |
| Cap.Transf.                                 | 28,091           | 1.9          |
| Pay.Public Debt                             | 223,211          | 15.5         |
| Prev. Years                                 | 8,783            | 0.6          |
|   | <b>1,440,600</b> | <b>100.0</b> |

SOURCE:

Contraloria General de la Republica  
Estados de Ejecucion Presupuestaria 1987

| TABLE No. 2.3.<br>CHILEAN PUBLIC FINANCES-MINISTERIAL CLASSIFICATION<br>(Millions of Pesos 1987) |           |       |             |       |
|--|-----------|-------|-------------|-------|
|  | REVENUE   | %     | EXPENDITURE | %     |
| Gen. Adm.  | 948       | 0.1   | 11,722      | 0.8   |
| Interior   | 81,233    | 5.1   | 130,766     | 9.1   |
| Foreign Aff.   | 238       | 0.0   | 16,512      | 1.1   |
| Economic Aff.  | 139,466   | 8.8   | 115,834     | 8.0   |
| Finance  | 17,372    | 1.1   | 21,708      | 1.5   |
| Education  | 687       | 0.0   | 104,180     | 7.2   |
| Justice  | 1,773     | 0.1   | 16,003      | 1.1   |
| Defense  | 13,815    | 0.9   | 147,619     | 10.2  |
| Public works   | 32,518    | 2.1   | 67,732      | 4.7   |
| Agriculture  | 8,646     | 0.5   | 15,773      | 1.1   |
| Nat. Goods   | 548       | 0.0   | 782         | 0.1   |
| Labour & Soc. Sec.   | 111,045   | 7.0   | 350,351     | 24.3  |
| Health   | 24,670    | 1.6   | 98,571      | 6.8   |
| Mining   | 278       | 0.0   | 2,447       | 0.2   |
| Housing  | 20,942    | 1.3   | 48,602      | 3.4   |
| Transport  | 881       | 0.1   | 1,600       | 0.1   |
| Gen. Secret.   | 2         | 0.0   | 2,096       | 0.1   |
| Const. Trib.   | 7         | 0.0   | 44          | 0.0   |
| TREASURY   | 1,125,257 | 71.2  | 288,267     | 20.0  |
| TOTAL  | 1,580,325 | 100.0 | 1,440,609   | 100.0 |

SOURCE:

Contraloria General de la Republica  
Estados de Ejecucion Presupuestaria 1987

If we now look to Table 2.3., we can observe the ministerial revenues and expenditures. The Treasury accumulates most of the public sector revenues from taxation and some other minor sources. Generally speaking, the ministries do not contribute much to fiscal revenues. one exception is Economic Affairs, which concentrates the operational revenues of most public enterprises. With regards to the social ministries, we observe that Labour and Social Security and Health produce some revenue, coming from the contributions of the workers to cover the expenses of these services.

The Treasury is the main financial source for each of the ministries. From it, two streams depart. One is called "free fiscal contribution", which finances ministerial current expenditures. The share of the fiscal contribution in each ministerial budget is variable, some ministries, like Education, with modest operational revenues will be financed almost 99% from

the "free fiscal contribution", whereas Economic Affairs will receive no fiscal contribution at all. In the case of the other social ministries, such as Labour and Social Security, Health and Housing, between 55% to 75% of their revenues will come from the fiscal contribution. The other stream of resources from the Treasury is called special expenditure programmes; this will be explained later.

Looking now to the ministerial expenditures, we note that Labour and Social Security have the biggest share of all (5), followed by the Treasury special expenditure programmes. These comprise three areas: Subsidies, Complementary Operations and the Programme for the Payment of the Public Debt. Other important expenditure ministries are Interior, Economic Affairs, Education Defense and Health.

In the Chilean public finance literature it is common to find different definitions of what constitutes the public social expenditures. The most usual definition is the one adopted by the Central Bank of Chile, which considers in their entirety budgets of the ministries of of Education, Labour and Social Security, Health, and housing; in addition to some special social programmes of the Ministry of the Interior, the National Childhood Service of the Ministry of Justice, and some so called "Social Assistance programmes" financed directly from the Treasury subsidies programme. Under this definition, social expenditures comprise 62.8% of total public expenditures.

## B. Budgetary procedure

Budgeting is a form of planning. The budgetary process is what relates the plans and social policies of a government to the public institutions which provide or subsidize social services. Therefore, the budget should embody the ruling party's priorities and aspirations. As Waterson (1965) has remarked, the nature of the link between the plan and the budget is a test whether a government is serious about its plan and intends to carry it out.

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5. The state has assumed the burden of the transition from a "pay as you go" system of pensions to one of Individual Capitalization, this will be explained in Chapter 8.

It seems important to spend some time describing the budgetary process in Chile, since it casts light on how expenditure decisions are taken. The budgetary cycle follows the traditional pattern of a national budget of any western country. There is not much literature published on the subject. The information provided here relies on some publications by ODEPLAN, and some personal interviews conducted in the Budget Office by the author. Therefore, the names given to some stages of the cycle are not official but they are used for methodological reasons. (figure 2.1.)

The cycle starts in the formulation phase with an analysis made by the Budget Office makes of the previous four budgets, and a detailed survey of how the public accounts will be at the end of the fiscal year. All the figures under analysis are adjusted to constant prices, giving the Budget Office a clear picture of the evolution of real expenditure over the last few years. This is the first approximation of the budget, from which many policies and expenditure constraints are derived. It is with this information that the exploratory budget is made. In the formulation phase we identified some stages (in section 1.3.), the Chilean Exploratory Budget, corresponds basically to the stage of the "preparation of initial estimates".

Four criteria are used for the actual delineation of the exploratory budget:

i) Special Expenditures: Made just once and with no reason to assume that they will be repeated. Example: Expenditures in the organization of a special conference.

ii) Committed Expenditures: Expenditures that were undertaken in previous years and are still being paid.

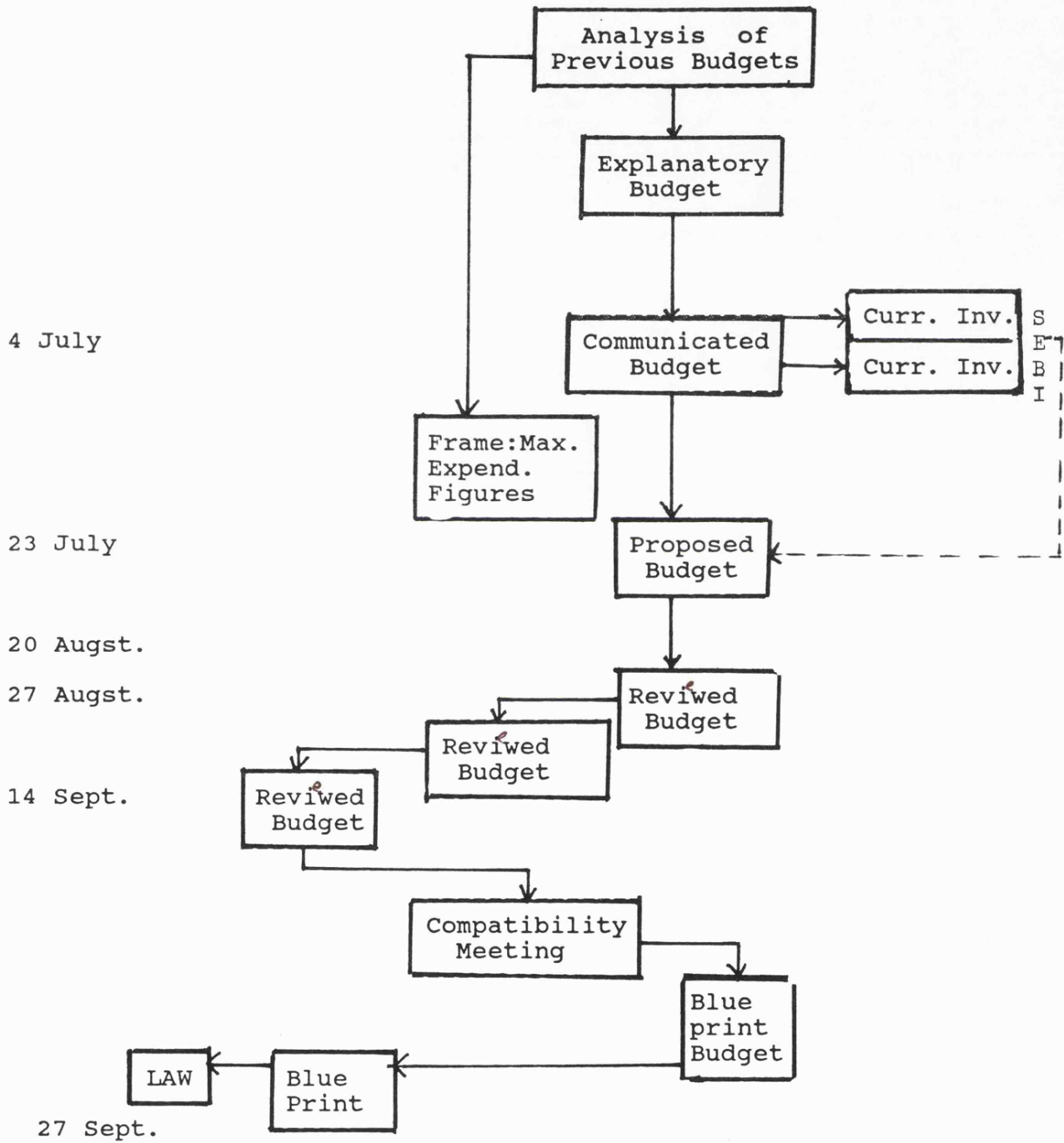
iii) Assessment of proposed expenditures relative to actual expenditures: To have a clear picture of the deviations between what is budgeted and actual expenditures.

iv) Policy criteria: Allows for possible policy changes.

FIGURE 2.1.

BUDGETARY PROCESS

LEGIS.POW. PRESIDENT M.FINANCE BUD.OFF MIN X,Y



The exploratory budget is sent to the Director of the BO for approval. Once it has been approved, it is communicated to the different ministries, (thus the budget is named Communicated Budget). This approach follows a devolution model, as mentioned in chapter one. The communicated budget gives a clear frame of expenditure to each ministry, divided among Departments or services within the ministries, and by current and investment expenditures. The communicated budget is accompanied with the Financial Basis (Bases Financieras) or budget circular, which provides information related to the expenditure policies of the year. For example decisions concerning further personnel recruitment or the investement of surpluses in the financial market would fall under this category. The financial basis also give information about the expected rate of inflation and other economic variables. In relation to investment expenditures, the ministries must include every project adopted by them in a form according to the Basic Statistical System for Investment (SEBI). This form is sent to ODEPLAN for approval. This information can be sent any time during the fiscal year. Thus in practical terms the communicated budget only tells the ministries how many of the pre-approved projects will be financed (6).

The budgets produced by each ministry according to the described instructions are compiled by the Budget Office without any changes. This stage is called the Proposed Budget. This stage recalls the aggregative model for the determination of public expenditure, however in this case the discretion that each service has is very restricted by the communicated budget and the financial basis. This Proposed Budget is later constraisted with a "frame for maximum expenditure figures", which contains the limits on which the following bargaining procedure may take place. This frame has been prepared simultaneously with the exploratory budget, and is aimed at preventing the customary policy of asking for more funds to obtain what is necessary; for the same reasons the communicated budget is usually designed a bit "tight".

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6. In theory ODEPLAN, is only an advisor in investment matters to the Budget Office, but in practical terms projects not approved by it are hardly financed, unless they have a very important political implication to override ODEPLAN's evaluation

It is with the proposed budget and the notion of the Budget Office for the maximum expenditure figures that a series of discussions are started; firstly, there is an "internal" discussion between Budget Office and ODEPLAN (as advisor), secondly the "open" discussions are between the Budget Office and each ministry about current expenditure, and then again with ODEPLAN on investment. At the end of the discussions the budget is re-arranged and presented to the Director of the Budget Office for approval. The approved budget is called Reviewed Budget-Budget Office, and is sent at the same time to the Minister of Finance. The Minister analyzes the compatibility of the reviewed budget with the fiscal and monetary policies, also in respect to the estimated economic growth, taxation yield and other macroeconomic variables; the reviewed budget is now Reviewed Budget MF.

It is important to note that up to this previous stage, the nature of the budgetary cycle is very incremental, in the sense that the main estimates and analyses are based on previous expenditures. This is confirmed by the fact that in the bargaining meetings the main discussion concerns the additions to past current expenditures or decreases in the future budget in relation to the previous one. However, with regards to investment expenditures some features of the rational comprehensive method may be found. There is a consideration of means versus ends by using Cost Benefit Analysis and other forms of rational decision making. At the same time, the description of each project in accordance to the forms of the Basic Statistical System for Investment follows a rational approach to decision making. Unfortunately, investment is a minor proportion of total public expenditure.

In the final stages of the budgetary cycle, the Minister of Finance presents the budget to the President, who considers the political reality of the country, and may be influenced by senior government officials, such as the Regional Governors (Intendentes). After this stage, the budget is given legal form and then introduced to the Legislature for final approval. In Chile during the military rule, the legislative power was in the



hands of the Military Junta; this was made up of the Chief officers of the armed forces. Therefore, the clear institutional links that exist between the legislative and the executive bodies avoid the classical conflict of authorisation. The approved budget starts on the 1st. of January of the following year. (see figure 2.1. for dates).

In relation to the nature of the budgetary process, and especially the implementation or execution phase in poor countries, it is interesting to make a comparison between some of the elements described by Caiden and Wildavsky (1974).

1.- Changes in the budget: The main changes in the Original budget, the one approved by the Legislative power, in relation to the final one at the end of the year, having been modified by Law decrees, are basically due to:

i) Deliberate under-estimation of expenditure in order to have the departmental budget approved.

ii) Wrong estimation of inflation or internal revenues, by both Budget Office or Ministry, and the consequent difficulty in meeting the programmed expenditures. Some services may deliberately underestimate their operational revenues, in order to receive a bigger share of the public fisc. However, present legislation requires a special Decree to incorporate additional revenues, preventing the services from underestimating this because the funds sooner or later will have to be declared to the Ministry of Finance.

iii) The emergence of unexpected situations which are deemed important for political or practical reasons and, to a minor extent, "formal" changes in policy during the year.

Although it is common to expect that not a single figure would remain exactly as it was in the Budgetary law after all the changes, the structure of expenditure is

usually maintained despite the possible modifications.

2.- Budget Coverage: Unlike many developing countries, the coverage of public expenditure in the budget is very complete. There are now some institutions not included in it, so called "decentralized institutions" (7), but all of them are accountable to the Comptroller. In previous administrations there used to be some expenditures not included in the budget (Cuentas extra-presupuestarias) which were related to earmarked taxes.

3.- Uncertainty: In general the cash flow from the Budget Office to the ministries has to be renegotiated every month, but usually there are no unexpected variations to the official one, with the exception of extraordinary hardships. However, it is known that at a ministerial level, it is common practice that the ministerial budget offices try to retain as much of the funds as possible in order to overcome difficult situations which may arise, therefore at a service level there is a degree of uncertainty in the availability of funds.

The Evaluation phase is restricted basically to a financial assessment of what is really spent in relation to the planned expenditure, there is also global financial auditing; both types of assessment are done by the General Comptroller. The auditing corresponds to a review in order to acknowledge that the expenditures were made in accordance with the budgetary law.

Although every ministry or department must present with its budget a list of the main objectives and goals of the programmes or projects on which money is being spent, there is no performance auditing in Chile. There is no institution to analyse the effectiveness or efficiency of the programmes. According to some Budget Office officials, the majority of the objectives are repeated every year, and "we have no time to read through them", or "we will only be able to pay attention to the justification of a new programme or area of expenditure". This is again a feature of incrementalism: since the bureaucrat has no time for general

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7. These "decentralized" institutions should be considered as delegated institutions in our terminology.

policies or values, they are forced to focus on marginal changes.

In conclusion, from the previous remarks it is clear that if there is no assessment of goals in relation to expenditure, it is difficult to expect clear links between the budget and planning.

There are usually some different approaches between planners and budgeters; planners tend to be spenders and have a high regard for investment spending, whereas budget officials are usually concerned with administration and control. As we mentioned earlier, the National Planning Office has no right to enforce the national or regional plans, and as we saw in the budgetary process, its participation is restricted to the investment part of the budget. Therefore, the only formal links between the budget and planning are related to the investment sector, where the planning institution sets priorities for investment, which are considered for the approval of the projects. On the other hand ODEPLAN, through the ministerial programmes, occasionally studies one or two programmes of expenditure, this may affect the budget structure during the next period.

### C. The Development of Social Expenditures

Before presenting some figures about the evolution of social expenditures in Chile, it is necessary to discuss briefly the exact meaning of the concept: "Social expenditure".

There are two issues to be analysed here: one is related to the institutional coverage, and the other is related to the definition.

In relation to the institutional coverage, it has to be said that during the last 15 years there have been important redefinitions of social service roles and activities, leading to the disappearance of some services and the creation of others. This has provoked changes in the institutions and the areas of expenditure considered as "social expenditure". For example, the Treasury is now paying at its own expense the full cost of family

allowances, which used to have a mixed finance from the pension funds and the Treasury prior to 1980. A few studies have tried to trace the institutional coverage prior to 1975 in order to have a clear reference for comparison, others take the present structure as given.

The social expenditure definition to be considered in the present work, is derived from the Central Bank's definition introduced in section 2.3.A.. However, we have excluded some few programmes from the latter definition because of lack of information and difficulties in obtaining access to the bureaucrats in charge of them. Therefore, Public Social Expenditure in this study will be defined as the budgets of the Ministries of Education, Labour and Social Security, Health and Housing, the Family Allowance Fund for Poor Families from the Ministry of Interior, the Special Employment Programmes and the contribution to the private pension funds by the Fund for Family allowances and unemployment subsidies from the Treasury (See Figure 2.2. for a clearer picture). This definition will be used as far as possible, but in some cases the appropriate analysis can only be carried out using a different definition.

With regards to different definitions of social expenditures, a distinction has to be made between public and fiscal social expenditures. Public Social Expenditure, the concept used in this study, includes all the expenditures being financed from ministerial resources (operational revenues, sale of assets, and others) and the free fiscal contribution. Another measure used in other studies is Fiscal Social Expenditures or net expenditures, it includes only the free fiscal contribution to each ministry, this is the subsidy element of public expenditure, or all that is financed directly from taxation. Finally, it is possible to find a further definition of social expenditures in the Chilean literature. The definition of Direct Social Expenditures includes only the "free fiscal contribution", this is similar to Fiscal Social Expenditures, except that all the expenditures related to the social services bureaucracy are not included. In this way the Direct Social Expenditures includes only the subsidy component of public expenditure that actually reaches the families.

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FIGURE 2.2

THE DEFINITION OF PUBLIC SOCIAL EXPENDITURES

| MINISTRY OR PROGRAMME         | AREA INCLUDED   |
|-------------------------------|---|
| Health                        | All   |
| Education                     | All   |
| Housing                       | All   |
| Labour and Social Security    | All   |
| Interior - Social Fund        | Social Fund for the finance of family allowances for poor families.   |
| Treasury- Subsidies Programme | - Programme for Unemployment Absortion.<br>- Municipal fund for intensive employment projects.<br>- Fund for family allowances and unemployment subsidies (Private sector) <sup>(8)</sup> . |

In the present work, we will use the concept of public social expenditure, since it is a broader definition and considers the total of resources on which the services really have to operate. Therefore, it includes the fiscal social expenditures. At the same time, it is the definition adopted by many international institutions, such as the International Monetary Fund <sup>(9)</sup>.

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8. This fund finances family allowances and unemployment subsidies for workers contributing to either public or private social security schemes. As the public pension schemes will receive the funds for family allowances and unemployment subsidies as a transfer from the Treasury, we consider those funds in the "recipient" institution budgets (i.e. the pension funds). In the case of family allowances and unemployment subsidies paid through private pension funds, only the transfer from the Treasury must be considered as a net expenditure.

9. It should be noted that the ministerial expenditure figures introduced in the sectoral chapters will not

TABLE No. 2.4.  
CHILEAN PUBLIC SOCIAL EXPENDITURES 1970-85  
(as % of G.N.P.)

|                        | 1970  | 1973  | 1974  | 1975  | 1976  | 1977  | 1978  | 1979  | 1980  | 1981  | 1982  | 1983  | 1984  | 1985  |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Interior               | 0.25  | 0.25  | 0.22  | 0.42  | 0.42  | 0.43  | 0.40  | 0.37  | 0.41  | 0.33  | 0.86  | 0.55  | 0.38  | 0.20  |
| Education              | 4.42  | 4.43  | 4.27  | 4.21  | 4.00  | 4.51  | 4.31  | 4.11  | 3.95  | 4.32  | 5.05  | 4.39  | 4.25  | 4.14  |
| Labour & Soc.Sec.      | 9.67  | 7.27  | 6.87  | 9.42  | 7.17  | 7.44  | 7.27  | 7.40  | 7.75  | 9.18  | 11.75 | 10.85 | 10.95 | 10.08 |
| Health                 | 3.05  | 2.57  | 2.45  | 2.40  | 2.41  | 2.75  | 2.81  | 2.55  | 2.55  | 2.75  | 3.38  | 2.89  | 2.84  | 2.59  |
| Housing                | 2.35  | 3.04  | 2.63  | 1.68  | 1.47  | 1.84  | 1.17  | 1.26  | 1.28  | 1.20  | 0.87  | 0.76  | 1.01  | 1.32  |
| Treasury-Asist. Progs. | 0.00  | 0.00  | 0.00  | 0.41  | 1.16  | 0.95  | 0.68  | 0.54  | 0.58  | 0.28  | 0.63  | 1.46  | 1.06  | 0.98  |
| TOTAL                  | 19.74 | 17.56 | 16.44 | 18.54 | 16.63 | 17.92 | 16.64 | 16.23 | 16.52 | 18.06 | 22.54 | 20.90 | 20.49 | 19.31 |

SOURCE:

Haindl, Budinich and Irarrazaval (1989)

The evolution of public social expenditures in relation to G.N.P. can be appreciated on Table 2.4. The series shows that for the earlier 1980s social expenditures have been maintained in the region of 20% of G.N.P., this constitutes an increase in comparison to the 1970's trend. Social expenditure reaches its peak in 1982 being 22.5% of G.N.P. If we compare Chile's social expenditure figures with those of other Latin American countries, we note that Chile has the highest expenditure figure of the Latin American countries considered in Section 1.2..

One important property for social expenditures to have is to respond to people's needs in difficult periods of the economy. In the economist's language, it should be counter-cyclical. From the table we can appreciate that social expenditures reached a peak in 1982, when the external debt recession was hitting Chile in a very strong way.

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necessarily be identical to those of the Comptroller described in Table 2.5. The differences arise from the use of different consumer price indexes, the treatment of transfers and the exclusion of some items of expenditure.

TABLE No. 2.5.  
PUBLIC SOCIAL EXPENDITURES  
(Millions of 1987 Pesos)

|                      | 1978    | 1979    | 1980    | 1981    | 1982    | 1983    | 1984    | 1985    | 1986    | 1987    |
|----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Interior Social Fund |         |         | 4,029   | 1,450   | 20,911  | 12,806  | 9,547   | 4,890   | 11,717  | 5,770   |
| Education            | 92,221  | 110,647 | 100,376 | 129,104 | 138,254 | 115,956 | 118,256 | 123,670 | 115,619 | 104,180 |
| Labour & Soc.Sec.    | 349,483 | 322,796 | 360,565 | 384,934 | 450,007 | 359,493 | 362,672 | 352,432 | 351,057 | 350,351 |
| Health               | 96,231  | 106,131 | 102,856 | 116,180 | 126,158 | 104,725 | 105,636 | 100,829 | 97,736  | 98,571  |
| Housing              | 39,036  | 52,715  | 51,671  | 48,426  | 34,204  | 27,142  | 36,802  | 48,715  | 43,537  | 48,602  |
| TOTAL                | 576,971 | 592,289 | 619,496 | 680,093 | 769,533 | 620,122 | 632,912 | 630,535 | 619,666 | 607,475 |

STRUCTURE OF PUBLIC SOCIAL EXPENDITURES  
(% of total Social Expenditures)

|                      | 1978  | 1979  | 1980  | 1981  | 1982  | 1983  | 1984  | 1985  | 1986  | 1987  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Interior Social Fund | 0.0   | 0.0   | 0.7   | 0.2   | 2.7   | 2.1   | 1.5   | 0.8   | 1.9   | 0.9   |
| Education            | 16.0  | 18.7  | 16.2  | 19.0  | 18.0  | 18.7  | 18.7  | 19.6  | 18.7  | 17.1  |
| Labour & Soc.Sec.    | 60.6  | 54.5  | 58.2  | 56.6  | 58.5  | 58.0  | 57.3  | 55.9  | 56.7  | 57.7  |
| Health               | 16.7  | 17.9  | 16.6  | 17.1  | 16.4  | 16.9  | 16.7  | 16.0  | 15.8  | 16.2  |
| Housing              | 6.8   | 8.9   | 8.3   | 7.1   | 4.4   | 4.4   | 5.8   | 7.7   | 7.0   | 8.0   |
| TOTAL                | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

SOURCE:

Contraloría General de la Republica  
Estados de Ejecución Presupuestaria 1987

The structure of social expenditure can be observed in a more recent series including 1986 and 1987 (Table 2.5.). We note that Social Security has varied from 55 to 61% of total social expenditures. This comprises not only the payment of pensions, but some social security subsidies such as unemployment subsidies, maternal allowances and others. In the case of education it ranges from 16 to almost 20% of social expenditures; its share has been relatively constant, although it increased after 1981-82 when the municipalization process of

education was introduced. Health care, as one of the most stable components, has maintained its share of between 16 to 18% of total social expenditures, Housing is, in relative terms, the area most affected by changes in its share throughout the period, ranging from 8.9% to 4.4%. During the recessionary years the housing budget was severely diminished.

The case of the social fund, which was created in 1980, constitutes a special case, as it is a programme specifically designed to help people in most need. Therefore, it may be expected that its share in the total social expenditures will vary according to the economic performance of the country. As we see from table 2.5. the share of the Social Fund has ranged from 0.2 to 2.7% of social expenditures.



## 2.4. REGIONAL ASPECTS OF SOCIAL PLANNING

### A. Regional organization

As has been mentioned in Chapter 1, Chile had an early industrialization process as a result of the heavy basis of its economy based on the exports of mineral products. The crisis of 1929 hit the country strongly, lessening the demands for most of its main products. As a result, the country adopted a policy of "import substitution", aiming at creating further industries and being able to produce internally most of the country's necessities. Under this scheme, the state played a significant role in creating economic activities. At the same time public employment grew in a considerable way. This process resulted in a growing development of cities and a considerable centralization of the country, especially in the capital city of Santiago where most of the industry was concentrated. According to Gwynne (1985), the occurrence of urban primacy; this is, one city dominating the national urban structure, is also a feature of the spatial concentration patterns found in Latin America.

The widespread acceptancy of the import-substitution model in Latin America in the 1950's had an important impact on the industrialization process of the continent. According to Gwynne (1985) this process was characterised by a primacy of industry over other areas of possible investment for development such as agriculture. Industrial activities have been promoted to supply the national market, specially in the area of consumer goods. However, this preference has made industry dependent on capital-intensive foreign technology producing a relatively small generation of employment. One of the most interesting aspects of this process is the fact that despite the application of a variety of government policies, industrialisation was mostly concentrated in one metropolitan area, because of the existence of economies of scale and the entrepreneurs' preferences for locating his investments on a more secure environment for him (10). In fact, Gwynne argues that the growth of manufacturing

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10. A more secure environment is a place where the entrepreneur can develop contacts that may help the development of his industry.

employment has not been nearly so dramatic as that of urban dwellers. Urbanisation has dramatically increased due to large migration from the rural areas and high urban fertility rates. In practical terms, urbanisation is a phenomenon on itself that is being reinforced by industrialisation. In addition to this argument, it is also been said that the industrialisation process can be related with a distinctive tendency of Latin America, that of increasing regional inequalities.

During the sixties the state made its first efforts to stop the centralization trend. According to Boisier (1978), this period corresponds to "intra-regional" or ad hoc efforts to create alternative centres to the capital city. During this stage many cities created their own councils of local or regional development. The state contributed to these initiatives creating some special legal incentives for industries localized in those areas or simply creating industries in those organized areas. However, these efforts proved to be insufficient to stop continuing centralization and growing regional inequalities.

By the late sixties and early seventies, there was a clear consciousness of the necessity of rectifying these trends. Therefore, the state initiated an ambitious programme of national planning at a regional scale aiming to accelerate the economic development and to diminish regional inequalities in the level of living. One of the tools for implementing this policy was the creation of growth poles. Through this strategy the government created some decentralized industries that were aimed to induce further development of economic activity through out its zone of influence (<sup>11</sup>). However, as Raczynski (1986) has pointed out, the strategy had a number of weaknesses which inhibited regional development; it had a clear approach from "above to below" and central conduct of the process, an exaggerated "economicism," as the goals were the improvement in economic efficiency to create more economic growth, and a marked industrial and urban bias. Nevertheless, the most critical aspect of the application of this model in Chile was its incapacity to generate effective

.....  
11. An interesting analysis of the government's intervention in an import substitution industry on a Chilean "growth pole", can be seen in: Gwynne, 1980.

local multipliers (Gwynne, 1985). For example, one of the industries chosen in the Chilean case was the Motor Vehicle Assembly, which despite being localised at more than a thousand kilometres away from the capital city, it had most of its parts supplied directly from it.

The military government also addressed these important issues which had been present for long time in the Chilean society. Their response was the convocatory of a new "regionalization process" (12). The principal aim of this new policy was to "allow the President to have a vertical organization, with wide coverage in all the country, to assure the implementation of government actions" (Canessa, 1979). The regional governors or Intendentes are, according to the legislation, the representatives of the President in a region, and not the regions representative to the President. After a few years of learning experience, the regionalization process was widely conceived as an attempt to have better organization and coordination of regional field offices of the central ministries.

In relation to the Chilean regionalization process, Cumplido (1983) argued that it corresponds to a deconcentration model because the regional institutions are only representatives or executors of the national policies, having few areas of discretion. At the same time Cumplido has criticized the dual structure of powers of the Regional Ministerial Secretariats (SEREMIs), because this tends to generate competence conflicts and parallel orders. The author recognises the positive effects produced by the National Fund for Regional Development (FNDR), which allows the regions to formulate investment projects according to their priorities.

Cumplido's assertions are in accordance to those of Harris (1983) quoted in the earlier chapter. The regionalization process coincides with a Latin American trend towards decentralization. Harris argued that the later regionalization attempts in Latin America are rather a centralization process, which aims to achieve greater coordination of the governmental organizations

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12. Law Decree No. 575 13 July 1974

operating at a local level.

According to the new regionalization and to the 1980 Constitution, Chile is a unitary country with a single central authority. However, its internal structure corresponds to a global criterion of deconcentration. The country is divided for the purposes of government and administration into Regions(13), Provinces (51) and Comunas (municipalities) (335).

The Region constitutes the supreme territorial unit for the administration of the state. The highest authority of the region is the Intendente, who has the responsibility for the coordination and execution of the policies, programmes and projects for the development of the region. The Intendente is the regional representative of the President of the Republic. For the planning process, at a regional level, the Intendente has the permanent advice of the Regional Secretariat for Planning and Coordination (SERPLAC), which itself depends directly on the National Planning Office (ODEPLAN).

At the same time, each ministry and public service is deconcentrated at a regional level through the Regional Ministerial Secretariats (SEREMIs). These institutions have a dual character, in that <sup>they</sup> are direct collaborators with the Intendente in their fields (public works, health, education, etc), and at the same time they are the regional representatives of the Minister. Each SEREMI is responsible for the execution of the sectorial policies at a regional level and the definition of investment projects in the area.

According to the constitution each region should have a Regional Development Council (COREDE), integrated by representatives of the several regional institutions, (For example, entrepreneurs, trade unions, and social organizations). The COREDE will have the power to assess the work of the Intendente and to advise him in the formulation of the investment budget of the region. However, the effectiveness of the COREDES remains to be seen, since most of its member have been appointed by the Intendentes. Furthermore, the newly elected government has proclaimed that the whole institution of COREDES is subject to

revision in the future parliament. The most likely alternative here is for the new government to favour regional collegiate bodies with a clear representational structure, i.e. whose members have been elected democratically.

In sum, the regionalization process has helped the central government to approach the users of public services. More efficiency is being achieved at a regional level, due to better coordination of regional institutions and clear directions from the centre. However, unless there is a transfer of decisional powers it is still not possible to speak of an effective decentralization. We can conclude that we have a case of clear deconcentration or administrative decentralization at most.

### Regional Aspects of Social Policies

In the early 1980s the government first introduced specific measures in the social sector in order to allocate "social subsidies to the demand". The purpose of the policy was to "distribute public resources in relation to the effective localization of the population requiring the service" (ODEPLAN, 1986).

The practical actions taken towards achieving the aim of social subsidies to demand were the following:

**Health:** Introduction of a capitation fee instead of direct central allocations. The capitation fee helps to allocate the Health Service's budgets in relation to the use of medical services.

**Education:** Introduction of a subvention scheme similar to a "voucher scheme", in which the central Ministry of Education pays a fixed sum to schools, both public and private, per student in class.

**Housing:** The main shift in this sector was from indirect to direct subsidies, with a national selection process to consider the saving capacity of the family and its well-being through the national means test.

**Social Security and Assistance Programmes:** In this sector the changes are more recent, some of which were introduced only at the end of 1987. In the case of Family Allowance for poor families and Assistance Pensions, the state fixed the number of benefits to be paid in each region, giving the regional authorities discretion for allocating them according to the national regulations.

The results of these actions produced an effective delegation of the administrative powers of the central ministries in favour of their regional field offices. Nevertheless, this delegation was not a transfer of decisional powers, since the procedures for allocating the benefits were still set at the central level.

Moreover, it is known that some of the "decentralization measures" specifically aimed to reduce the expenditure of the social programmes. For example, in the case of Social Security, the state offered to the regional authorities an incentive, which consisted of the transfer to the regional investment funds of half of the "savings" produced by the exclusion of beneficiaries who do not fulfil the requirements according to the new selectivity rules. In the case of the health services, the introduction of capitation fees was an attempt to control the current expenditures of hospitals. In this case the ministry went even further by introducing ceilings in the number of consultations allowed per hospital or public medical clinics. There is further evidence to show the hidden objective of "regionalization". This evidence will be analyzed in the sectoral chapters.

In sum, the government is trying to adapt its organization and policies to include a greater consideration of local needs and preferences. However, at the same time the state bureaucracy is using some of the regionalization policies to introduce cuts in the social sector budgets.

## B. National Characteristics

Before concluding this chapter about the context of Social Planning in Chile and turning to the sectoral chapters, it is convenient to make a brief introduction of the basic characteristics of the country and its regions. Since this research will address the regional impact of social policies it, seems advisable to give some elementary references about the regions.

Chile was founded in 1536 by the Spanish conqueror Diego de Almagro, five years later the capital city of Santiago was founded by the Spanish conqueror Pedro de Valdivia. In 1810, it acquired its independence from Spain initiating the republican period.

In 1987, Chile had a population of over 12.5 million inhabitants, with a population density equivalent to 16.6 (habitants/Square kilometers). As can be observed in Table 2.6., Chile has relatively good social indicators in relation to other developing countries of the same economic category. In fact, its life expectancy of 71.7 years is one of the highest for Latin America, closely followed by Argentina with 70.6. However, other important Latin American countries show a worse performance on this indicator; Brazil with 64.9, Mexico with 68.9 and Peru with 61.4 (13).

The infant mortality rate is also a good indicator in the Chilean case; its rate of 18.5 is comparable to that of the Eastern European countries, and in fact, also to some Southern European countries.

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13. Source: Statistical Yearbook for Latin America  
1988 Edition  
Economic Commission for Latin America-Santiago.

TABLE 2.6.  
BASIC DEVELOPMENT INDICATORS  
(MIDLE ECONOMIES AND CHILE)

|  | CHILE      | Lower<br>Midle<br>Economies<br>(1985) | Midle<br>Income<br>Economies<br>(1985) |
|--|------------|---------------------------------------|--|
| Total Population (1987)                          | 12,536,383 |                                       |  |
| Pop. Density (Hab./Sq.Kms.) (1987)               | 16.6       | 41.9                                  | 32.6                                   |
| Pop. Growth (Avg. Annual rate 1985-90)           | 1.6        | 2.3                                   | 2.5                                    |
| Life Expectancy at Birth (1987)                  | 71.7       | 58.0                                  | 62.0                                   |
| General Mortality (1987)                         | 5.6        |                                       |  |
| Infant Mortality (1987)                          | 18.5       | 82.0                                  | 68.0                                   |
| Illiteracy Rate (1982)                           | 8.9        |                                       |  |
| GNP/Capita (US\$ 1985)                           | 1,430      | 820                                   | 1290                                   |
| Average disposable Monthly<br>income (US\$ 1985) | 201        |                                       |  |

SOURCES:

Chile: Compendio Estadístico 1989 I.N.E.

GNP: World development report 1988

Monthly Income: Haindl and Weber 1986

Midle and Lower Midle Economies:

World Development Report

World Bank 1988

With regards to the age structure, Chile is a young country, with having 51% of its population less than 24 years old, and 31% of the population below 14 years old. At the same time the proportion of the population above retirement age (65 years) is only 5.9%. However, the country is experiencing a rapid change on its demographic structure, according to which the period of demographic transition will result in a stabler and older structure.

In relation to economic indicators, it must be acknowledged that the Chilean figure for the GNP/Capita has been decreasing since the world recession in 1981 when the country reached its peak of US\$2,600 <sup>(14)</sup>. Based on the 1985 GNP per capita of US\$1,430 Chile is classified by the World Bank as a middle income economy and in the sub group of Lower middle income countries.

14. Source: World Development report  
Word Bank 1988  
Washington,



However, it must be said that after 1987, the economy has been growing at an annual rate of about 5%.

### C. Regional characteristics

In table No. 2.7. it is possible to note the evolution of the Chilean regional population in the last seventeen years. Like many other developing countries, Chile concentrates a large proportion of its population in the capital city or the main metropolitan area. The share in the Metropolitan Region has been increasing in the last decades; during the early fifties and sixties the rural-urban migration contributed to the growth of the Metropolitan area, but by the late eighties much of the effects of the migration process had stopped. But the Metropolitan Region continued to increase its share because of its high rates of annual growth, which were above the national figure of 1.6%. The regions of the extreme north, Tarapaca and Antofagasta, and the regions of the extreme south, Aysen and Magallanes, are the only other regions to show an increase in their share in population, although it is much smaller than that of the Metropolitan Area. The annual growth rates of these four regions ranged from 3.4% to 2.1% all well above the national average.

| TABLE 2.7.                              |            |       |            |       |            |       |
|---|------------|-------|------------|-------|------------|-------|
| REGIONAL POPULATION ESTIMATES FOR CHILE |            |       |            |       |            |       |
| (30th. June each year)                  |            |       |            |       |            |       |
| REGION                                  | 1985       | %     | 1986       | %     | 1987       | %     |
| 1 Tarapaca                              | 308,909    | 2.5   | 314,783    | 2.6   | 324,087    | 2.6   |
| 2 Antofagasta                           | 363,329    | 3.0   | 366,316    | 3.0   | 370,563    | 3.0   |
| 3 Atacama                               | 191,254    | 1.6   | 194,488    | 1.6   | 195,956    | 1.6   |
| 4 Coquimbo                              | 448,667    | 3.7   | 452,465    | 3.7   | 459,393    | 3.7   |
| 5 Valparaiso                            | 1,284,976  | 10.6  | 1,314,298  | 10.7  | 1,336,073  | 10.7  |
| 6 O'higgins                             | 615,389    | 5.1   | 621,664    | 5.0   | 627,665    | 5.0   |
| 7 Talca                                 | 778,030    | 6.4   | 792,961    | 6.4   | 805,141    | 6.4   |
| 8 Bio-Bio                               | 1,591,398  | 13.1  | 1,609,694  | 13.1  | 1,625,840  | 13.0  |
| 9 Araucania                             | 740,601    | 6.1   | 745,199    | 6.0   | 755,137    | 6.0   |
| 10 L.Lagos                              | 884,831    | 7.3   | 896,211    | 7.3   | 903,418    | 7.2   |
| 11 Aysen                                | 72,275     | 0.6   | 73,019     | 0.6   | 74,509     | 0.6   |
| 12 Magallanes                           | 139,413    | 1.2   | 141,699    | 1.1   | 145,539    | 1.2   |
| RM Metropolitana                        | 4,702,606  | 38.8  | 4,804,232  | 39.0  | 4,913,062  | 39.2  |
| TOTAL                                   | 12,121,678 | 100.0 | 12,327,029 | 100.0 | 12,536,383 | 100.0 |

SOURCE: National Institute of Statistics

The urbanization process of Latin America is mostly a result of the colonial legacy (Gwynne, 1985). During this period the city served rather as an agent for consolidating the occupation and administering the Spanish Crown interests. Lately, the export oriented structure of the economy consolidated this organization of the urban system. Chile does not escape to this common Latin American features. As is seen in Table No.2.8., Chile is a highly urbanized country.

The regional distribution of the population shown in Table No. 2.8, allows an initial classification of regions. URBAN are those regions with 90% of their population living in urban areas, these are Antofagasta, Metropolitan, Tarapaca, Atacama, Valparaiso and Magallanes. All these regions have one or two big cities in which between half and two thirds of the total regional population are concentrated. The INTERMEDIATE regions are Aysen, Bio-Bio, Coquimbo and O'higgins. Finally, the RURAL regions are Los Lagos, Araucania and Maule; although these regions were classified as rural they have important urban centres, but in relative terms they correspond to the rural group.

| TABLE 2.8.  |      |      |      |
|---|------|------|------|
| ESTIMATES OF THE URBAN REGIONAL POPULATION<br>(CHILE) |      |      |      |
| REGION  | 1985 | 1986 | 1987 |
| 1 Tarapaca  | 94.4 | 94.5 | 94.6 |
| 2 Antofagasta   | 98.7 | 98.7 | 98.8 |
| 3 Atacama   | 91.9 | 92.2 | 92.3 |
| 4 Coquimbo  | 75.1 | 75.3 | 75.7 |
| 5 Valparaiso  | 91.1 | 91.3 | 91.4 |
| 6 O'higgins   | 65.7 | 66.2 | 66.6 |
| 7 Maule   | 57.4 | 57.9 | 58.2 |
| 8 Bio-Bio   | 77.0 | 77.3 | 77.6 |
| 9 Araucania   | 58.0 | 57.9 | 58.2 |
| 10 L.Lagos  | 59.6 | 60.1 | 60.4 |
| 11 Aysen  | 79.8 | 80.3 | 80.9 |
| 12 Magallanes   | 92.3 | 92.4 | 92.6 |
| RM Metropolitana                                      | 96.7 | 96.8 | 96.9 |
| TOTAL   | 83.3 | 83.6 | 83.8 |

SOURCE: National Institute of Statistics

A first insight into the regional well-being is provided in Table No. 2.9., which shows the regional distribution of the Gross Domestic Product standardized by the regional population. Distribution patterns follow those of table 2.8.; among the seven regions with income per capita above the national average, we found all but one to be urbanized regions and only one intermediate: O'higgins. The poor regions are those defined as rural.

The pattern of the regional well being described above is very stable through time, although some variations may be seen in the social indicators of health, education and housing. Nevertheless, the basic correlation between urbanization and well being is very clear in all sectors.

| TABLE No. 2.9.                              |        |        |        |
|---|--------|--------|--------|
| ESTIMATES OF THE REGIONAL G.D.P. PER CAPITA |        |        |        |
| (CHILE)                                     |        |        |        |
| (in \$ 1977)                                |        |        |        |
| REGION                                      | 1985   | 1986   | 1987   |
| 1 Tarapaca                                  | 40,153 | 40,842 | 41,945 |
| 2 Antofagasta                               | 58,903 | 58,216 | 60,850 |
| 3 Atacama                                   | 43,728 | 43,394 | 45,539 |
| 4 Coquimbo                                  | 17,954 | 18,738 | 19,514 |
| 5 Valparaiso                                | 29,235 | 30,692 | 31,923 |
| 6 O'higgins                                 | 36,137 | 37,305 | 39,068 |
| 7 Maule                                     | 19,306 | 20,090 | 20,921 |
| 8 Bio-Bio                                   | 23,509 | 23,715 | 24,826 |
| 9 Araucania                                 | 16,361 | 16,858 | 17,591 |
| 10 L.Lagos                                  | 19,687 | 20,806 | 21,824 |
| 11 Aysen                                    | 23,954 | 24,779 | 25,677 |
| 12 Magallanes                               | 76,491 | 77,199 | 79,474 |
| RM Metropolitana                            | 32,334 | 34,123 | 35,281 |
| TOTAL                                       | 29,406 | 30,553 | 31,766 |

SOURCE: National Institute of Statistics  
Central Bank

## CHAPTER THREE

### PROBLEM DEFINITION

#### 3.1. MAIN TOPIC OF RESEARCH

The research aims to analyse and discuss how the Social Services are organised and financed in Chile, with a special concern on the regional impact of social policies.

In the first place, the study will concentrate on describing the procedures and strategies with which each social ministry or sector, as named through out the thesis (Health, Education, Housing, Social Security), finances its programmes. This will present for the first time an intersectorial view of the social services organization in Chile.

As was mentioned in Chapter 2, since 1975 the Government has advocated a new "regionalization" policy, aimed at decentralising the power of national government, eliminating regional inequalities and reducing poverty it is important therefore, in the second place to test to what extent the regional allocation of social expenditures is actually related to regional needs. This has been done through the calculation of the regional social expenditures per capita. These figures have been produced for the first time ever in Chile and cast light on the present pattern of regional allocation of social expenditures. Then these figures are compared with regional indicators of need in order to determine if there is a relation between these variables.

### 3.2. PRINCIPAL ISSUES TO BE ADDRESSED

According to the description of the main research topic, a deductive method was followed starting with a necessary theoretical background for understanding properly the research theme, at the same time some cross references with other Latin American countries were also considered. In relation to the main topic of research, the principal issues to be addressed are described below.

#### 1.- What are the main features of the social sector's finance and organization?

This heading is aimed at describing and analysing the strategies, procedures, and rules that might affect the actual distribution of social expenditures.

#### Description

##### a.- What is the formal organization of the sector (<sup>1</sup>)?

Perhaps the most elementary question when analysing the social sector's finance and organization, is what are the aims, functions and structure of the main institutions of the sector.

##### b.- Is there an annual or periodical planning procedure?

It seems that for most of the planning traditions reviewed in Chapter 1 it is important to have a systematic or periodic planning procedure. As was described in Chapter 2, at a national level Chile does not appear to have a systematic annual planning strategy, with the exception of some specific sectoral tasks. Therefore, it is interesting to test if this approach is common to each sector.

.....  
1. In this case we will consider public and private structure and organization of the sector.

c.- What are the links between planning and the budget?

As was mentioned in Chapter 1, both Glennerster (1983) and Goode (1983) have insisted that the budget is the means by which social or public policies and plans are implemented. Therefore, it is important to examine to what extent the planning and budgetary processes are formally linked in Chile.

2.- Is it possible to observe some relation between the officially stated progressive social policies and ministerial expenditure structures?

From the social policy precepts introduced in Chapter 2, we can analyse how far expenditure is spent on poverty programmes being defined as government priority.

3.- How is the expenditure and budgetary process of each social ministry organised?

Under this heading, following on the approaches to budgeting of Caiden and Wildavsky (1974) and Goode (1983), we attempt to analyse how the budgetary phases of formulation, authorisation, execution and evaluation are undertaken in each ministry, and whether they correspond or not to the patterns described in the bibliographical review.

4.- How extensive is the discretion or autonomy that the regions really have in planning and managing the social programmes undertaken on its territory?

In attempting to solve this question, we will concentrate on the basic forms of government intervention: regulation, finance and production of social policies and programmes. We will be analysing to what extent each of these forms are performed or decided at a central or a regional level. For this last point, we will consider some elements of the theoretical approach to measure decentralization developed by Smith (1979).

5.- What is the regional allocation of social expenditures per capita in each social sector?

This point concentrates on calculating the actual regional expenditure figures. This involves a complex process of data analysis, described in Chapter 4. The findings of these calculations will give a first indication of the equalisation role of Central Government between regions.

6.- What is the relation between the regional allocations of social expenditures and regional needs?

It is not only important to know the regional expenditure allocations, as mentioned in Item No.5, but also to test whether they are related or not to the regional needs. Using Davies' (1968) concepts, we are interested in testing whether resource allocation is following a criterion of territorial justice.

#### Specific Topics to be Examined in Relation to the Regional Allocation of Social Expenditures

In the theoretical review of Chapter 1 we discussed some studies, related to the present one, that were undertaken in Latin America and other countries. Some of those studies' findings, especially those of Selowsky (1979) and Rodriguez (1984), were considered as interesting statements to be reviewed in the present research, in that they discuss the implications of the regional allocation of social expenditures.

The main competing hypotheses to be examined are listed below:

1. The government will channel a higher proportion of its funds to the less wealthy regions, measured in terms of their basic needs insatisfaction.
2. The richest regions will demand and obtain higher levels of social expenditure per capita.

3. Urbanization results in the extended family and the community being less able to provide education, housing and health care, thus inferring a greater need for social services: consequently social expenditure will be concentrated on more industrialized and urban regions.

In relation to the third hypothesis under analysis, as has been mentioned before, Gwynne (1985) and other authors have observed that in Latin America there are mutually reinforcing and intertwined relations between industrialization and urbanization. We define this hypothesis only in relation to the latter phenomenon, urbanization, since data on this is more reliable and it is the urbanization consequent on industrialization that is probably most significant for social needs.

7.- What lessons for the future can be learned from the present system of regional allocation of social expenditures?

Under this heading it is intended to review the main findings of the study analysing the implications this may have for the future development of the Chilean Social Services.



## CHAPTER FOUR

### CONCEPTUAL AND METHODOLOGICAL ASPECTS

#### 4.1. INTRODUCTION

In this chapter we will describe the principal steps that were undertaken to address the issues listed in Chapter Three. Although the methodological aspects considered here are to be used through out this research, in some particular cases it was necessary to define ad hoc procedures in order to tackle specific problems which had arisen.

Sections 4.2., 4.3. and 4.4. delineate the methodological steps used to discuss the first main topic of research, a topic related to the intersectoral analysis of the procedures and strategies of the finance and organization of each social ministry at national and regional levels. Therefore, we will be looking at the ways of obtaining access to the information required. At the same time we will define a procedure for examining in a qualitative approach the information about the ministerial organization and finance.

Sections 4.5. and 4.6. will discuss methods to analyze the elaborated information in order to address the second main topic of research, which states the extent to which the regional allocation of social expenditures is related to regional needs. Therefore, the first of these two sections will explain how the national expenditure figures were elaborated and how the regional allocations were estimated. The next section sets the framework for the data analysis.

#### 4.2. GETTING ACCESS AND INFORMATION ABOUT MINISTERIAL FINANCES

Since the main objective of the present work is the analysis of the Chilean Social Sectors finances and Organization, it was necessary to obtain this information directly from the ministerial bureaucracy. To the knowledge of the author there are no global descriptions of this theme in the Chilean case. The research methodology of this part included a theoretical review, some structured interviews and feedback provided from the observation of practice and from the own officials in charge of the services. To some extent, this approach is consistent with that of "administrative anthropology", defined by Glennerster et al. (1983).

The steps for approaching this problem were the following:

##### 1. Bibliographical Review

The bibliographical review summarized in Chapters 2 and 3 provided an important background for defining the specific tasks to be considered in the subsequent steps. Most of the issues discussed in these studies were considered as topics to be examined in each ministry. The most important contributions in the area of planning and bureaucratic organization were taken from Caiden & Wildavsky's "Planning and Budgeting in Poor Countries", and Glennerster's "Paying for Welfare". With regards to the budgetary process, Premchand's book on Government Budgeting and Expenditure Control, together with Goode's "Government Finance in Developing Countries" were of great use.

The sectoral bibliographical reviews included in the first section of the ministerial chapters also contributed to the definition of the most important issues and problems in each area.

##### 2. Documentary Analysis

An important contribution towards understanding the bureaucracy and organization of the Social Services were the reviews of the main Official Publications in the area. Although these usually

did not include a complete description of the ministerial organization, they did provide an insight into the basic structure of service delivery and above all, an introduction to the most important programmes and policies in action. In this regard, the latest Informes Sociales of ODEPLAN (1984-85 and 1986) contributed enormously. The Annual reports of the Ministry of Housing and some ad hoc reports of the Ministries of Education and Health were also considered.

### 3. Structured Interviews

The most important ideas and issues raised through the bibliographical review and Documentary Analysis were included in a structured interview with Budget and Planning Senior officials from each social ministry. All the interviews had a similar structure but were different in some aspects of finance which were specific to each ministry.

### 4. Feedback

The interviews with the officials were not only a way to obtain specific information, they also contributed to a great extent to introduce the research topic to the officials, receiving some interesting feedback from most of them.

The interviews also provided the opportunity to negotiate further access to information, especially about expenditures and need indicators series. Usually, this information was obtained through lower ranking officials or simply processed by the researcher himself. In these occasions, it was extremely useful and illuminating to discuss with the ministerial staff their perception and ideas about the services; this was also considered a feedback to the information provided by Senior officials.

#### 4.3. PROCEDURE FOR THE ANALYSIS OF THE REDISTRIBUTIVE EFFECT OF SOCIAL POLICIES

The analysis of the redistributive effects of social policies in Chile, is considered one of the issues to be addressed in the present work. In Chapter Three we mentioned the intention of checking how far the officially stated goal of progressive social policies is related to the ministerial expenditure structure.

As the reader can appreciate, the discussion of this issue and specifically obtaining the required data for analysis is an exercise that is beyond this research; in fact, it could be a vast area of research in itself. Therefore, in dealing with this issue we must rely on works previously carried out in this area.

Two related results are obtained from this analysis. In the first place, we want to address issue No.2, that is, how far expenditure is being spent on poverty programmes which have been defined as a government priority. In the second place, depending on the previous results, we can infer the government's willingness to achieve its stated policy proposals.

The information data source to be used in this section comes from the works of Haindl and Webber (1986) and Haindl, Budinich and Irarrazaval (1989). These studies analyse the distribution of fiscal social expenditures <sup>(1)</sup> in each of the social sectors per income deciles of the Chilean Population. These studies were sponsored by The World Bank, and are based on a nation wide sample survey of 22,000 households <sup>(2)</sup>. The samples have national representativeness and an estimated sampling error of 5%. The surveys were carried out in November 1985 and 1987. They included questions on family characteristics, income,

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1.

It should be noted that the outcomes of these studies refer to Fiscal Social Expenditures. They constitute an important porportion of public social expenditure but are not totally equivalent. (see section 2.3.C.). In 1985, fiscal social expenditures were 78% of public social expenditures.

2. The Sample Survey is known as CASEN: National Socioeconomic Characterization.

housing, education, health and social security. .

In order to test the share of fiscal social expenditures reaching poor families, we need to define a poverty line. There has been a considerable discussion about poverty levels in Chile. Some official measures based on housing standards have concluded that poverty affects 14% of the population, other studies based on minimum basket requirements concluded that 45% of the Chilean population lives in poverty <sup>(3)</sup>. We decided to set a more consensual level of poverty, one that might be accepted by a wide range of experts and could be calculated using the available data.

The level defined was that of many studies on income distribution: The lower 30% of the income distribution.

Therefore, we will test what proportion of the programme or sector expenditures reaches the lower 30% of the population. We will classify the share of fiscal social expenditures received by the bottom 30% according to the categories in table 4.1.

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TABLE 4.1.

REDISTRIBUTIVE EFFECT OF SOCIAL EXPENDITURES ON THE LOWEST 30% OF  
THE POPULATION

| TYPE OF PROGRAMME    | SHARE OF BOTTOM 30% |
|----------------------|---------------------|
| Regressive           | up to 30 %          |
| Neutral              | 30 %                |
| Slightly Progressive | 30 - 50 %           |
| Progressive          | 50 - 65 %           |
| Very Progressive     | 65+%                |

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3. In relation to Chilean poverty levels; see:  
Irrazaval, I. (1989) La situacion de la pobreza en Chile: Aspectos conceptuales y cuantitativos.  
Documento de Investigacion No. 93 Dept. Economia Universidad de Chile.

#### 4.4. TESTING EFFECTIVE REGIONAL DISCRETION IN MANAGING PUBLIC DECISIONS AND RESOURCES

In order to test the effective regional discretion in managing public decisions and resources, we will be looking at three forms of government intervention (4):

**Regulation:** The state, through a law or other legal procedure, defines what activities may, or may not, have to be undertaken.

**Finance:** The state through its budget may finance some activities and make them available free or almost free of charge to the common citizen. For Example, the state may finance old's people homes which are run by a voluntary organization.

**Production:** The state may produce or manufacture some specific social goods. For example the state runs its own public schools.

It should be noted that the last two forms of intervention can also be performed by the private sector, or by a mixture of both private and public.

The analysis here has basically a qualitative approach based on the information provided by Senior officials , the insights of the researcher into each sector, and some bibliographical background. Since this is a qualitative analysis and, as was mentioned in Chapter 1, decentralization is a concept that can take many specific forms throughout a continuum; we cannot expect to define with exactitude the level of decentralization of a certain institution, and this is not the basic issue here. However, through a series of relevant topics and questions concerning each of the three forms of government intervention, we will be able to produce an idea of the pattern of discretion or

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4. These three forms of government intervention have been adapted from Le Grand and Robinson's (1984) categories of government policies and Musgrave and Musgrave's (1989) explanation of the allocation function of public finance. However, the names given here do not correspond necessarily with those used by them.

autonomy that the region has in for managing decisions and resources (5).

An important caveat ought to be introduced in relation to the testing of effective regional discretion in managing public decision and resources. As the level of analysis here is the region and this level is being compared with the central or national level, we consider local government regulation, finance and production. For example: all public schools in Chile are now managed by the municipalities, therefore for our purposes the production of primary and secondary education is regional. In the case of finance, the approach is a bit more complex. We consider as "regional", the allocations transferred from the the centre to the municipalities in order to perform such tasks as had been previously undertaken by the central ministries , as in the case of health and education. In this research we are not studying local governmet revenues.

#### REGULATION

Three questions are to be considered in relation to this form of government intervention:

1. Who defines the tasks or functions of the agencies?

There is usually a sharing of responsibilities between central and local governments. The centre may define broad goals and the use of resources, and localities determine the mode of delivery.

2. What is the source of agency authority?

It is important to clarify where the acting powers of an agency come from? Do they have an origin in the central goverment? If such is the case, the agency is probably then a deconcentrated institution. But, if the acting powers come from the regional level, then the agency should be a decentralized institution.

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5. Some of the methodological questions used in this section were taken form Smith (1979).

### 3. Who controls the functions of the agencies (6)?

Has the regional level the capacity to exercise control at all? Can the central level impose control over regional offices or must it influence the field offices in order to change some actions?.

## FINANCE

In this area we have defined five different forms of financing regional social programmes and policies, ranging from central control to regional discretion over the management of resources.

Grants or funds transferred from central government to the regions were not considered at the outset as a necessary reduction of the regional autonomy. What may effect the autonomy of the region is the type of grant being transferred (7) or the method of administering the grants. Another important issue to be considered here is the definition of some constraints in the use of resources transferred to regions, such as imposing ceilings on some types of expenditure.

1. Centrally managed finance: This is the case of national programmes which have effects "in and for" the regions, but have almost no discretion in the allocation of resources.

2. Specific-purpose grant or fund: Under this category we include funds transferred to a region for a single objective. The eligibility criteria for benefiting from this fund is defined centrally, the central level may also impose ceilings in the number of beneficiaries. The regional level has the discretion to select the individual beneficiaries. A goal of territorial equity might be behind this form of allocation.

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6. This question can also be related to production.

7. For more details on the types of grants: see section 1.7.



3. Fund for subsidising specific activities: This form is very similar to the previous one, but in this case the regions have more discretion; there are almost no imposed ceilings in the number of beneficiaries and the region is free to use these resources within a sector.

4. Block grant or fund: In this case we have a fund that has a broader defined purpose (such as "investment"). The region can decide in which sector to use the resources, and there is no pre-defined basis of distribution from the central level.

5. Regionally managed finance: The region has total freedom in managing the resources in the areas decided by it.

## PRODUCTION

In the production of a social good or service, we will look at two aspects:

**Personnel Policies:** How far personnel recruitment, promotion and transfers are in regional hands or are managed centrally.

**Levels of field administration:** The greater the numbers levels in the field organization's hierarchy, the greater the decentralization involved. Despite the fact that different levels may have variable powers, together they add up to strong decentralization.

Other aspects to be considered here are the frequency with which field officers must refer matters to central headquarters, and the frequency of communications between headquarters and the field for planning and control.

#### 4.5. METHODOLOGICAL STEPS FOR THE DERIVATION OF THE NATIONAL AND REGIONAL SOCIAL EXPENDITURE DATA

In this section we will concentrate on the methodological steps needed to produce a regionalized series of Chilean Social Expenditures.

##### A) Regional Allocation Criteria

The starting point for producing a regional series of social expenditure is to have a standard criterion for allocating national figures on a regional basis.

The criterion is defined from the conceptual basis derived from the writings of Short (1978), introduced in Chapter No 1. As a reminder of Short's work, it is necessary to mention that he defined two regional dimensions of public expenditures:

- a. Expenditures in a region : Expenditures in a region comprises all the expenditures made within the geographical boundary of the region, irrespective of where the real benefits accrue.
- b. Expenditures in and for a region, or regionally relevant expenditures: This type of expenditures comprise only those expenditures made in a region, for the benefit of that region. This latter category may be subdivided into:
  - i) Expenditures from which benefits accrue exclusively to a particular region
  - ii) Expenditures from which benefits accrue in and also beyond the region concerned

To clarify these concepts an example can be given. The Ministry of Education purchases every year textbooks to be distributed in all the regions. However, the actual purchase is made in only one region, where the publishers are located. Therefore, this expenditure is 100% in a region. However, since the textbooks are to be distributed through all public schools the benefits of this purchase will be shared by all the regional

educational authorities, therefore these expenditures can be treated as regionally relevant, according to the regional and final distribution of the text books.

In the present work all the figures are treated according to the regionally relevant criterion. A special effort was made to isolate from these figures all expenditures that did not have a clear regional impact or were basically national programmes with no clear criterion for regional allocation. Fortunately, this was not an important proportion of the total social expenditures. Other areas of public expenditures such as Foreign Affairs, Defence and others are not considered in this work, since this research is not a regional fiscal incidence study (8).

In addition to Short's basic definitions, it is necessary to define some criteria to clarify the quality of the regional figures obtained:

Criteria:

- a) Correspond to those expenditures which have a clear regional accounting system from the original data source.

For example, each Health Service or Regional Housing Service has its own budget, therefore the expenditure figures of their budget are by definition regionally relevant.

- b) Correspond to those programmes or to the parts of those programmes that do not have a defined regional accounting system to match the "in and for" criterion but have a regional connotation. Therefore, it is necessary to define an external but specifically related indicator to regionalize these expenditure figures.

For example, in the case of the Programme of Complementary

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8. This means that we are not looking at the net impact of public activities in a region. This is the net effect between public expenditures and taxes, in this case all public activities should be considered, not only the social ones.

Feeding(M.of Health)it was possible to regionalize these expenditures by multiplying the quantities of products distributed in the regions (according to ministerial sources)by the estimated costs of each one.

Overall,we consider that criteria A and B are the two most accurate approaches to regionalize public expenditures as they both have a clear regional reference basis.

- c) This criterion is similar to b), but in this case the criteria to allocate the regionally relevant expenditures is a sectorally related indicator, which is not as specific as the ones used in the former case.

The example in this case is the Chilean Undersecretariats, which typically pays the salaries of all the civil servants in the upper tiers of each ministry. However, it is not possible through an accounting procedure to establish the exact amount of expenditures devoted to each region, therefore a sectorally related indicator was used to allocate these expenditures. This can be medical consultations per region, proportion of school registrations or others.

- d) This criterion was reserved for some national or ample programmes within the social ministries. In this case it was not possible to allocate these expenditures with a specific or sectorally related indicator. Therefore, a general external indicator was used.

For example, in the case of the National Council of Television, dependent upon the Ministry of Education, a general external indicator was used to allocate its regional expenditures, such as regional distribution of population, regional G.D.P. per capita or other indicators considered more appropriate.

## B) Social Expenditure Data Sources

One of the most important tasks of the present work is to produce a regional distribution of social expenditures; the data

for elaborating this information was obtained through each ministerial and service source. In many instances the Departamental or Service sources did not match with the Ministerial figures; on these occasions it was necessary to check the accounting system of both institutions to understand the origin of the differences. In order to have a common basis for all the public institutions, allowing comparisons between programmes, the ministerial or service figures were adjusted to the final figures of the "Estados de la Gestion Financiera del Sector Publico" of the General Comptroller. This is the only series of public expenditure figures with a broad coverage and elaborated on a uniform basis.

In spite of the uniform basis of the Comptroller figures, they are usually presented in an aggregate form, making it difficult to elaborate from this single source the regional figures. Therefore, in most cases the original ministerial or service budgets were used to elaborate the regional figures. From this stage, the regional structure of the expenditure distribution was elaborated, and then, this structure was used to allocate the Comptroller figures.

#### C) Transfer Elimination

Most ministries transfer part of their resources from one of its institutions or departments to finance the work of another. It is even possible to find interministerial transfers which finance services related to the original ministry but performed by another. The expenditure figures published in the "Estados de la Gestion Financiera" consider as expenditures all the transfers between and within public institutions; this means that it takes no consideration of the transfers with a view either to eliminate or consolidate them. Therefore, in this study great caution was taken in order to avoid doubly counting these "expenditures". The intra and interministerial transfers were studied according to the Yanez (1983), and Yanez and Aguilo (1988) methodology, introduced in Chapter 1.

As a general rule, the resource involved in a transfer were registred as an expenditure in the institution that received the

transfer, and were eliminated from the "donor" institution.

Great care was also taken in discovering the type of transfers involved. The Chilean accounting system registers as a "transfer to the private sector" some purchases that a public institution makes for the public sector. As an example; the Central Supply Warehouse of the Health Ministry considers as a transfer to the private sector all the expenditures involved in the purchase of milk for the National Programme for Complementary Feeding. In these cases the transfers were not consolidated.

#### D) Public Sector Price Index

As mentioned in Chapter 1, there has been an important controversy in Chile in relation to the representativeness of the official consumer price index. This problem was very important between 1974 and 1978, when some scholars estimated that the CPI underestimated inflation (Cortazar & Marshall 1980). Fortunately, this problem is not crucial for the present study, since the basic data series is from 1985 to 1987; but some more extensive data series used the appropriate CPI.

However, there is an additional difficulty for constructing a real public expenditure series. The majority of the works in this area transform nominal figures into real ones through the CPI. Yanez, (1988), has shown that the CPI is an imperfect deflator for public sector expenditures, since the basket of public goods differs considerably from the basket of goods that an average family consumes. For example, one of the main components of public sector expenditures is wages and salaries, which in the last years has grown less in nominal terms than the CPI, therefore deflating through the CPI subestimates the real level of value.

In the present study, the nominal figures were all transformed into real ones through Yanez's public sector deflator for each ministry. This deflator considers appropriate variables for the goods which the public sector typically buys.

## 4.6. METHODS OF STATISTICAL ANALYSIS

### A. Introduction

This section is aimed to introduce most of the statistical devices which will be later used in the data analysis. Special emphasis will be given to explaining why these specific devices were chosen for the analysis, and the constraints in their use and analysis.

One of the most important issues to be addressed in the present study is to determine to what extent the Chilean regional allocation of public expenditures represents a situation of territorial equity. Therefore, we need a statistical indicator of dispersion that can show the relative equality of different distributions.

The traditional indicators of dispersion, such as mean or standard deviation, have the advantages of expressing their results in the same measurement unit as the variable analysed. But it might be somewhat misleading to compare the absolute magnitude of standard deviations. One might expect that with a very large mean one would find a fairly large standard deviation. One might therefore be primarily interested in the size of the standard deviation relative to that of the mean. This suggests that we can obtain a measure of the relative variability by dividing the standard deviation by the mean; this has been termed coefficient of variation.

In the case of the data used in this research, some items are presented in different metrics. Therefore, we need an indicator such as the coefficient of variation that shows the relative variation of the variables.

In each sectoral chapter, the coefficient of variation of the regional allocations of public expenditures per capita is calculated. Through this it is possible to make comparisons between the equality of the territorial distributions of the different ministries, and when possible these figures are

compared with similar calculations for Britain or other countries.

## B. Data Pooling

A practical problem of some importance occurred when attempting to investigate further the statistical associations and causal relations between the variables under study. The series of regional expenditures were calculated for all thirteen Chilean regions for only three years from 1985 to 1987, because of the great complexity involved in the process. However, a two dimensional problem occurs, on the one hand, thirteen observations are too few to have good estimators from statistical models, on the other hand, three years are insufficient to use time series models. Therefore, a data pooling was used, in which cross section and time series data are combined.

According to Pindyck & Rubinfeld (1981), a condition for the use of pooling is that cross section parameters should be stable over time. Fortunately, this is one of the features of the data under analysis. The social indicators chosen for the study do not present important discontinuities over short periods of time, as is commonly to found in many financial and economic indicators. For example, it is not expected for infant mortality to show important differences from one year to another unless there is a national catastrophe.

Pindyck & Rubinfeld suggest that a good test to check the stability of the parameters is to run "N" regressions for each "T" time period. If both Alphas and Betas are constant over time, this means that a more efficient parameter estimate can be obtained if all data are combined, so that one large pooled regression is run N\*T observations. The suggested test was performed for each sectoral set of variables and found no significant differences in the estimated parameters of each regression.

The results of the statistical analyses from this data pool should be taken with caution. We are not dealing with a time series, therefore we cannot make assumptions about future



evolution based on this information. What we are getting is a picture of the present situation with a broader information base, which can be considered as an average of the three year period under analysis.

There is an additional problem in the use of pooled data, related to the structure of the disturbance term, which may be a complex one. The difficulty arises because the disturbance term is likely to consist of time series-related disturbances, cross-section disturbances, and a combination of both. Therefore, great effort was made in defining tests and mechanisms to check the presence of heteroscedacity, multicollinearity.

### C. Correlation and Regression

After the calculation of the coefficient of variation, a second step in data analysis was the calculation of a product moment intercorrelation matrix, to test the strength of the linear associations between pairs of variables in use.

The linear correlation coefficient or Pearson correlation coefficient measures the degree to which a change in direction and magnitude of one variable is associated with a comparable change in the other.

The calculation provides data which can solve possible links as well as describing the strength of empirical associations.

Further to correlation analysis, it was desirable to explore the dependancy relations between the variables under study. Therefore, several multiple regression models were fitted with an emphasis in testing the hypotheses formulated above.

As a result of the issues and topics described previously, the dependent variable was usually defined as the sectoral expenditure in per capita terms, leaving as independent variables a number of relevant indicators for each sector. It may appear somewhat striking to define such dependant variables instead of traditional sectoral status or performance indicators such as

General Mortality, Infant Mortality, Literacy, Educational level, etc. However, since the main objective was to test to what extent social expenditures are linked to needs, the form of the model was defined in a way that related needs indicators to the sectoral expenditures and not, inversely, what are the variables which influences changes in infant mortality, educational levels, etc<sup>(9)</sup>. Nevertheless, in some specific cases, some regressions of the latter form were performed to explore the relations between these variables.

Because of the constraints in using a pooled database an important effort was made in performing a variety of statistical tests to assure the reliability of the results. These tests included an analysis of the regression goodness of fit, the relative importance of the parameters, and other tests for cheking the presence of heteroscedacity and multicollinearity, each of them are described in Annex No.1.

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9. A further constraint for using a variety of social indicators as dependant variables, is that they were expressed as percentage rates, making it difficult to assume that they have a normal distribution ranging from minus infinite to infinite; therefore with small ranges of variation the dependent variable may be truncated, impeding any statistical inference to be made from the results.

## CHAPTER FIVE

### HEALTH

#### 5.1. BACKGROUND TO THE ORGANIZATION AND FINANCE OF HEALTH CARE IN CHILE

As was mentioned earlier, Chile has a very long history of state intervention in social welfare programmes, which finds its origins in the early industrialization period it experienced in comparison to other Latin American countries. As an example, in 1918 a health insurance scheme was organised for the workers of public railroads, by 1925 a milk programme for children was started.

The situation in the early fifties before the foundation of the National Health Service (SNS), was that of a variety of institutions with many overlaps and total lack of coordination (Mardones, 1977). There was a the General Direction of Beneficence and Social Assistance, which was the main health provider in the country, and almost entirely financed by fiscal revenue. The users of the Beneficence were at large poor people; the origin of this institution is related to the Spanish conquerors and their intention to organise the provision of a minimum health standard. Manual workers contributing to the Obligatory Insurance Fund for Invalidity and Illness were also beneficiaries of the Beneficence. This fund only provided some ambulatory health consultations, and all major operations were performed in the Beneficence hospitals. There was also a legal guarantee of medical services and primary food for the wives and children of those contributing to the Obligatory Insurance. On the other side, there was the National Service for Employees; for those contributing to other funds, it provided basically for preventive medicine, and ultimately it shared the hospitals with the Beneficence. Finally, there was the National Direction for the Protection of Infants and Adolescents, which covered all the children of non-contributing parents, this was totally financed from public expenditure and used the medical infrastructure of the Beneficence.

There were also a number of public and environmental health institutions, some of them dependent directly upon the Ministry of Health, others dependent upon other public institutions, such as the municipal hygienic services.

This short review of the health sector development prior to the foundation of the National Health Service, shows that the basic problems health care faced at that time were due to the variety of institutions performing similar tasks with no coordination between them, and sometimes with overlaps in their functions. With regards to the private sector; during this period there were few private clinics and there were no developed health insurance schemes.

This situation is demonstrated in figure 5.1., which shows the complicated links between the Ministry and its dependant institutions.

In 1952 the National Health Service (SNS) was created in an effort to consolidate the diverse public institutions involved in public health care under a unified structure. It incorporated the majority of the previous institutions, except the National Service for Employees, as figure 5.1. shows. The changes produced by the organization of the SNS involved mainly an institutional re-arrangement, without incurring new expenditures. The original structure comprised one director, to whom four departments depended: environmental hygiene, epidemiology, medical attention and technical services. There also was a General Sub Director who managed 18 health zones; in theory these zones had decentralized discretion for the management of the budget, but in practice this did not happen (Urzua, 1977). In practical terms, the Ministry allocated the budget on the basis of historic apportionments related to the assigned and centrally estimated population, without specific consideration of the local needs or circumstances.

The organization of the SNS was slower than expected due to a lack of financial backing from the central government and to the inherent problems of combining different institutions with different aims and, in practice, even different wage levels.

The National Medical Service for Employees (SERMENA), founded originally in 1942, was a way of recognising the special status that skilled worker had in relation to manual workers; it was also thought of as a mechanism for alleviating the burden on the SNS hospitals and doctors. But because there was a real shortage of doctors, and many of them were working part time in both SNS and SERMENA, it was necessary to improve the quantity and quality of medical services given. So, in 1968 the SERMENA was reorganised, the main aim being to supply more doctor hours per patient. The solution was then to change the system of payment to doctors from a fixed wage to a payment per medical action, at the same time the modifications allowed the users of the service to choose their doctors, even from the private sector; for this reason this system is thereafter known as "free election system" or Preferred Provider System (Valdivieso, 1977). SERMENA was basically financed from the Medical Assistance Fund (FAM), to which skilled workers and pension funds were required to contribute. FAM financed, in the form of medical vouchers, part or all of the medical action; it also offered some personal loans to finance the difference between private cost and SERMENA's contribution. The value of the medical consultation and other medical services, such as operations, X-rays, etc, were specified in special fee schedules. Doctors were required to be registered with SERMENA, and all the payments to them were through the Medical Association.

In the mid sixties, the distribution of the population in the health system was the following: 60% were beneficiaries of S.N.S., 25% were beneficiaries of SERMENA; the remaining 15% were covered by private medicine or had no health protection at all (Quesney, 1988).

In 1975, around 70% of the active doctors were registered in SERMENA, which was providing health care for more than two million people. In the same year SNS and SERMENA were covering 91% of all medical consultations in the country (Valdivieso, 1977).

The organization figure for the seventies shows a simpler structure, with only two public services in the health

sector. At the same time, the ministry was performing simultaneously normative and operative or productive functions.

By 1980, many of the original expectations of the health care system were not being obtained and for that reason the government initiated a large scale reorganization of the sector. The main flaws of the old system, as identified by the government (ODEPLAN, 1980), were:

1.- The users of the public health system had no freedom to choose their desired type of medical consultation. There was an unnecessary discrimination between skilled workers and manual workers, in that only the former were able to use the "free election system", whereas the latter were obliged to use only the SNS facilities. The argument in practical terms is that in the lower tiers there is not a large wage differential between employees and manual workers, and therefore some workers are prepared to pay part of private medical services, and on the other hand some employees would like to use fully the SNS facilities.

2.- Another important problem in SERMENA was that of administrative irregularities. For example, doctors could overcharge patients (at no expense to themselves or to patients) by simply filling more vouchers. Another irregularity was in relation to the identification of SERMENA beneficiaries, there was no form of identification and therefore it was easy for non members to have illegal access to the system.

3.- The management system was very centralised, and in practical terms the Health Zones were unable to influence in any way their expenditure and revenue decisions.

4.- There was an excessive concentration of the services offered, almost all of them were performed by public institutions.

5.- Finally, the health services were concentrated very much on curative health care. Although the system had relatively good facilities in big cities, it was necessary to improve the conditions in poor rural areas where mortality was high.

These flaws are related to the basic problems of health services finance in Developing Countries identified by the World Bank. The Bank argues that the problem is not only insufficient funds to meet the growing health needs, but also the existing inefficiencies in the management and incentive system of health services. The Bank also cites the existing inequalities in the distribution of the benefits from the health services (Banco Mundial, 1987).

In relation to the evolution of the Chilean health indicators between the 1960's and the 1980's it must be said that they show a very positive evolution (Medina, 1979). The last 25 years feature a systematic pattern of diminishing health risks. The group most benefited with this trend are the children: infant mortality has been diminishing at an annual rate of 3.6%. This is a clear result of policy priorities: maternal and infant diseases have been in the top priority since 1960, and subsequent governments have put an effort into the organization of ambulatory programmes for pregnant women and children up to 6 years old (Medina and Kaempffer 1983). Castaneda (1984) has argued that despite a trend toward improvement since 1960 in the infant mortality rate and related indicators there is evidence of an acceleration of that trend since the mid 1970's. The reasons for the decline in mortality indicators are the shift toward the provision of services for mothers and children and primary health care in general. However, Foxley and Raczynski (1984) have argued that in the last ten years, this positive trend for children has been helped by a drop in the birth rate and a concentration of births in the social stratum with lower death risks.

As a consequence of a low death rate, life expectancy has increased by 10 years during the period (See Table 5.1.). In relation to principal death causes there is a big shift from

infectious diseases and pathologies related to infants, including malnutrition, (all typical of developing countries), to a mixed situation including some of the former pathologies but with a greater share of circulatory diseases, cancer and accidents, all more common in developed nations. The changes and improvements are associated with the increase of medical coverage and with improvements in other social sectors, such as education, sanitation and others.

TABLE 5.1.

CHILEAN HEALTH INDICATORS FOR THE LAST 25 YEARS

| YEAR | GEN.MORTALITY | INFANT MORTALITY | LIFE EXPECTANCY<br>AT BIRTH |
|------|---------------|------------------|-----------------------------|
| 1960 | 12.4          | 119.5            | 57.1                        |
| 1965 | 10.8          | 97.3             | --                          |
| 1970 | 8.9           | 82.2             | 61.5                        |
| 1975 | 7.3           | 57.6             | 64.2                        |
| 1980 | 6.7           | 33.0             | 65.5                        |
| 1985 | 6.3           | 17.9             | 67.1                        |

Source: National Institute of Statistics and Ministry of Health



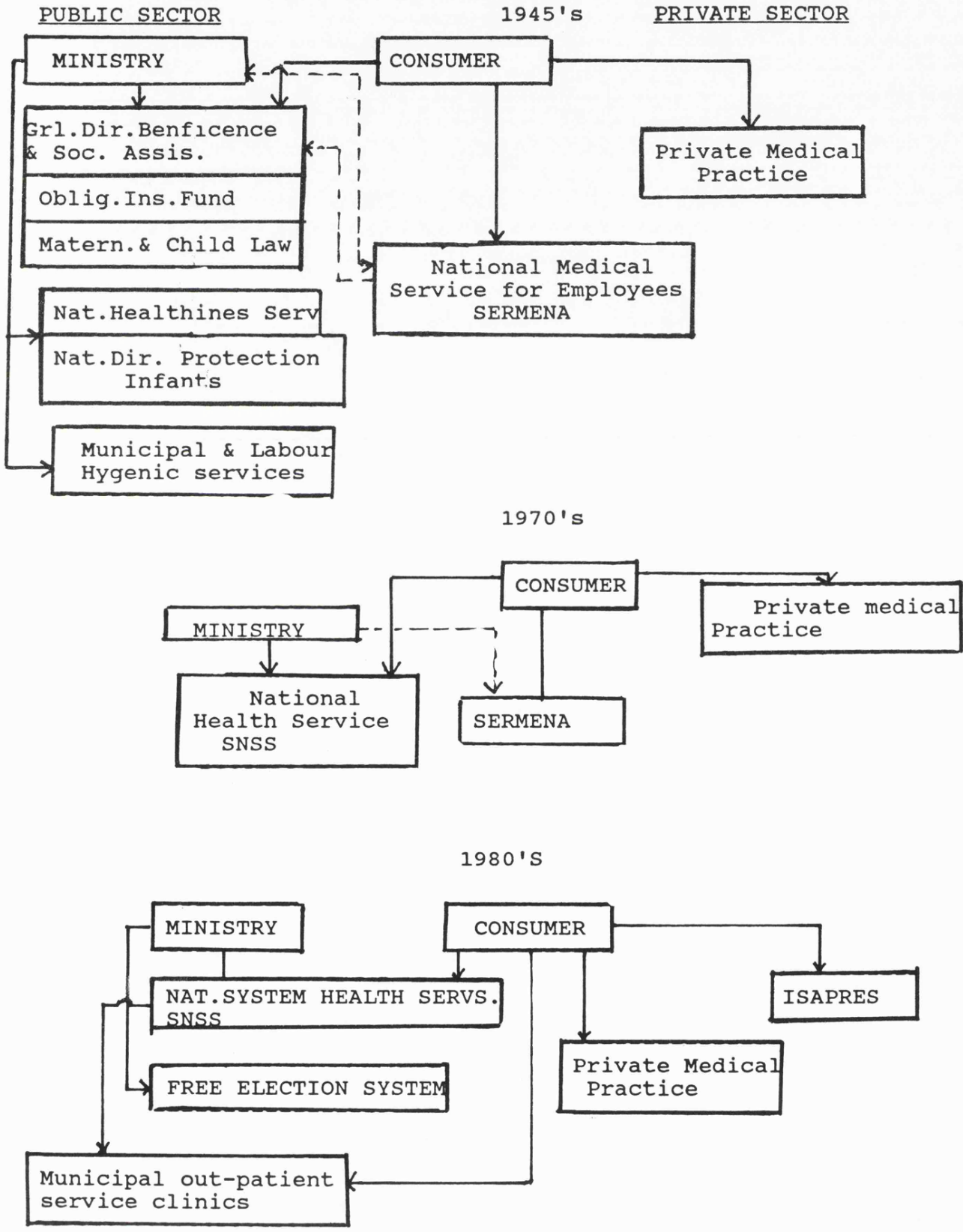
## 5.2. HEALTH FINANCE AND ORGANIZATION

### 5.2.A. Present System of Health Care

The Military Government wanted to reorganize the Health Sector from 1974. The majority of the organizational problems acknowledged were shared at first by both the Government and the Chilean Medical Society. However, the policy solutions offered by the Government varied from a privatization move, to a shared responsibility with emphasis in the public sector. This former solution was the source of the disagreement with the Medical Society, because medicine was treated as a "social service" but had no possibilities to develop in a competitive free market economy, the hospitals were overcrowded and had insufficient resources and, at the same time, the government was demanding efficiency in management (Raczynski, 1983). Under these circumstances, the government did not introduce all the changes at the same time; some delay was deliberately intended in order to have the backing of the Medical Association, but this was not achieved in most cases.

A second important area of discussion was related to the ministerial policy priorities in health care. Despite the acknowledged improvements in health care of the previous decades, there were still important areas to be improved. At that time, it was agreed that the public effort was concentrated in curative hospital based medicine, therefore it was possible to make additional improvements by concentrating public efforts in primary health care. This meant developing health actions through out patient service clinics and rural clinics with programmes oriented to mothers and their children (ODEPLAN 1980). This view was shared by a wide range of health analysts including Navarro (1976).

FIGURE 5.1.  
THE DEVELOPMENT OF MINISTRY OF HEALTH ORGANISATION



The government tackled these problems through the reformulation of the ministerial functions and activities <sup>(1)</sup>, in which it re-organised the SNS and SERMENA, the SNS becoming the National Health Service System (SNSS) and SERMENA becoming the National Health Fund (FONASA) (see figure 5.1.). This change, which is practically a unification of the services, then allowed both skilled workers and manual workers to have access to the system as a whole with no distinction. Therefore, now it was possible for the contributions of both manual workers and employees to go to FONASA.

The new health organization attempted to be a direct response to the problems identified earlier. Therefore it is important to look at each of them in some detail:

#### 1.- Freedom to choose

The new law established a single health regime for all workers dependent or independent, and ended the distinction between manual workers and skilled workers. It also established the level of payment that the beneficiaries have to pay per consultation.

#### 2. Administrative irregularities:

The Free Election System or Preferred Provider System (formerly SERMENA) was now administered by FONASA. In relation to the administrative problems of abuses or misuses of former SERMENA identified earlier, Preferred Provider System users were obliged to show a special identification card to be able to purchase medical vouchers. This process has also been simplified by allowing some banks and FONASA branches to sell the vouchers. To receive medical attention the user of the free election system must purchase a voucher through which he pays part of the doctor fees, the rest being subsidised by FONASA. Afterwards the doctor will receive from FONASA the

.....  
1.

Law Decree No. 2.763 1979

total cost of that medical attention.

### 3. Decentralization:

One of the most commonly recommended ways to tackle the problems of administrative inefficiency and management, is decentralization. A strategy for decentralising both planning and budgeting processes of health services has been firmly advocated by the World Bank (Banco Mundial, 1987). The Chilean centralization problem was tackled with the division of functions at a sub-national level within the ministry; the normative function is now executed by the regional ministerial secretariat (Secretaria regional ministerial SEREMI), the productive or operational function is performed by the health services of the country. The SNSS is now organized in 26 semi autonomus regional services, each of which with the required infrastructure to provide from primary health care to curative or specialized tertiary health care. Each regional service is managed by a Director appointed directly from ~~the~~ President. For this reason, in figure 5.1. the Ministry is drawn to the left of the operative or productive services of health care, in this way we stress that the Ministry is performing a normative role, and the links to the Health services are not as vertical as they used to be. However, as will be explained below, the Ministry still finances directly most of the health activities, through FONASA.

A new feature appears too in the allocation system of the budgets of the SNSS. Instead of being allocated to health zones, regardless of the volume of health services supplied as in the past, SNSS budgets were now partially based on system of anticipated payments. These payments are now named Bill per medical consultation or fee for service system (Facturacion por atencion prestada (FAP)), and help to allocate budgets more in line with the actual utilization of medical services. The aim of this system is to change the distribution of financial resources from a subsidy of the supply of health services to a subsidy of the demand of health services (Viveros-long, 1986).

The changes also embraced the municipalization of outpatient service clinics (consultorios). The aim here was to promote decentralization and efficiency through the consideration of all local demands. The system was financed by a municipal FAP (FAPEM) which paid more than the SNSS fees for medical consultations. In order to administrate transferred out-patient service clinics municipalities created Social Development Corporations. These Corporations are private non profit institutions; they receive the the SNSS reimbursements and use them to pay the clinics expenses (2).

Another way by which decentralization was tackled involved the elimination of the territorial jurisdiction of the former health zones, so that each health service should compete with the other to attract more patients, and therefore obtain more resources through the FAPs paid from central government.

#### 4. Diversification of public services

An important change in health care finance and delivery during this period is that for the first time the government explicitly included the private sector in the provision of public health services and defined for the state a subsidiary role (Viveros-long,1986). This idea materialised with the introduction, in 1981, of the Provisional Health Institutes (Instituciones de Salud Previsional, ISAPRES). (The ISAPRE system is discussed below).

#### 5. Shift to primary health care

The new institutional structure promoted a shift to primary health care; this was achieved through some decentralization policies. Additionally, in 1978 the government obtained an important financial support from the Interamerican Development Bank (IDB), to build a large number of rural outpatient health service clinics. At the same time

.....  
2. The theme of Social Development Corporations is also discussed in Chapter 6: Education.

special training courses for nurses, midwives and paramedical personnel were organised.

The Programme of Complementary Feeding (PNAC) was also redefined to improve targeting to poor families. In an attempt to discourage middle and rich families from the programme, it no longer distributes its benefits through the welfare offices of enterprises or institutions; instead it was required that every recipient (children from 0 to 6 years) must attend the regular medical consultation for nutritional vigilance. The savings produced from this new form of operation were used to enhance the variety of products offered to children in relation to their nutritional status.

With these changes in primary health care and in the complementary feeding programme, the ministry simultaneously moved towards targeting its expenditures on the poor, i.e., making its programmes more progressive.

#### Organization and Production of Health care

The new health law of 1986 <sup>(3)</sup> established a single health regime for all the population using the public scheme. The beneficiaries of the public system are all workers paying their mandatory health contributions to FONASA or low income families which qualify as such through a means test. There are two main alternatives within the public sector, the institutional (SNSS), and the free election system or the preferred provider system.

Under the institutional scheme the state subsidizes the users in a form inversely related to their incomes; poor families make no payment at all. The law defines four groups of beneficiaries:

Group A: Indigents and recipients of assistance pensions -

.....  
3. "New Health Law" Law No. 18,469

1 January 1986.

Group B: Affiliated with personal disposable income below  
\$16,288 - No Charge

Group C: Affiliated with personal disposable incomes between  
\$16,288 and \$25,540 - 75% subsidy

Group D: Affiliated with personal disposable incomes above \$25,540  
- 50% subsidy.

Low income families, usually employed in the informal sector of the economy (i.e. do not contribute to FONASA), can only receive medical treatment under the institutional scheme in groups A or B.

The same regulation of the institutional scheme applies to the users of the Municipal Outpatient Service Clinics (Consultorios). In this work, this latter form of public health production has been differentiated in order to discriminate between centralized and decentralized modes of production.

The free election system benefits only the families of those workers contributing to FONASA. The beneficiaries can choose from three levels of subsidiation; this choice can be exercised either in a private clinic or in an SNSS hospital.

The free election system is a tri-level care system, which consists of a fixed subsidy per medical voucher, and corresponds to different levels of subsidisation according to the level at which the consulted doctor is registered. There are three different levels (<sup>4</sup>):

Level 1: 50% Subsidisation of medical consultation.

Level 2: 33% subsidisation of medical consultation.

Level 3: 25% subsidisation of medical consultation. (<sup>5</sup>)

.....  
4. There are other percentages of subsidisation per level in other medical services. However, the rank between the levels is always maintained, this means level 1 is always the cheapest, level 3 the most expensive.

5. FONASA has a price list of over 2000 types of medical treatments including examinations. Each type of attention has a base price which is applicable to doctors registered in each of the three levels.

Theoretically there should be no differences in the quality of the medical services in relation to the different levels; differences should arise only as a result of amenities offered, waiting lists, etc. In practice, however, the majority of the more experienced doctors are located in the third level, whereas young doctors are in the first level. This produce the result that sometimes people have to see a doctor in an undesired (expensive) level, because it is impossible to find a known specialist in lower levels.

All the hospitals belonging to SNSS were included in the first level, as a way of controlling prices. FONASA users have some priority in the different levels of subsidisation, they usually prefer levels 2 and 3 for medical consultations, but they choose level 1 for laboratory exams (Castaneda, 1987).

It must be noted that the original expectations of the Ministry were, on the one hand, that an important part of the SNSS beneficiaries were going to use the "free election system", alleviating the burden of SNSS users and allowing it to concentrate on the most needy people; on the other hand, they expected that a few of the former SERMENA users would use the SNSS facilities.

A further alternative within the public sector is the Armed Forces Health Services. These services are exclusively for the armed forces and their families, and are not analysed here.

With regards to the private alternatives of health provision, there are two possibilities here: private medical practice and ISAPRES.

Private medical practice is available to all those who are not contributing to FONASA, or to an ISAPRE, or who are not low income families. In other words, this alternative applies to those self employed workers who choose not to contribute to a health insurance scheme, preferring to pay the cost of the medical consultations directly.



In relation to the Provisional Health Institutes (ISAPRES), it must be said that these private health organizations are similar to the U.S. Health Maintenance Organizations, and receive the health contributions of those who made the choice not to contribute to FONASA. These should provide at least the same benefits as former SERMENA and must comprise curative and preventive medicine and the payment of temporal invalidity subsidies. The initial motivation of the government for the ISAPRES was to "alleviate the burden of the State Health System, and to stimulate the development of a private health infrastructure, leaving governmental health for the poor" (Raczynski, 1983). The main fears about this private health system were publicised from the outset by the Chilean Medical Society: i) The mandatory contributions for health care were too low to finance the high costs of curative medicine; ii) as a result, the ISAPRES would be highly selective, and would be competitive only for high income and low health risk workers; iii) This would produce at the same time, an important reduction of resources for the public health services.

Some of the original fears proved to be real after some time. As a result of the new health law, the mandatory payroll rates changed from a range of 3.5% to 4.5%, depending upon the institution to which the deductions were going; from a flat 4% rate in 1981, the rate then rose to 5% in January 1983, and to 6% in June of that year, and finally in January 1986, the deduction increased to 7%. It is interesting to note that one of the attractions of the new social security system (including in this case health insurance), was the lowering of the contributing rates and the subsequent increase of the disposable income of workers. Although social security contributions have stayed at the same rate of 13%, the practice has shown that the revenue yielded from the original contribution rates to finance health care were totally insufficient. This financial crisis is an indirect result of the health contributions going to the private sector, which correspond mainly to high income contributors, who are at the same time the people with low health risks.

It is now clear that the system favours mostly high income groups, in that the plans discriminate in relation to the income

and number of beneficiaries per policy (cargas). Workers with higher levels of income, and smaller family will obtain more benefits.

The ISAPRES system has provoked an important transference of people from the "free election system" to the ISAPRES; this was an intended policy. However, this has produced a constraint in FONASA resources. As Arellano (1987) showed, there is a negative net result between less expenditures in FONASA, (because of people leaving), and fewer resources in the public system, (because of the contributions shifted to the private system).

Despite the previous remarks, the evolution of ISAPRES has been very rapid. The number of beneficiaries has been growing at an annual rate of 60% (Miranda, 1989). The share of ISAPRES in relation to the other health systems has grown to 10.6% of the total population; this has been helped by the rise in mandatory contributions and by other legal changes, and it is expected to grow to 15 - 20% of the total population. The profitability (<sup>6</sup>) of the institutions has ranged between 40% in 1985, to 23.6% in 1987 (Miranda, 1989). Finally, the ISAPRES business has been featured by high stability; on the one hand, in the seven years through which the system has operated, only one institution has been closed by insolvency, and on the other hand, the top five ISAPRES have maintained their position during the period.

ISAPRES are only developed in the more urbanised high income regions, and the majority are working with contracts for private clinics already established as such, and so are not producing new "real" capital investment in the health sector.

To sum up, it should be noted that according to the New Health Law, the consumer has, theoretically, six alternative forms for accessing health care, although there are some restrictions for some of these (see figure 5.1.).

.....  
6. Profitability measured in relation to assets. See: Miranda 1989.

From the public sector side, the consumer can access health care through SNSS hospitals, Municipal Outpatient Service Clinics or through the Free Election System receiving the medical treatment in a SNSS hospital or a private institution. There is a further alternative within the public sector in the form of the Armed Forces Health Services, but this is exclusive to the armed forces and their families, and therefore is not available for the general public. According to table 5.2. around 80% of the population relies on the public provision of health care; this is an interesting point, since it is almost the same share as in the mid 1960's, despite the new law aimed at privatising Health.

In the case of the private sector, the consumer can have access to a Provisional Health Institute (ISAPRE), or simply use a private practice with no contributory system. According to Table 5.2., 14 to 16% of the population has access to private health care. According to Miranda (1989), more than 31% of the total health resources spent in the country are concentrated in the ISAPRES system. This helps to understand, that private healthcare is far from being a redistributive system.

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TABLE 5.2.  
DISTRIBUTION OF BENEFICIARIES OF HEALTH SYSTEMS (7)  
1987 (%)

| ISAPRES | FREE ELECTION | SNSS | Armed Forces | Other | TOTAL |
|---------|---------------|------|--------------|-------|-------|
| 11.0    | 11.0          | 70.0 | 5.0          | 3.0   | 100.0 |
| 7.5     | 19.0          | 65.0 |              | 8.5   | 100.0 |

-----

Source: Author estimates (first line)  
Arellano (1987) (second line)

.....

7. Since all workers must make their mandatory health contributions to any one of the systems available, it is not expected to find persons in more than one system, unless they are acting illegally. For example, an ISAPRE beneficiary can buy a medical voucher for a SNSS beneficiary.

To conclude this section on the present system of health care in Chile, it is possible to summarize the governmental efforts in three areas:

- i. The administrative changes of the public health services have meant a redefinition of the system's functions:

Regulation: The National Health policies are formulated by the Ministry of Health. At a regional level the Ministry is represented by a Regional Ministerial Secretariat for Health.

Financial Subsidy: This is concentrated in the National Fund of Health (FONASA), which administers all of the financial resources of the Ministry.

Production: The execution of the health policies is a function of the National System of Health Services (SNSS).

- ii. The government has liberalized the different alternatives of health care within the public sector, eliminating the discrimination between skilled workers and manual workers, and allowing each to use the service most suitable to his own budget.

- iii. The Ministerial effort has been concentrated in stimulating the development of private health care in an attempt to alleviate the burden of the public health system and to leave the state system in a subsidiary role. However, as Table 5.2. shows, 80 to 85% of the population still rely on the public health system.

### 5.2.B. Total Public Expenditure in Health

The analysis of the evolution of total public expenditures in health in Chile is not an easy task. During the last ten years there has been a big controversy on the subject. The figures produced by researchers show important differences in absolute terms. However, Castaneda (1984) has pointed out that the main difference arises from the variety of deflators used rather than the original nominal series used. The findings reproduced here confirm this point of view.

Three series of public health expenditures can be compared in Table 5.3. Each of the authors quoted used different deflators; Yanez used his own price index, Cheyre and Symon used the GDP implicit deflator, whereas the Comptroller used the Consumer Price Index (CPI). As can be seen, the main differences in the trends appear during two periods: 1973-76 and 1978-80, during which the National C.P.I. was subject to many criticisms. Nevertheless, it can be appreciated that the general trends observed are very similar. From 1970 to 1982 health expenditures grew by more than 35%, having experienced during this period an important decline during the international oil recession (1975-6).

The peak of the period is reached in 1982, when total public health expenditures accounted for 9.8% of total public expenditures or 3.4% of the GDP (Cheyre & Symon, 1987). After 1982 there is a sharp decline in the expenditures when the country was hit by the new international recession. According to Yanez's figures, the present total expenditure levels are similar to those of 1970, but 18% lower than those of 1982.

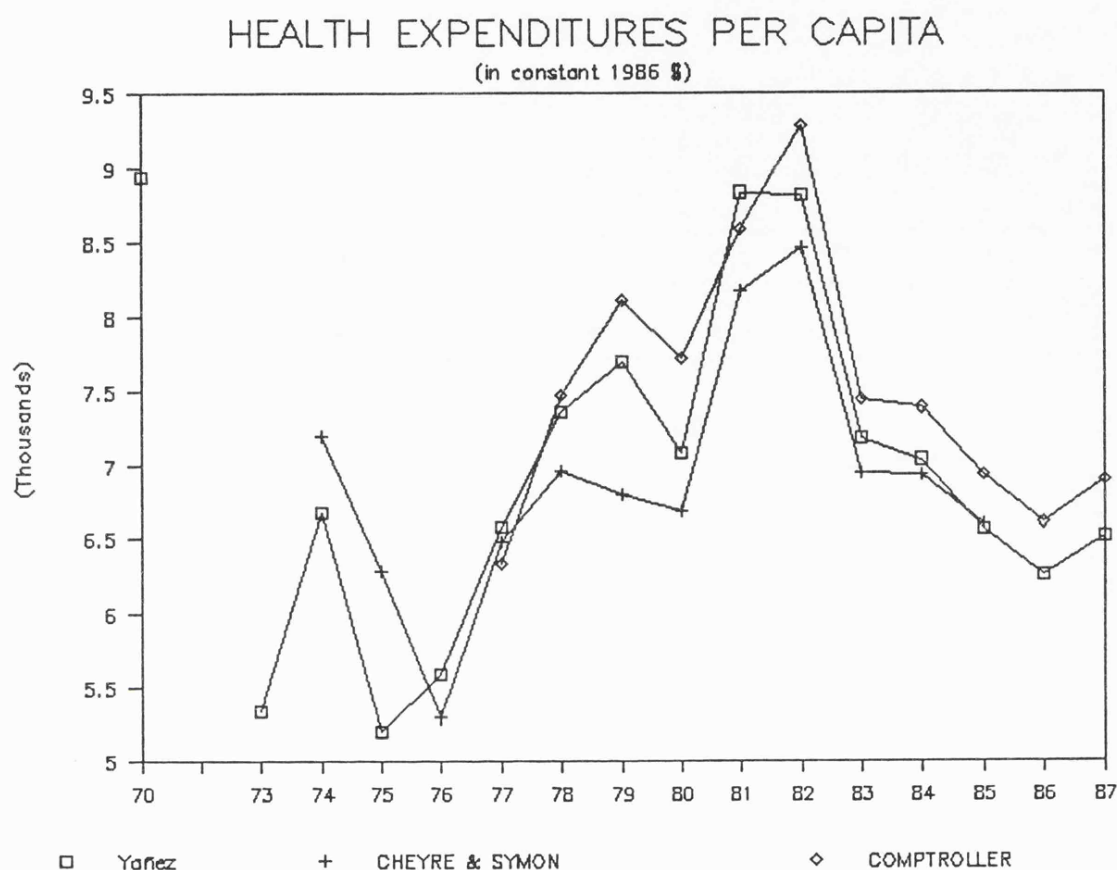
| TABLE 5.3.                    |   |        |             |  |        |             |
|-------------------------------|---|--------|-------------|--|--------|-------------|
| PUBLIC EXPENDITURES IN HEALTH |   |        |             |  |        |             |
| YEAR                          | PUBLIC EXPENDITURES IN HEALTH<br>(Millions of 1986 pesos) |        |             | HEALTH EXPENDITURES per CAPITA<br>(1986 pesos) |        |             |
|                               | YANEZ   | CHEYRE | COMPTROLLER | YANEZ  | CHEYRE | COMPTROLLER |
| 1970                          | 83,400  |        |             | 8,929  |        |             |
| 1973                          | 52,600  |        |             | 5,334  |        |             |
| 1974                          | 67,000  | 72,241 |             | 6,683  | 7,205  |             |
| 1975                          | 53,000  | 64,054 |             | 5,198  | 6,282  |             |
| 1976                          | 57,900  | 54,907 |             | 5,582  | 5,294  |             |
| 1977                          | 69,400  | 68,406 | 66,799      | 6,578  | 6,483  | 6,331       |
| 1978                          | 79,100  | 74,819 | 80,276      | 7,370  | 6,971  | 7,479       |
| 1979                          | 84,100  | 74,266 | 88,533      | 7,703  | 6,802  | 8,109       |
| 1980                          | 78,800  | 74,347 | 85,800      | 7,096  | 6,695  | 7,727       |
| 1981                          | 99,700  | 92,263 | 96,934      | 8,828  | 8,169  | 8,583       |
| 1982                          | 99,800  | 95,909 | 105,220     | 8,809  | 8,465  | 9,287       |
| 1983                          | 84,200  | 81,423 | 87,365      | 7,186  | 6,949  | 7,456       |
| 1984                          | 84,000  | 82,705 | 88,143      | 7,048  | 6,939  | 7,395       |
| 1985                          | 79,600  | 80,117 | 84,141      | 6,567  | 6,609  | 6,941       |
| 1986                          | 77,100  |        | 81,514      | 6,255  |        | 6,613       |
| 1987                          | 81,800  |        | 86,500      | 6,525  |        | 6,900       |

Source:

1. Yanez (1983) and Yanez y Aguilo (1988)  
Quoted in Arellano
2. Cheyre & Symon (1987)
3. Contraloria General de la Republica  
Informes Gestion Financiera (1986 and 1987)

The health expenditures in per capita terms are plotted in Figure 5.2. The evolution of per capita expenditures shows a similar trend to total health expenditures. However, it must be noted that the growth shown here is less than that for total expenditures; in 1987 the government spent \$6,525 per person which is 27% lower than what it spent in 1970, or 26% lower than 1982. It should be noted in figure 5.2., that health expenditures show two peaks in the periods when the country was most economically stricken by the oil recession (1974) and the external debt crisis (1982). This is a remarkable countercyclical trend which will not be found in all other social sectors.

FIGURE 5.2.



In sum, during the 1970-87 period the country experienced an important decrease in health expenditures in real terms, both in absolute and per capita figures. This trend is due to a government policy of cost containment in health care and the more active role of the private sector after the creation of the ISAPRES. The total public expenditure in the health sector is now 2.6% of GDP. If the expenditures done through the private sector are added, the health sector accounts for 3.4% of the GDP, a figure similar to that of the 1982 peak and the late sixties.

However, the evolution of health finances may not be directly correlated to health status. As was mentioned before Chile has experienced important improvements in primary health

care during this period, although its expenditures were reduced by an important proportion. This is similar to the conclusion of Abel-Smith (1984) in his study of cost containment in health care in some European countries.

### 5.2.C. Expenditure Structure

#### Introduction

Prior to the analysis of the expenditure structure, it is important to clarify that all the figures presented below were elaborated according to the methodology for transfer elimination described in Chapter Four. In the case of the Health Ministry, there are important transfers between the National Fund of Health (FONASA), the SNSS, and the Central Supply Warehouse (CSW), this is an important source of confusion for health finance analysts. For example, in the initial health budget for 1987, transfers were 45% of total expenditures, whereas in the final budget, after the elimination of internal transfers, the item was only 7.8%.

Another caveat to be made is in relation to the up-dating of nominal figures. The deflator used was that developed by Yanez (1988), described in Chapter Four. This deflator was used for all the institutions except the CSW, for which a special deflator was produced considering its own expenditure structure, especially with regards to milk.

In this section we will describe firstly the economic expenditure structure of the Ministry of Health. Then we will describe the institutional expenditure structure.

#### Economic Expenditure Structure

The economic and institutional expenditure structure outlined in Table 5.4. considers only the three years under analysis in the present research: 1985 to 1987. However, we will also consider some references from the 1970's in order to describe the possible changes over time.



TABLE 5.4.

## THE STRUCTURE OF HEALTH EXPENDITURES

| EXPENDITURE   | PUBLIC EXPENDITURES IN HEALTH<br>(Millions of 1987 pesos) |         |         |           |        |         | EXPENDITURE STRUCTURE<br>(%) |        |      |           |        |       |
|---------------|---|---------|---------|-----------|--------|---------|------------------------------|--------|------|-----------|--------|-------|
|               | 1985  |         |         |           |        |         | 1985                         |        |      |           |        |       |
|               | Undersec.   | FONASA  | SNSS    | Inst.Sal. | C.S.W. | TOTAL   | Undersec.                    | FONASA | SNSS | Inst.Sal. | C.S.W. | TOTAL |
| Personnel     | 419.6   | 332.1   | 32533.2 | 381.1     | 133.9  | 33800.0 | 51.9                         | 1.4    | 57.3 | 50.6      | 1.9    | 37.8  |
| G.& S. cons.  | 183.9   | 1153.6  | 17627.7 | 321.5     | 92.7   | 19379.4 | 22.7                         | 4.8    | 31.1 | 42.7      | 1.3    | 21.7  |
| G.& S. prod.  | 0.0   | 0.0     | 0.0     | 0.0       | 0.0    | 0.0     | 0.0                          | 0.0    | 0.0  | 0.0       | 0.0    | 0.0   |
| Soc.Wel.Prov. | 0.0   | 21717.5 | 3167.3  | 0.0       | 0.0    | 24884.9 | 0.0                          | 90.0   | 5.6  | 0.0       | 0.0    | 27.8  |
| Transfers     | 1.6   | 4.8     | 5.7     | 3.4       | 6263.5 | 6279.0  | 0.2                          | 0.0    | 0.0  | 0.5       | 88.9   | 7.0   |
| Cap.Inv.      | 11.4  | 704.8   | 806.8   | 13.2      | 0.8    | 1537.0  | 1.4                          | 2.9    | 1.4  | 1.7       | 0.0    | 1.7   |
| Financ. inv.  | 0.0   | 0.0     | 0.0     | 0.0       | 0.0    | 0.0     | 0.0                          | 0.0    | 0.0  | 0.0       | 0.0    | 0.0   |
| Publ.debt     | 0.0   | 17.7    | 0.0     | 0.0       | 0.0    | 17.7    | 0.0                          | 0.1    | 0.0  | 0.0       | 0.0    | 0.0   |
| Previous year | 191.9   | 193.0   | 2586.6  | 33.0      | 557.2  | 3561.8  | 23.7                         | 0.8    | 4.6  | 4.4       | 7.9    | 4.0   |
| Other         | 0.0   | 10.1    | 16.0    | 1.6       | 0.0    | 27.6    | 0.0                          | 0.0    | 0.0  | 0.2       | 0.0    | 0.0   |
| Total         | 808.5   | 24133.6 | 56743.3 | 753.8     | 7048.2 | 89487.4 | 0.9                          | 27.0   | 63.4 | 0.8       | 7.9    | 100.0 |
|               | 1986  |         |         |           |        |         | 1986                         |        |      |           |        |       |
| EXPENDITURE   | Undersec.   | FONASA  | SNSS    | Inst.Sal. | C.S.W. | TOTAL   | Undersec.                    | FONASA | SNSS | Inst.Sal. | C.S.W. | TOTAL |
| Personnel     | 438.3   | 365.4   | 33463.0 | 390.6     | 139.5  | 34796.7 | 67.6                         | 1.5    | 57.8 | 56.1      | 1.9    | 38.4  |
| G.& S. cons.  | 190.5   | 1111.0  | 17898.2 | 267.1     | 101.7  | 19568.5 | 29.4                         | 4.6    | 30.9 | 38.3      | 1.4    | 21.6  |
| G.& S. prod.  | 0   | 0.0     | 0.0     | 0.0       | 0.0    | 0.0     | 0.0                          | 0.0    | 0.0  | 0.0       | 0.0    | 0.0   |
| Soc.Wel.Prov. | 0   | 21697.8 | 3407.2  | 0.0       | 0.0    | 25105.0 | 0.0                          | 90.8   | 5.9  | 0.0       | 0.0    | 27.7  |
| Transfers     | 2.4   | 29.1    | 4.0     | 0.8       | 5695.4 | 5731.7  | 0.4                          | 0.1    | 0.0  | 0.1       | 76.5   | 6.3   |
| Cap.Inv.      | 5.2   | 479.8   | 924.2   | 8.9       | 4.1    | 1422.0  | 0.8                          | 2.0    | 1.6  | 1.3       | 0.1    | 1.6   |
| Financ. inv.  | 0   | 33.2    | 0.0     | 0.0       | 0.0    | 33.2    | 0.0                          | 0.1    | 0.0  | 0.0       | 0.0    | 0.0   |
| Publ.debt     | 0   | 23.0    | 0.0     | 0.0       | 0.0    | 23.0    | 0.0                          | 0.1    | 0.0  | 0.0       | 0.0    | 0.0   |
| Previous year | 11.7  | 94.9    | 1879.0  | 28.5      | 1500.8 | 3515.0  | 1.8                          | 0.4    | 3.2  | 4.1       | 20.2   | 3.9   |
| Other         | 0   | 61.5    | 296.5   | 0.7       | 0.0    | 358.7   | 0.0                          | 0.3    | 0.5  | 0.1       | 0.0    | 0.4   |
| Total         | 648.1   | 23895.8 | 57872.0 | 696.6     | 7441.4 | 90553.9 | 0.7                          | 26.4   | 63.9 | 0.8       | 8.2    | 100.0 |
|               | 1987  |         |         |           |        |         | 1987                         |        |      |           |        |       |
| EXPENDITURE   | Undersec.   | FONASA  | SNSS    | Inst.Sal. | C.S.W. | TOTAL   | Undersec.                    | FONASA | SNSS | Inst.Sal. | C.S.W. | TOTAL |
| Personnel     | 426.3   | 381.0   | 33395.6 | 398.6     | 143.0  | 34744.5 | 71.8                         | 2.0    | 54.1 | 59.4      | 1.7    | 38.5  |
| G.& S. cons.  | 154.0   | 1091.1  | 21642.5 | 259.6     | 115.8  | 23263.0 | 25.9                         | 5.8    | 35.1 | 38.7      | 1.4    | 25.8  |
| G.& S. prod.  | 0.0   | 0.0     | 0.0     | 0.0       | 0.0    | 0.0     | 0.0                          | 0.0    | 0.0  | 0.0       | 0.0    | 0.0   |
| Soc.Wel.Prov. | 0.0   | 15935.3 | 3355.9  | 0.0       | 0.0    | 19291.2 | 0.0                          | 84.7   | 5.4  | 0.0       | 0.0    | 21.4  |
| Transfers     | 2.2   | 36.7    | 1.9     | 1.0       | 6975.8 | 7017.6  | 0.4                          | 0.2    | 0.0  | 0.1       | 82.3   | 7.8   |
| Cap.Inv.      | 6.0   | 9.6     | 1297.2  | 10.5      | 12.1   | 1335.4  | 1.0                          | 0.1    | 2.1  | 1.6       | 0.1    | 1.5   |
| Financ. inv.  | 0.0   | 538.3   | 0.0     | 0.0       | 0.0    | 538.3   | 0.0                          | 2.9    | 0.0  | 0.0       | 0.0    | 0.6   |
| Publ.debt     | 0.0   | 26.5    | 0.0     | 0.0       | 0.0    | 26.5    | 0.0                          | 0.1    | 0.0  | 0.0       | 0.0    | 0.0   |
| Previous year | 5.3   | 20.2    | 1920.8  | 1.3       | 1228.4 | 3176.0  | 0.9                          | 0.1    | 3.1  | 0.2       | 14.5   | 3.5   |
| Other         | 0.0   | 767.2   | 63.0    | 0.6       | 0.0    | 830.8   | 0.0                          | 4.1    | 0.1  | 0.1       | 0.0    | 0.9   |
| Total         | 593.8   | 18805.9 | 61676.9 | 671.6     | 8475.1 | 90223.3 | 0.7                          | 20.8   | 68.4 | 0.7       | 9.4    | 100.0 |

Author calculations based on:

Estados Ejecucion Presupuestaria del Sector Publico

- Personnel: Expenditures on personnel comprise the payment of the salaries and wages of all public employees in the health sector. As a social service, Health spent most of its resources in labour costs. The proportion of expenditure in this item has remained constant, at around 37% to 38%, from 1970. However, because health expenditures overall have diminished in real terms, the Ministry has adopted a policy of increasing the number of nurses, midwives, medical technologists, and others, in order to allow the system to increase the number of medical consultations at a lower cost.
- Goods and services: The expenditures on goods and services includes the medical supplies for providing health care. The expenditures in this item have evolved somewhat erratically, ranging from 21 to 26% of total expenditures.
- Social Welfare Provisions: Social welfare provisions are the expenses resulting from state subsidy of the purchase of medical vouchers for the beneficiaries of the "free election system", it also includes the payment of maternal and illness subsidies.

This item has diminished in importance as a result of the creation of ISAPRES, since these institutions must now pay the subsidies. Still it constitutes the second largest area of expenditure within the Ministry of Health.

- Transfers: Transfers are basically the purchase of milk to be distributed through the National Programme for Complementary Feeding (PNAC).
- Investment: Investment expenditure has systematically fallen since 1970, when it was 13.5% of the total budget. From 1974, the Ministry argued that it was an intended policy aimed to concentrate efforts on the available infrastructure; therefore investment expenditure has remained around 2% of health expenditures. However, it should be mentioned that through the National Fund for Regional Development the Ministry of Health

receives some funding for investing in its sector; in 1987, this was equivalent to an additional 2% of the total expenditures.

All investment projects must be approved through ODEPLAN's Basic statistical system for investment. This is the governmental project evaluation system described in Chapter two.

#### Institutional Expenditure Structure:

**Undersecretariat :** This basically covers the ministry's central bureaucracy which performs the ministry's normative function. It has a large share of expenditures in personnel, comprising health planners and financial analysts both at central headquarters and in the regions. The expenses in goods and services are almost totally related to office and similar items. The Undersecretariat account for less than 1% of total health expenditures.

**FONASA:** The National Fund of Health performs the financial function of the ministry. FONASA is the legal successor of SERMENA. Its funds are obtained from different sources such as the free fiscal contribution from the Treasury and mandatory contributions from workers. It accounts for 21 to 27% of total health expenditures. The funds originally allocated to FONASA are later distributed among other ministerial institutions, such as SNSS, CSW, etc.. It also finances the "Free election system", and health related subsidies.

**SNSS:** The National System of Health Services (SNSS) performs the operative or productive function of the ministry, i.e. providing health care to the population. It accounts for more than 60% of the ministerial budget. In this case it is necessary to give a larger explanation of its expenditure structure.

The expenditures on personnel are paid according to a payroll list, and represent the most important area of expenditure of the SNSS. Each of the 27 health services has a

limited number of employees, which is fixed by the budget law; at the same time the salary scales and promotion policies are also set from the central level. Therefore, despite the extent to which each health service may have some budgetary discretion, personnel expenditures are centralized. The Regional Director has discretion for recruiting additional professionals at the expense of the regional SNSS budget. This means that the Director must budget some regional additional resources in order to finance these.

The health services finance their expenditures on goods and services for consumption through the "Facturacion por atencion prestada" system (FAP) (fee for service or bill per medical consultation) FAPs are paid to each health service in relation to the number of consultations given; this system helps to allocate budget more in line with local needs. The effects of this procedure will be considered in section 5.2.D.

The payment of social welfare provisions makes up around 5 to 6% of the total SNSS budget. These expenses comprise the payment of subsidies to those contributors to FONASA who are unable to work due to illness, pregnancy or childcare. The funds for these health subsidies are allocated monthly by FONASA in relation to the expenditures of previous years. As a way to provide incentives for efficiency and fewer expenses in this area, the ministry designed a policy by which each health service can spend in goods and services for consumption, the savings produced by the difference between the central monthly allocation and the actual expenditure in subsidies.

Finally, the allocation of capital investment between health services is defined according to central priorities; local autonomy is limited to the identification of different investment projects.

**Institute of Public Health:** The Institute is a research body and acts as a national reference laboratory and quality control agency.

Central Supply Warehouse (CSW): The CSW is the main supplies purchasing organism of the SNSS. After the creation of the SNSS, the health services were permitted to buy their supplies from the private sector; therefore the CSW evolved from a virtual monopoly, and as a result providing 89% of pharmacy items in 1975, to a simple competitor, providing 40% of these items in 1983 (Scarpaci, 1985).

The main expenditure item of the CSW is transfers. This area corresponds to the purchase of powder milk and other products for the National Programme for Complementary Feeding.

#### 5.2.D. Budget and Planning

In this section we describe and discuss how the budgetary process of the Ministry is organized. In this analysis we also look at the existing links between planning and budgeting in Health. Therefore, firstly we will delineate the main elements of the ministerial process of budgeting. In the second place, we will analyse in more detail the effects that might produce in the ministerial budget the introduction of the new schemes of bill per medical consultation (FAP) or (fee for service), and the financial decentralization of the Programme for Complementary Feeding of the Central Supply Warehouse (CSW). In the final part, we will look at the links between planning and budgeting.

In general terms, as the Health budget is part of the national one, it must follow the same phases and stages of the national budget. However, it is interesting to direct attention to some particular aspects <sup>(8)</sup>:

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8. The description of the budgetary and planning processes of the health sector will be larger than the rest of the other sectors. In the next sectoral chapters we will concentrate on the differences observed in relation to the standard procedure of the health sector.

## Formulation

In contrast to the national level, the Ministry does not prepare its own policy outline for the elaboration of the budget; it prefers to rely on the financial basis of the budgetary office.

In the case of the health sector services, and in general most social services, revenue estimates are not of great significance since most revenue comes from the Free Fiscal Contribution, and therefore the services largely must rely on the budget allocations. In the mean time, in order to prepare their budgets, they usually work with the previous year's allocation plus the estimated rate of inflation. The Budget Office supplies to each health institution an estimate of their expenditures for the next year. This figure comes from the Communicated Budget prepared by the Budget Office, and in practical terms it contains the final ceilings on expenditure.

Based on the previous year's allocations, health institutions receive their revenues and expenditure figures from the central level. The only exception is FONASA which receives workers' health contributions; in this case FONASA plans in relation to the previous year's contributions with and a consideration of the delay in receiving them.

Health institutions concentrate heavily on giving grounds to the expenditure areas which the budget office will not anticipate. For instance, areas such as personnel, in which most of the structure is fixed by law, will be approved without major considerations; almost certainly, most parts of the previous year's explanations and justifications of the figures will be included. In the SNSS, an area demanding accurate explanation for the Budget Office is the "over salary rate" of doctors, whose base income will increase according higher experience and years of service. This salary rate produces a change every year, therefore the budget office knows that it is an area to look at.

The Ministerial Planning Office compiles the service budgets, correcting minor mistakes, but usually not allowing for internal discussions, due to the tight schedule of the central budget. This proposed budget, which is almost entirely based on the prior communicated budget, will be sent to the budget office for approval (9).

#### Authorisation

The authorisation phase depends almost entirely on the Budget Office and the Ministerial Planning Office. On some occasions, such as 1983, reductions to the institutional estimates of expenditures can be made after the internal consolidation of the departmental budgets (10) and the formal approval of the budgetary law. In such a case, the institution facing the reduction must redefine some areas of expenditure, though this does not usually mean re-assessing the whole health budget.

#### Implementation

The implementation phase does not usually present significant problems, as the expected cash flow for the resources should have been included earlier in the departmental budget. The Ministry of Finance, through the Budget Office, provides the resources according to the planned cash flow.

However, some financial problems may arise due to inaccurate estimation of operational revenues or to delays. In the case of FONASA, because workers' health contributions are coming from different pension funds, the transfers of resources to FONASA may be delayed, creating important problems of insolvency which are automatically transferred to the health services (SNSS). On some extreme occasions the Budget Office has

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9. It must be remembered at this stage that the total amount of expenditure devoted to capital investment is not subject to discussion, as it has been set by the Budget Office; but, depending upon the amount of resources involved, the health investment specialists will have some rounds of discussion with ODEPLAN's investment department.

10. In practical terms, for the health institutions within the ministry the process of budget consolidation by the planning office becomes an informal authorisation.

given funds in advance, while the pension funds' monies are expected.

Cases of wrong estimation of operational revenues can occur when a regional health service underestimates its revenues from the ministerial reimbursements of the fee for service system (FAP). However, as will be explained below, FAPs only cover part of the operational costs, the rest of the service expenditures being financed from the centre.

There are not important fluctuations in the budget estimates during the year, with the exception of specific occasions related to national ventures for vaccinations or others. Therefore, in relation to implementation we can conclude that the Ministry of Health is not affected by the problem of "repetitive budgeting", as the institutions are certain of the availability of the funds approved in the original budget. This fact can be endorsed by comparing the original ministerial budget expenditures with the final actual figures. For the years 1985, 1986 and 1987 the accrued figures were 107%, 101% and 101% of the original budgeted figures. This implies a small range of variation in relation to the original figures.

There is no comprehensive evaluation phase of the budget. There is a partial financial assessment of the level of budget completion, analysing specifically the expenditures agreed upon for the next year.

In sum, it can be said that the ministerial budget possesses some elements of comprehensive rationality, in the sense that there are predefined and transparent procedures known to all the agencies. One area can be acknowledged as having a fully rational approach - investment expenditures, where it is possible to find precise goals and an evaluation of means against ends. However, as capital expenditure is less than 2% of total expenditures, its "rational" influence is minimal.

In more practical terms, the budgetary approach is very incremental, in that only marginal additions or changes are really analysed. A clear example of this is in the case of "over



salary rates" of doctors, which is one of the few items to be justified in depth.

The regional health services' budgeting capacity is really concentrated in the area of goods and services for consumption (23% of their budgets). However, personnel expenditures, which account for 54 to 57% of the budgets, are centrally defined. According to a financial analyst of the Ministry of Health, the 27 health service budgets have an initial historical basis for the allocation of the resources. This originated from summing up hospitals budgets within a geographical region, prior the creation of SNSS and, as was explained in the introductory background, many of the hospitals were built as a result of pressure groups or political interests. Therefore, the present health service allocations are really a result of previous historical allocations (<sup>11</sup>).

After describing how the Ministry of Health budget is organized, it is interesting to discuss in more detail two areas in which there has been important transformations in order to decentralize their financial organization.

Fee for Service Scheme or Bill per medical consultation (FAP)

The Facturacion por atencion prestada (FAP) or fee for service scheme is a mechanism that takes into account the amount and type of services rendered by the agency. FONASA has a list of all possible consultations and prescriptions which are valued, depending the level of complexity (<sup>12</sup>), in terms of a special unit called "unidad arancelaria". Each month every health service details all the medical consultations given, valuating them according to a established national price scheme. The Ministry provides a form for the monthly reports (Resumenes

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11. In section 5.3. we will have more elements to discuss the impact of this type of historical allocations.

12. There are three predefined levels of complexity: alfa, beta and gamma. FONASA has a different coefficient by which the total amount of unidades arancelarias is multiplied. Through this system the Ministry can promote different levels of complexity. Between 1980 and 1985, there was only a single scale of FAP payments (FAP integral), which was based on FONASA price schedules.

Mensuales Consolidados RMC) that should register all types of consultations and services given (<sup>13</sup>). FONASA refunds to each health service (<sup>14</sup>) a proportion of the total cost apportioned to each billed service or medical consultation. It should be noted at this stage that FAP schedules do not make allowances for the regional variations in prices. The system only reimburses the operational costs of medical consultations comprising basically medical supplies; other fixed costs expenditure, such as salaries and bills are still financed directly from the service budget, which is set at central level. This system is similar to the American Diagnosis Related Groups (DRG), which is a mechanism for prospective payments; a DRG equals the average amount of resources (labor, inpatient room and board services, pharmacy items, diagnostic services and other costs) spent in treating a patient (Scarpaci, 1988) (<sup>15</sup>).

For stimulating efficiency, the Ministry has recently designed an interesting incentive mechanism by which it allocates 30% of the budgeted expenses for goods and services for consumption. The incentive mechanism is based on three types of indicators:

**Financial:** The ratio between billed treatments and health services revenues.  
Balanced budget.

**Biomedic:** Ratio between normal/total deliveries.  
Hospital discharges /total consultations.  
Emergency consultations/ total consultations.

**Social welfare provisions:** Days of inability to work/ total contributors.

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13. Even the services not subject to FAP reimbursement should be included in the RMCs.

14. The FONASA list considers the total cost of giving a medical prescription; this is labour, infrastructure, medicines, etc. It will not refund the costs financed centrally such as personnel and investment.

15. More about DRG can be found in: Grimaldi, P. and J. Micheletti: Diagnosis Related Groups. Pluribus Press, Chicago U.S.A. 1983.

The aim here is to promote efficiency by providing a financial reward to those regional health services that follow the ministerial policies on these matters. This reward scheme might help the regional services to have in the future resources of their own and to spend them at their own discretion.

A similar system to FAPs is also applied to the payment of Out-Patient Municipal Clinics (Consultorios Municipalizados), which were transferred in 1981 from the health services to municipalities. The "Facturacion por Atenciones Prestadas en Establecimientos Municipales" (FAPEM) work in a similar way to FAPs, the only difference being that the former considers the payment of personnel costs. On top of FAPEM, some municipalities have increased their health expenditures with their own resources.

The idea here was to encourage the use of municipal clinics to decongest SNSS hospitals. In practice this move produced a huge increase in expenditure, because some municipal clinics, in order to obtain more resources, remained open more time than usual or managed to organise visits to primary schools to treat and vaccinate children, receiving for those activities the corresponding reimbursements from central government. As a result of this the ministry imposed ceilings on certain types of medical attentions and restored the same FAP regardless of the provider, reducing therefore the local capability for increasing staff recruitment or investment (Scarpaci, 1985).

#### Central Supply Warehouse (CSW)

The CSW is the main supplies purchaser organism of the SNSS. This involves the purchase of medical supplies and the food to be distributed through the National Complementary Feeding Programme (PNAC).

As was mentioned earlier, the CSW is no longer the monopolistic provider of medical supplies to the SNSS; it now has to compete with private suppliers.

In 1988 the Ministry started a similar scheme of competence with private suppliers in the case of the supplies for the National Complementary Feeding Programme. It firstly studied the historical allocations of feeding products (<sup>16</sup>), defining a regional optimal quota of products and its equivalent costs. After that, the Ministry allocated the resources to each regional SNSS defining a minimum level of provision. In the new system the resources are transferred to the regional SNSS, being the region authorised to make public tenders for the purchase of milk and related products. In this instance the CSW can participate as any other private supplier. The Ministry now allows the regional SNSS to spend any savings arising from lower prices and lower transport costs, providing that they have met the minimum quotas defined. However, although the "savings" can be spent as the region chooses they must be approved at the central level.

Unfortunately, we note again that this reward scheme is based on historical allocations which may not be equitable.

In conclusion, these new approaches are interesting devices which may help to decentralize and make more flexible the finance of the health sector. However, the proportion of resources involved in these schemes accounts for only 26 to 32% of the health budget (<sup>17</sup>). Therefore, their strength is not enough to redress the historical pattern of allocation.

As mentioned earlier in the case of the SNSS the Regional Directors cannot actually manage around 60% of their budgets, which are defined centrally for them (this includes basically personnel and social welfare provisions). Therefore, their financial capacity is still constrained in an important manner. At the same time the incentive schemes are valuable alternatives for allowing the health services to increase their budgets and to spend in the areas most needed according to regional discretion. However, the incentive schemes can become

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16. The PNAC products are basically powder milk and some nutritional cereals.

17. See: table 5.4.

somewhat perverse as the reward system will favour the central policies. The Ministry will probably spend less because of the incentive indicators' definition. At the same time the centre will assure that the rewards are not wasted but invested in areas of which they approve, and therefore a better service can be achieved.

A second perverse element is related to the fact that because of the type of indicators chosen, it is probable to expect that the best performers are going to be the urbanised and more organised regional SNSS. This is the case, for example, with emergency consultations, which because of the distances and access problems have a relatively higher occurrence in rural areas. Another similar constraint concerns public tenders of milk and related products. In an area comprising mostly rural dispersed population, because of the lower quantities and the distances involved the costs will possibly increase due to the loss of the economies of scale, again harming the poor areas. Unfortunately, since this scheme has been recently introduced there is no statistical information as to its results, but according to some ministerial sources it is clear that the more urbanised and older regional SNSS are getting the greater share of the incentive scheme.

## Planning

Within the Ministry of Health, the Director of the Planning Office is the third in the hierarchy after the Minister and the Undersecretary. For the last five years the heads of the Planning Office have been economists.

The Planning Office has five departments:

**Financial resources:** Its main activities are the elaboration and implementation of the budget, as described above.

**Human Resources:** Its functions are the organization and the structure of personnel policies.

Control and Evaluation (<sup>18</sup>): This department processes all the information flows to the Ministry and delivers them to the appropriate users.

Planning: The main task is to define medium and long term health policies.

Programming: This deals with the control and analysis of the evolution of illnesses, through a system of established goals and aims.

We now concentrate on the last two departments:

The Department of Planning analyses the demographic tendencies and the setting of medium and long term policies and goals. In the early 1980's it concentrated on defining the "health strategies for year 2000" according to the World Health Organization recommendations.

They have also undertaken a number of national and regional diagnoses of the coverage of health programmes. From the outcomes of these works, medium term policies were defined.

In performance there are usually no links with the financial resources department, nor does the department of planning spend time trying to assess the financial implications of their policy proposals. It should be said that there is a natural barrier between both departments, as Planning is composed of public health specialists (i.e. medical doctors), and Finance of economists. Each knows he speaks a different language and does not try hard to understand the other. In the words of a financial analyst, being asked about the links between the two departments: "planning is a technical department not an administrative one, that is why we have no links with them".

However, the lack of links between planning and budgeting does not prove that planning is a redundant activity within the Ministry. Most of the policies defined by planning do

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18. This will be described in section 5.2.E.

have an important effect in the long and medium term. But, as the financial aspect is not considered simultaneously, many proposals will end in a declaration of good will. Although some sophisticated mechanisms are used to estimate the future trends of some illnesses, it is not in a situation of rational comprehensiveness. Many aims are stated, but there is a weak evaluation of the means to achieve them.

The Planning Department is also in charge of defining the Ministerial Programmes in conjunction with ODEPLAN . These programmes have proven to be highly successful by being able to define simple tasks or areas to be studied. Most of the present decentralization measures are a result of short and ad hoc studies undertaken.

Finally, with regards to intersectoral planning, according to the planning officials, they only have joint committees to deal with specific subjects such as drug problems (with the Ministry of Justice) and nutrition (with the Ministry of Education). But in this case, the outcomes of the meetings are even more restricted than others, as none of the ministries like to spend their resources in "helping the others to perform their functions".

The Department of Programming is in charge of monitoring the evolution of illnesses and health related problems. It maintains close links with the Department of Control and Evaluation. The occurrence of any unexpected illness or an increase in infant mortality, will mean a close control to the regional SNSS affected.

The Department also sets annually the number of medical consultations and health visits in general that each regional service must perform. These goals are defined by the historical activities of the health services, deviations from which imply receiving a warning from the central level.

The Programming Department has contributed in an important manner to the decrease of infant mortality and other

major health problems by monitoring closely the evolution of indicators in all regions.

To conclude this section on budgeting and planning, we would like to summarise the main findings introducing them as the major weaknesses and strengths of the system.

In relation to the weaknesses, it is clear that the lack of formal and practical links between planning and budgeting is an important constraint for the achievement of policy proposals. As mentioned earlier in Section 1.2.B, this is a common problem for social planning in Latin America.

As a result of the former problem, planning and budgeting are usually approached in a rather disjointed procedure, leaving each department or agency to solve its problems or to perform its activities with a background of general but strict rules.

Incrementalism appears to be the model guiding the budgetary process and parts of the planning procedures. However, it seems that the bureaucrats have not acknowledged this fact and still act as though they are using a rational comprehensive approach, and not taking advantage of the "Science of Muddling Through". For example, they must to include explanations and give grounds for the expenditures of major programmes every year, although every official knows that these will not be considered, as these expenditures are justified in and of themselves for their historical background.

Finally, another constraint is related to rigid expenditure and budgeting rules. In accordance to this rules, the problem arises that some semi-autonomous institutions are confined by a lack of discretion. Thus the regional SNSS are allowed to manage only a proportion of their budgets.

As may happen in other areas of Social Policy, some of the institutional weaknesses can also be considered from another point of view as strengths for the system. The rigid structure of



operation of the system helps to have transparent and known procedures for all institutions. In this regard we mentioned that the problem of repetitive budgeting is not present in this sector, although it is a recurrent phenomenon in many developing countries.

Another interesting feature is the power of some practical approaches to achieve specific aims. This is the case of successful Ministerial Programmes which set specific tasks, deadlines, and institutions to tackle the problem. The rule seems to be "small is beautiful", (there are broad social policy aims, but let us define a few tasks to achieve these aims in steps and stick to them). This situation may also apply to the Programming Department which closely controls a specific set of indicators.

Finally, it ought to be pointed out that, although there are some schemes which may act as a break through device with regards to the problem of lack of discretion, their influence remains to be seen as the schemes have been recently developed and their impact on the general budget is minimum. This is the case of the fee for service scheme and the decentralization of the CSW.

It is not possible to assimilate the health and budgeting procedures to one of the planning models reviewed earlier. There are some elements of rational comprehensiveness, there are also a number of steps and phases solved in an incremental approach although it is not acknowledged as such. It may be possible to say that there is an unconscious distinction between fundamental and incremental decisions, especially in the preparation of the budgets; but as Mixed Scanning is featured by its flexibility we cannot consider that this is the model followed here. It is clearly not possible to find elements of transactive or advocacy planning as most decisions are taken centrally without consideration of the beneficiaries.

In sum, since the features of the health model take elements (deliberately and not deliberately) from many of the planning models described, we are in the apparent necessity for

defining a further new model that will pick most of the elements of the health planning and budgeting structure. We leave this as an open question to be considered in the following sectoral chapters.

#### 5.2.E. Information System

An important element for the definition of policies, norms and actions in the health sector is a good information system. The Ministry of Health has organised, through its Department of Control and Evaluation, some pre-existing statistical sources in the form of a health information system. The aim of the system is not only to contribute to the decision making process but also to assess and control the performance of the health sector.

The information required for the seven components of the system is gathered by each health service, with different levels of aggregation, according to central norms and forms.

#### System Components:

1. Bio-demographic information: It provides the basic information to gauge the quantity of resources needed.  
Indicators: - Population  
                  - Vital Statistics
2. Illnesses of ephidemiological importance: The health services have to inform periodically about the appearance of some illnesses for ephidemiological watchfulness.  
For example: Meningitis, cholera, aids, etc.
3. Malnutrition and alimentary surveillance: It is a follow up system for children under six years and their mothers.  
It works through a sample of 73 urban and rural outpatient service clinics which are representative of the total beneficiaries of SNSS.

4. Work and school accidents: The main objective is to provide statistics to prepare studies for preventing working accidents. The data is processed by sex, age and circumstances.
5. Mortality audits: As a way to continue the decrease of infant mortality, every maternal or child death is subject to an audit, which is aimed to find the precise cause of death. Through this information the Ministry presumes to define preventive actions in this area.
6. Resources: Every health service must inform the central authorities periodically about their number of employees and their area of work.
7. Health Consultations (Atenciones de salud): This component has two objectives: i) To gather the information about the number and type of consultations given in the public and private systems, and ii) To report the amount of resources to be transferred to each health service according to the number of consultations given and the valuation of them.

## 5.2.F. Discretionary powers over public resources and decisions

Before proceeding with the analysis of the discretionary powers over public resources and decisions, it is important to remind the reader that as we mentioned in section 4.4., we basically take a qualitative approach through which we expect to be able to have an idea of the pattern of discretion or autonomy that the region has for managing decisions and resources.

Secondly, it is also important to remember that although we are analysing the regional discretion, we are doing it from a national point of view. This means that we will not compare the discretionary powers of each region in particular or between them, but rather, we are concerned with the regional dimension in general.

A final reminder to the reader, is that the methodological approach to follow here draws from section 4.4. Therefore, the concepts introduced there should be taken into account now. In that section we introduced some categories within the three forms of government intervention. In table 5.5. we summarize the discussion about the regional discretionary powers.

### F.1. Regulation

For answering the questions related to regulation, we have defined three categories: central, regional and shared regulation.

In relation to the definitions of tasks or functions of the health agencies, it was found that the great majority of them rely on the centre. In the case of the regional health services (regional SNSs), the Programming Department sets the number and types of consultations to be rendered on each health service and keeps close control on them. They might have minor areas of discretion, such as opening times and other administrative procedures not considered as the main task of the agency.

TABLE 5.5.

DISCRETIONARY POWERS OVER RESOURCES AND DECISIONS IN HEALTH

| Govt. Intervention Forms | Undersecret. | FONASA  | SNSS     | Ins.Pub.Health | CSW     | TOTAL    |
|--------------------------|--------------|---------|----------|----------------|---------|----------|
| <b>REGULATION</b>        |              |         |          |                |         |          |
| Who Defines Tasks        | Centre       | Centre  | Centre   | Centre         | Centre  | Centre   |
| Source of Authority      | Shared       | Centre  | Shared   | Centre         | Centre  | Centre   |
| Control                  | Shared       | Centre  | Shared   | Centre         | Centre  | Centre   |
| <b>FINANCE</b>           |              |         |          |                |         |          |
|                          | CMF 99%      | CMF 98% | CMF 66%  | CMF 100%       | CMF 17% | CMF 70%  |
|                          | BF 1%        | BF 2%   | FSSA 32% |                | SPF 83% | SPF 7%   |
|                          |              |         | BF 2%    |                |         | FSSA 21% |
|                          |              |         |          |                |         | BF 2%    |
| <b>PRODUCTION</b>        |              |         |          |                |         |          |
| Personnel                | Centre       | Centre  | Shared   | Centre         | Centre  | Centre   |
| Field Administration     | 2            | 2       | 3-4      | 1              | 3-4     | 2-3      |
| Levels                   |              |         |          |                |         |          |

FINANCE: CMF Centrally Managed Finance  
 SPF Specific Purpose Fund  
 FSSA Fund Subsidizing Specific Activity  
 BF Block Fund  
 RMF Regionally Managed Finance

PRODUCTION: Levels of Field Administration  
 1 Central  
 2 Regional  
 3 Area  
 4 Local

An exception to this rule might be the case of outpatient municipal service clinics as they rely on municipal authority. However, as was explained earlier, these service clinics were transferred from the SNSS to the municipalities; this transfer implied that the outpatient clinics' functions are now performed under municipal authority, but they were defined earlier under the SNSS. Moreover, the fee for services (FAPEM), are payed to the municipal clinics in accordance to the SNSS price lists and incentive schemes. Therefore, we conclude that the functions of these service clinics are also defined by the centre.

With regards to the source of the agency authority, we can again state as a general rule that the powers of most health agencies come from the central Ministry of Health. However, there are two interesting exceptions to this general rule. The Regional Ministerial Secretariats (SEREMI), which depend on the Undersecretariat, have a dual structure. On the one hand they are the Ministerial representatives in the regions (i.e. their

authority comes from the centre); but on the other hand, they are also accountable to the regional Governors (Intendentes). However, as explained in Chapter Two, the source of the Governors authority is the centre, as they are appointed directly by the President and accountable to him. The regional collegiate bodies have power only to influence the regional investment projects in health, but they cannot formally challenge the regional SNSS performance. Therefore, there is a share in the source of the SEREMI authority between the centre and the region. At a regional level, the SEREMI is able to decide administrative measures, but it is regulated from the ministerial headquarters, therefore it is a case of administrative deconcentration.

The second exception are the regional SNSSs, whose situation is very similar to those of SEREMIs. The regional SNSSs depend on the authority of the SEREMI, as their function is to assure the fulfilment of the ministerial policies. However, it is often common that the Ministry itself will by-pass the SEREMI to make certain the observance of some measures. Therefore, we have a situation of shared source of authority.

In the case of the powers to control agencies, we apply the general rule of central decisions again, as most of the control rules are set by the centre. However, when acting as controllers, the SEREMIs have the capacity to control the regional SNSSs. At the same time, regional SNSSs have power to control the activities of municipal outpatient service clinics. Therefore, for these two cases we are in a situation of shared responsibilities again.

## F.2. Finance

In the area of finance, we have attempted to give a more quantitative measure of the regional discretionary powers. We estimated the proportion of resources being spent in each of the five forms of financing introduced in section 4.4.

In the column referring to the total ministerial finance, we note that 70% of its resources are centrally managed. This includes the social welfare provisions of FONASA, personnel, goods and services for consumption and other major areas of

expenditure of FONASA, SNSS and the Undersecretariat. This is an indication of the constrained financial capacity of field agencies.

Specific purpose funds comprise only 7% of total ministerial expenditures. Almost all of the funds classified under this area corresponds to the Programme of Complementary Feeding. In this case the funds are transferred to the region for the specific purpose of being spent on the programme in accordance to central regulations, the region only having discretion in some parts of the delivery system. It is probable, however, that in the near future according to the new decentralization scheme that is being applied to the CSW, since 1988, part of the funds classified here as specific funds may be considered as regionally managed finances (19).

Funds for subsidising specific activities add up to 21% of total ministerial resources. This area comprises the fee for service scheme (FAP) of the SNSS. Under this circumstance the centre transfers funds to the regions to perform a specific activity, i.e. finance the goods and services for consumption of each regional SNSS. In contrast to the previous type of fund, the region is free to spend these resources within the frame of goods and services. For example, the region has the discretion to spend more on pharmaceutical products or surgical implements.

In the future, according to the new incentive scheme introduced into the FAPs, a small part of these expenditures may be classified as RMF.

.....  
19. It is important to clarify that the CSW's goods and services for consumption have been classified as CMF. We considered as goods and services for consumption only the effective goods used by the CSW. In this case we have a difference with Yanez and Aguilo (1988), as they considered all the expenditures registered under this item, although most of them are sold later to regional SNSS or private hospitals. Therefore, there would have been double accounting if we had followed Yanez and Aguilo's approach; the share of goods and services in the CSW budget would have been greater, and its form classification different.

Finally, only 2% of ministerial expenditures are classified as block funds. These funds have a broader definition. The region or the agency can decide in which area to spend it. Such is the case of investment expenditure.

### F.3. Production

Production is the final form of government intervention to be considered. Under this heading we analyse two dimensions: personnel and field administration.

In section 5.2.D. we indicated with regard to budgeting and planning that personnel is one of the most centralized areas of expenditure in the Ministry of Health, being the total number of employees per agency financed from the central level. Therefore, we have again a general case of centralization.

The exceptions are related to the regional SNSS which may recruit additional personnel at their own expenses with resources arising from the new FAP incentive schemes; whether this is done this remains to be seen. In the case of outpatient municipal service clinics, some municipalities recruited additional personnel financed by their own resources.

The levels of field administration are an interesting indicator of the agencies hierarchy and delivery systems. The more levels in field administration the greater the decentralization involved. In this area we observe that the Health Ministry is fairly decentralized as far as administrative levels are concerned. It is possible to reach even to the local level through the Ministerial network.

Unfortunately, we have no formal research studies to draw from concerning delivery systems in Health Care and the discretion of field agencies in producing programmes of health care. Some sources indicate that they do enjoy growing degrees of discretion as some national programmes have been adapted to local conditions. For example, in areas of low milk and nutritional



cereals consumption, the programme will not only consist of giving these foods, but also of teaching how to cook and use them.

Overall, we can conclude that regulation is mainly a centralized process, with some degree of discretion in relation to control and the authority of field agencies. In the decentralization continuum, governmental regulation in health is located between centralized and deconcentrated regulation.

Finance is also a centralized form of intervention in health, as 70% of its budget was found to be as centrally managed finance. However, the remaining 30% of the budget was classified as more decentralized alternatives, and this proportion can possibly increase as new decentralization schemes have just been introduced.

In production, we note that personnel is perhaps one of the most centralized and least discretionary forms of intervention. However, field administration and other areas which could not be assessed, such as delivery systems, were found to be decentralized.

In sum, we have a general view that regulation and finance are centralized non discretionary forms of government intervention in Health. In the case of production, despite personnel being centrally managed, we found this form to be the most decentralized and discretionary of all. Overall, we consider that the Health Ministry follows a deconcentrated model.

## 5.2.G. Summary and Conclusions: Organization and Finance of Health Care.

At the beginning of section 5.2., we described the weaknesses of the health system according to a governmental analysis in 1980. The problems defined there included the absence of a possibility to choose the type of medical consultation; administrative irregularities; lack of targeted programmes for the poor and for primary health care; and centralization.

The first problem was addressed through the elimination of the distinction between skilled workers and manual workers, allowing each now to choose their desired health scheme; the National System of Health Services, the Free Election System or the Provisional Health Institutes (ISAPRES).

The problem of administrative irregularities was tackled through more strict controls for those accessing public financed health care systems.

Primary health care and targeting for the poor were addressed through building a number of primary health care out patient service clinics in urban and rural areas. At the same time some programmes were redefined in order to make them more attractive to poor families and less attractive to rich families. Finally, the "new health law" clearly defined the groups to be entitled to free health care. In section 5.3. we will assess to what extent these changes have produced an alteration in the distributive effects of health expenditures.

In relation to decentralization, various attempts have been made. Firstly, the main producer of health care, the SNSS, was deconcentrated into 26 semi-deconcentrated field agencies. Simultaneously, some financial mechanisms have been defined to allow more regional discretion in the management of public resources and decisions in health care. However, our assessment shows that despite the efforts made, the ministerial organization and finances are still centralized. The financial incentive mechanisms were probably designed as cost containment devices

rather than financial decentralization schemes, as their impact on the budget is too small to redress the historical centralization trends. Around 70% of the Health budget is centrally managed; one future alternative here can be to allow FAPs to meet the full cost of the services to be provided.

However, we consider that in addition to the government's "defined problems", there are other constraints that may restrict further developments and achievements in the health sector. The most important of these is the scarcity of links between the financial and planning functions; although both have common problems, such as "unaware" incrementalism, both seem to operate in different dimensions, each being able to perform its activities without requiring information from the other. For example, finance has made an attempt to decentralize some areas of the budget, whereas the regulation of health activities, linked to planning, has remained centralized.

Another important problem to be considered is the change in the Chilean pattern of mortality and morbidity. As we said in the first section of this chapter, the country has shifted from pathologies typical of developing countries to more complex pathologies such as cancer, cardiovascular diseases, etc. This requires at the same time a change in policy priorities from preventive and primary health care to a more costly curative health care. In this case, the links between finance, planning and policy making should be closer than ever as new health habits must be introduced.

### 5.3. REDISTRIBUTIVE EFFECTS OF HEALTH POLICIES

In this section we discuss the redistributive effects of health expenditure in relation to the poor population. It is important to bear in mind that none of the health programmes performed by the ministry has a poverty-targeting aim defined by the government, such as will be found in other sectors. Therefore, to what extent how far the institutional allocation is related to poverty is arguably not a fair test for this sector. However poverty-targeting is a goal which encompasses all the sectors according to the government's priorities. In sum, the aim of this section is to assess to what extent the Government accomplished an important item within its policy proposals; this objective was considered in the list of issues to be addressed in this research in Chapter 2.

It ought to be remembered that for this exercise we rely on the information provided by Haindl and Weber (1986) for the year 1985 and Haindl, Budinich and Irarrazaval (1989) for the year 1987. It would have been highly desirable to have information for the year 1986. But, the studies quoted are based on large sample surveys and there was no financial support to undertake a survey in 1986. However, it must be said that this type of indicator does not usually show discontinuities over short periods of time, therefore to miss one year in between will probably not make a great difference in the tendency over the period.

The methodological approach followed in the studies mentioned considered four stages:

Firstly, it was necessary to study the distribution of population according to the membership of each health system. This information was obtained directly from the survey, as it included questions about the affiliation to different health systems.

Secondly, it was necessary to chart the medical treatment received by each beneficiary. This information was also obtained from the survey as it included questions on the the occurrence of different health episodes during the last three months (20).

Thirdly, the costs met by each person were estimated. Every person receiving a medical treatment may face two costs: one is the cost of the mandatory health contribution (<sup>21</sup>); the other is related to ad hoc charges made by hospitals depending on the socio-economic background of the persons. The total costs involved were estimated with information from the SNSS; their allocations were made according to the information provided in the sample survey.

Fourthly, the costs of providing the different types of medical treatments were also estimated. This was estimated with information provided by the SNSS.

Once all this information had been gathered, it was possible to estimate the individual benefits accruing to users of the public health scheme (<sup>22</sup>). Overall, people belonging to Groups A and B (See Section 5.2.A.) were net beneficiaries from the public expenditures in health; those belonging to Groups C and D were net contributors to the Public Health System.

In the case of health expenditures, the studies located the Direct Social Expenditures by income deciles. As explained in section 2.3.C., Direct Social Expenditures comprise only the subsidy component of public expenditure which actually reaches the families, without considering the bureaucracy expenditures for producing the service (<sup>23</sup>).

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20. The survey included questions about eight different types of medical treatments. It also considered the type of hospital in which the treatment took place (Private or SNSS) and the costs involved for the patient.

21. Persons classified in group A will usually not contribute to a health scheme as they are indigents.

22. The approach here was to take the estimated cost of the medical treatment received by the person and then subtract the costs met by him, obtaining therefore, the "net" benefit, publicly financed, received by the person.

23. This means that the redistributive effects of the expenditures in the Undersecretariat and the Institute of Public Health are not assessed here.

In Table 5.6. we estimate what proportion of the Total Public Social Expenditures were accounted for by the Direct Social Expenditures. In the first place we subtract the contributions paid by SNSS users to the system, obtaining fiscal social expenditures. In second place, when the administration costs are subtracted from fiscal social expenditures, we obtain direct social expenditures in health. Therefore, under this definition we are able to capture only 44 and 46% of the total public health expenditures presented in table 5.6. for 1985 and 1987 respectively. In conclusion, these figures indicated that the analysis here is constrained to less than half of the total expenditures presented in Table 5.4. However, as this is the only basis of information, we have no alternative but to use it.

| TABLE 5.6.   |        |        |
|--|--------|--------|
| ESTIMATES OF DIRECT SOCIAL EXPENDITURES AS A PROPORTION OF<br>TOTAL PUBLIC EXPENDITURES IN HEALTH<br>(Millions of 1987 \$) |        |        |
|  | 1985   | 1987   |
| a) Total Public Expenditure in Health  | 89,487 | 90,223 |
| - Contributions paid   | 29,738 | 37,849 |
| b) Fiscal Social Expenditures in Health  | 59,750 | 52,375 |
| - Administrative costs   | 20,486 | 11,184 |
| c) Direct Social Expenditures in Health  | 39,263 | 41,191 |
| c) / a) %  | 43.9   | 45.7   |

Author calculations based on:

Table 5.4.

Ley de Presupuestos del Sector Publico 1985 -1987

Haindl & Weber 1986

Haindl, Budinich and Irarrazaval 1989

In table 5.7. we can observe the redistributive effects of health expenditures. With the information provided by the authors quoted it is possible to calculate the amount of resources reaching the lower 30% of the population in the areas of the National Health Service System and the Central Supply Warehouse. With the comparison of these figures to the total direct social expenditures, as estimated in table 5.6., we obtain the proportion of total direct expenditures reaching the bottom 30% of the

population.

|      |       | Total<br>Direct Exps. | Share of<br>Bottom 30% | %    | TYPE OF PROGRAMME    |
|------|-------|-----------------------|------------------------|------|----------------------|
| 1985 | SNSS  | 32,478                | 15,913                 | 49.0 | Slightly Progressive |
|      | CSW   | 6,786                 | 3,394                  | 50.0 | Slightly Progressive |
|      | TOTAL | 39,263                | 19,307                 | 49.2 | Slightly Progressive |
| 1987 | SNSS  | 32,287                | 17,891                 | 55.4 | Progressive          |
|      | CSW   | 8,904                 | 5,076                  | 57.0 | Progressive          |
|      | TOTAL | 41,191                | 22,967                 | 55.8 | Progressive          |

Author calculations based on:

Table 5.4. and 5.6.

Haindl & Weber 1986

Haindl, Budinich and Irarrazaval 1989

From table 5.7. it is possible to note that despite health programmes not having a pre-defined redistributive aim, they do prove to contribute to the alleviation of poverty.

Moreover, the table shows that there has been an increase in the progressiveness of the programmes over the period under analysis. This seems to be a result of the introduction of the new health law in 1986. The law defined in a precise way the groups entitled to free health care, not allowing other users to this right. Therefore, this selective procedure might have been the element that contributed to the regressive trends. At the same time the introduction of the auto-targeting element in the complementary feeding programme might also have helped to increase progressiveness. In sum we conclude that health expenditures do have a progressive element, therefore we have a case in which the broad social aim of progressiveness is being achieved.

## 5.4. REGIONAL ALLOCATION OF HEALTH EXPENDITURES

### 5.4.A. Data Constraints and Methodology

Health expenditures were regionally allocated following the methodology described in section 4.4. For the three years under analysis, over 85% of health expenditures were allocated according to criterion A, i.e., with a clear regionally relevant criterion from the original data source (See table 5.8.); this figure shows the accuracy of the figures presented.

Criteria for regional allocation by institution:

Undersecretariat:

This corresponds to the ministerial bureaucracy both central and regional. As there was no statistical serie to allocate the regional expenditures on the undersecretariat, they were allocated according to the regional distribution of health personnel. (Criterion C).

FONASA:

The elimination of transfers in FONASA was not an easy task as many of them were not clearly registered in the Estados Analiticos of the Comptroller (<sup>24</sup>). Therefore, many of them had to be traced back in FONASA's Department of Finances. After the elimination of transfers, around 90% of FONASA budget was on the payment of Social Welfare Provisions.

In relation to the payment for social welfare provisions, it has to be said that although all the institutions paying these benefits must send a monthly report to FONASA, they are not compiled annually. However, from these reports it is possible to obtain the regional allocation of these resources. However, as they had not been compiled it was not possible to obtain an

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24. The Analiticos are the most detailed accounts of government expenditure.



annual average of the regional expenditures in this area (25).

| TABLE 5.8.   |           |        |      |                    |        |       |
|--|-----------|--------|------|--------------------|--------|-------|
| CRITERIA OF REGIONAL ALLOCATION OF HEALTH EXPENDITURES (%) |           |        |      |                    |        |       |
| 1985   | Undersect | FONASA | SNSS | Ins.Pub.<br>Health | C.S.W. | TOTAL |
| Crit. A  |           | 90     | 100  |                    |        | 88    |
| Crit. B  |           |        |      |                    | 89     | 7     |
| Crit. C  | 100       | 10     |      |                    | 11     | 4     |
| Crit. D  |           |        |      | 100                |        | 1     |
| TOTAL  | 100       | 100    | 100  | 100                | 100    | 100   |
| % Min. Budget  | 1         | 27     | 63   | 1                  | 8      | 100   |
| 1986   | Undersect | FONASA | SNSS | Ins.Pub.<br>Health | C.S.W. | TOTAL |
| Crit. A  |           | 91     | 100  |                    |        | 89    |
| Crit. B  |           |        |      |                    | 77     | 6     |
| Crit. C  | 100       | 9      |      |                    | 23     | 4     |
| Crit. D  |           |        |      | 100                |        | 1     |
| TOTAL  | 100       | 100    | 100  | 100                | 100    | 100   |
| % Min. Budget  | 1         | 26     | 64   | 1                  | 8      | 100   |
| 1987   | Undersect | FONASA | SNSS | Ins.Pub.<br>Health | C.S.W. | TOTAL |
| Crit. A  |           | 85     | 100  |                    |        | 86    |
| Crit. B  |           |        |      |                    | 82     | 8     |
| Crit. C  | 100       | 15     |      |                    | 18     | 5     |
| Crit. D  |           |        |      | 100                |        | 1     |
| TOTAL  | 100       | 100    | 100  | 100                | 100    | 100   |
| % Min. Budget  | 1         | 21     | 68   | 1                  | 9      | 100   |

NOTE: See text for explanation

25. To estimate the annual average it would have been necessary to obtain the information of some 20 institutions paying around five different forms of social welfare provision from thirteen regions during twelve months, for the three years under analysis, then to obtain a weighting score to produce a weighted estimate of the social welfare provisions. The calculation of this single average would have taken at least six weeks.

Nevertheless, as social welfare provisions are paid on a monthly basis and there are only minor seasonal variations, it was decided to choose a representative month.

Therefore, with the information available, (the total monthly expenditure on this area, and the evolution of social security contributions and contributors), we studied the overall monthly variations in social welfare provisions.

The aim was to select a representative month, estimate the regional expenditure structure for that month, and use that structure to allocate the annual expenditure in this area according to the Comptroller's figures. The month chosen was July, as it represents a period of important economic activity but not the peak of the year. Therefore, we have a criterion for type A, which provides an appropriate estimate of the regional expenditure structure.

For the rest of FONASA expenditures, we used the same criterion as for the Undersecretariat: Personnel (criterion C).

#### SNSS:

For allocating the regional expenditures of the SNSS, we had access to the 27 budgets of each health service for the three years under analysis. This information proved to be very useful, as we discovered through the analysis of it some interesting financial and organizational aspects.

To produce the actual regional expenditures in SNSS, we consolidated the 26 budgets eliminating the relevant transfers to avoid double counting, and then regionalized them, i.e. we summed the 26 budgets in order to match the 13 geographical regions.

As these figures have a clear regional accounting procedure they are categorised as criterion A.

#### Institute of Public Health:

This research body corresponds in practical terms to a national programme which oversees the quality of the medicines being produced. There is no specific criterion to use here, therefore this falls under criterion D.

#### C.S.W.

Around 80% of the Central Supply Warehouse budget consists of the purchase of products for the National Complementary Feeding programme. The CSW does not have a record of the regional expenditures on this programme. We estimated it using the information available.

The CSW does keep a record of the amount of kilos of products given per region. This information itemizes the different types of products distributed. There are six types of products <sup>(26)</sup> which are distributed in different combinations or mixtures according to the age of beneficiaries and their nutritional status. We estimated the costs <sup>(27)</sup> of the basket of products for each possible combination. With this information we estimated the regional expenditures by multiplying the relevant quantities of products given per region with their respective unitary prices.

Despite the difficulty in producing the regional expenditure estimates, we have a clear regional basis for the allocation of them. Therefore we consider these estimates under criterion B.

The rest of Central Supply expenditures are hospital supplies which were allocated according to medical health consultations (criterion C).

The estimated regional health expenditures are presented in per capita terms, as it was convenient to standarize these figures in relation to population size. These results are presented in tables 5.9. to 5.10.

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26. There are 3 types of powder milk and 3 types of nutritional cereals.

27. The actual costs were obtained from the National Institute of Statistics price for the consumer price indexes.

#### 5.4.B. Regional Expenditures and Regional Needs

The creation of the Chilean National Health Service had as an impetus, as in Britain, an important desire to obtain a more equitable distribution of resources. From the outset, it was deliberately planned to have an important central role to ensure an equally good service everywhere.

The Chilean regional maldistribution of resources is an acknowledged problem, which has its origins in the centralized tradition of the country described earlier and the concentration of population and wealth in the capital city of Santiago. Navarro (1976) argues that one of the causes of the maldistribution of health resources is that the urban bourgeoisie control most of the national wealth and income in developing countries, therefore they can greatly influence the market through distributing health services according to purchase power and they can also influence medical and professional education.

At the same time, it is also necessary to consider, that the improvements in health indicators during the last decade had mostly a national implication, improving the national health status overall, but the regional inequalities have been maintained (Ugarte, 1979).

One of the principal objectives of this research is to test to what extent the regional allocation of social expenditures is actually related to regional needs. For this task it was not only necessary to regionalise the health expenditures, but to define a set of health indicators to contrast the regional allocations with the satisfaction level of basic needs. Three groups of indicators were defined according to the sectoral statistics available:

- Consultations:
- Medical consultations per inhabitant-MECO
  - Paramedical consultations per inhabitant-PACO
  - Average length of stay in SNSS hospitals-AVLE
  - Medical discharges per bed.- MDIS

- Resources:
- Doctors per 10.000 habs.-DOCT
  - Other medical staff per 10.000 habs.-OTHE
  - Public beds per 1000 habs.-BEDS
  - Bed occupation index-BEOC

- Biomedical:
- General mortality-GEMO
  - Infant Mortality-INMO
  - Maternal mortality-MAMO
  - Malnutrition-MALN
  - Life expectancy at birth-EXPE

In addition to health indicators, a fourth group of variables related to the regional socio-economic features was defined. This included:

- Regional GDP per capita-GDP
- Average regional income per capita-INCO
- % Urban population (Census Definition)-URBN
- % Population living in cities above 20.000 habs.- URBZ

and,

- Health expenditures in the SNSS, including only the expenditure budgets of SNSS hospitals- HESN
- Total health expenditures; which includes in addition to the SNSS, the expenditures in social welfare provisions and the Central Supply Warehouse. - HETO

#### B.1.- Preliminary Data Analysis:

The basic data is presented in table 5.9. to 5.11. where the data is also analysed considering some dispersion statistics such as, average, standard deviation, coefficient of variation and an index that considers as base level the national average of each variable.

TABLE 5.9.  
HEALTH INDICATORS - 1985  
(Index Total=100)

|               | CONSULTATIONS |       |       |       | RESOURCES |       |       |       | BIOMEDICAL |       |       |       | OTHERS |         |         |       | EXPENDITURE |        |        |
|---------------|---------------|-------|-------|-------|-----------|-------|-------|-------|------------|-------|-------|-------|--------|---------|---------|-------|-------------|--------|--------|
|               | MECO          | PACO  | AVLE  | MDIS  | DOCT      | OTHE  | BEDS  | BEOC  | GEMO       | INMO  | MAMO  | MALN  | EXPE   | GDP     | INCO    | URBN  | URBZ        | HESN   | HETO   |
| Tarapaca      | 97.4          | 99.3  | 101.2 | 98.3  | 92.6      | 81.5  | 97.8  | 87.4  | 86.9       | 76.9  | 0.2   | 51.7  | 101.8  | 136.5   | 85.7    | 113.3 | 127.3       | 102.0  | 101.9  |
| Antofagasta   | 74.3          | 84.7  | 101.2 | 101.3 | 81.2      | 99.2  | 97.9  | 96.8  | 96.7       | 90.8  | 40.0  | 98.9  | 99.1   | 200.3   | 83.2    | 118.5 | 119.9       | 86.8   | 104.8  |
| Atacama       | 144.7         | 129.8 | 82.1  | 130.0 | 75.4      | 85.5  | 86.1  | 86.7  | 72.1       | 93.8  | 80.0  | 109.2 | 102.0  | 148.7   | 82.8    | 110.3 | 83.9        | 110.2  | 103.2  |
| Coquimbo      | 89.7          | 119.3 | 81.0  | 118.0 | 63.3      | 90.5  | 86.1  | 86.8  | 98.4       | 110.3 | 200.0 | 105.7 | 102.6  | 61.1    | 69.0    | 90.2  | 63.7        | 86.2   | 83.9   |
| Valparaiso    | 108.5         | 102.9 | 107.1 | 90.0  | 114.6     | 115.9 | 123.4 | 104.0 | 106.6      | 95.9  | 140.0 | 89.7  | 100.7  | 99.4    | 90.8    | 109.3 | 101.4       | 109.7  | 109.3  |
| O'higgins     | 100.4         | 94.9  | 78.6  | 121.7 | 78.8      | 85.4  | 88.6  | 98.5  | 108.2      | 95.4  | 80.0  | 109.2 | 99.9   | 122.9   | 79.4    | 78.9  | 43.1        | 78.3   | 73.6   |
| Maule         | 95.5          | 128.2 | 90.5  | 115.3 | 93.8      | 102.3 | 102.8 | 94.8  | 118.0      | 116.9 | 160.0 | 111.5 | 98.3   | 65.7    | 83.3    | 68.8  | 57.4        | 90.4   | 82.4   |
| BioBio        | 112.3         | 108.8 | 90.5  | 118.7 | 85.0      | 118.5 | 103.5 | 94.5  | 108.2      | 122.6 | 60.0  | 108.0 | 96.1   | 79.9    | 88.6    | 92.5  | 81.6        | 101.2  | 97.0   |
| Araucania     | 83.7          | 100.0 | 106.0 | 108.7 | 70.2      | 109.4 | 110.2 | 97.3  | 124.6      | 129.2 | 100.0 | 94.3  | 97.7   | 55.6    | 94.3    | 69.6  | 41.3        | 93.6   | 87.2   |
| Los Lagos     | 98.6          | 124.1 | 90.5  | 97.0  | 85.2      | 109.7 | 114.7 | 87.8  | 106.6      | 111.3 | 160.0 | 106.9 | 98.5   | 66.9    | 98.2    | 71.5  | 46.0        | 101.4  | 91.3   |
| Aysen         | 156.2         | 86.0  | 101.2 | 103.3 | 120.9     | 127.2 | 146.5 | 89.8  | 90.2       | 132.8 | 200.0 | 73.6  | 99.9   | 81.5    | 93.8    | 95.8  | 63.8        | 203.9  | 158.4  |
| Magallanes    | 90.8          | 83.9  | 102.4 | 82.0  | 120.6     | 120.0 | 140.4 | 69.4  | 103.3      | 60.5  | 140.0 | 39.1  | 100.2  | 260.1   | 117.5   | 110.8 | 105.8       | 144.2  | 136.0  |
| Metropol.     | 97.8          | 86.6  | 113.1 | 87.7  | 117.9     | 89.4  | 89.3  | 110.4 | 88.5       | 74.4  | 60.0  | 100.0 | 101.8  | 110.0   | 117.0   | 116.0 | 135.5       | 101.0  | 107.4  |
| INDEX         | 100.0         | 100.0 | 100.0 | 100.0 | 100.0     | 100.0 | 100.0 | 100.0 | 100.0      | 100.0 | 100.0 | 100.0 | 100.0  | 100.0   | 100.0   | 100.0 | 100.0       | 100.0  | 100.0  |
| COUNTRY TOTAL | 1.8           | 0.8   | 8.4   | 30.0  | 4.6       | 5.4   | 2.8   | 75.2  | 6.1        | 19.5  | 0.5   | 8.7   | 71.5   | 29406   | 42788   | 83.3  | 71.4        | 4681   | 7382   |
| AVG           | 1.9           | 0.9   | 8.0   | 31.7  | 4.2       | 5.6   | 2.9   | 69.7  | 6.1        | 19.7  | 0.5   | 8.0   | 71.4   | 33673.2 | 38952.8 | 79.8  | 58.8        | 5073.4 | 7589.6 |
| STD           | 0.4           | 0.1   | 0.9   | 4.2   | 0.9       | 0.8   | 0.5   | 7.2   | 0.8        | 4.1   | 0.3   | 1.9   | 1.3    | 17068.2 | 5681.6  | 14.9  | 22.6        | 1481.5 | 1624.6 |
| COEF.VAR.     | 21.3          | 15.7  | 11.0  | 13.3  | 20.8      | 14.3  | 17.9  | 10.3  | 13.4       | 21.1  | 55.0  | 24.3  | 1.8    | 50.7    | 14.6    | 18.7  | 38.5        | 29.2   | 21.4   |

|      |   |      |   |
|------|---|------|---|
| MECO | Medical consultations per inhab.          | INMO | Infant mortality                            |
| PACO | Para-medical consultations per inhab.     | MAMO | Maternal mortality                          |
| AVLE | Average lenght of stay in SNSSS hospital  | MALN | Malnutrition                                |
| MDIS | Medical discharges per bed                | HESN | Health expenditures per capita in the SNSSS |
| DOCT | Doctors per 10000 inhabitants             | HETO | Total health expenditures per capita        |
| OTHE | Other medical staff per 10000 inhabitants | GDP  | GDP per capita in 1977 \$                   |
| BEDS | Beds per 1000 habitants                   | INCO | Regional average income                     |
| BEOC | Bed occupation index                      | URBN | % urban population                          |
| GEMO | General Mortality                         | URBZ | % population living cities above 20.000     |

TABLE 5.10.  
HEALTH INDICATORS - 1986  
(Index Total=100)

|               | CONSULTATIONS |       |       |       | RESOURCES |       |       |       | BIOMEDICAL |       |       |       | OTHERS |         |         |       | EXPENDITURE |        |        |
|---------------|---------------|-------|-------|-------|-----------|-------|-------|-------|------------|-------|-------|-------|--------|---------|---------|-------|-------------|--------|--------|
|               | MECO          | PACO  | AVLE  | MDIS  | DOCT      | OTHE  | BEDS  | BEOC  | GEMO       | INMO  | MAMO  | MALN  | EXPE   | GDP     | INCO    | URBN  | URBZ        | HESN   | HETO   |
| Tarapaca      | 98.8          | 100.3 | 97.6  | 92.4  | 88.5      | 79.3  | 100.5 | 84.9  | 72.9       | 78.5  | 60.0  | 46.2  | 101.8  | 133.7   | 83.8    | 113.0 | 127.0       | 101.1  | 99.2   |
| Antofagasta   | 73.2          | 72.6  | 95.3  | 95.4  | 80.0      | 100.2 | 101.5 | 94.5  | 91.5       | 94.2  | 160.0 | 71.4  | 99.1   | 190.5   | 78.2    | 118.1 | 120.3       | 89.4   | 96.2   |
| Atacama       | 114.0         | 122.5 | 69.4  | 123.1 | 74.8      | 82.4  | 86.9  | 86.4  | 88.1       | 111.0 | 120.0 | 114.3 | 102.0  | 142.0   | 78.9    | 110.3 | 84.0        | 109.8  | 102.6  |
| Coquimbo      | 90.5          | 123.7 | 74.1  | 113.9 | 60.7      | 88.9  | 87.9  | 87.8  | 96.6       | 115.2 | 100.0 | 112.1 | 102.6  | 61.3    | 68.5    | 90.1  | 63.9        | 83.8   | 83.6   |
| Valparaiso    | 109.4         | 107.4 | 115.3 | 90.8  | 109.8     | 113.0 | 121.6 | 106.7 | 105.1      | 93.7  | 80.0  | 93.4  | 100.6  | 100.5   | 92.1    | 109.2 | 101.0       | 106.3  | 107.8  |
| O'higgins     | 99.1          | 96.1  | 74.1  | 133.3 | 74.6      | 83.3  | 82.4  | 98.4  | 108.5      | 94.8  | 80.0  | 111.0 | 99.9   | 122.1   | 78.2    | 79.2  | 43.3        | 76.3   | 76.4   |
| Maule         | 93.9          | 128.0 | 84.7  | 118.5 | 88.9      | 99.8  | 102.6 | 96.9  | 108.5      | 109.4 | 120.0 | 114.3 | 98.3   | 65.8    | 83.4    | 69.3  | 57.4        | 92.3   | 83.1   |
| BioBio        | 110.0         | 111.9 | 83.5  | 113.9 | 85.3      | 119.7 | 105.7 | 92.6  | 105.1      | 111.0 | 80.0  | 108.8 | 96.1   | 77.6    | 85.3    | 92.5  | 81.7        | 108.9  | 101.9  |
| Araucania     | 85.6          | 102.0 | 90.6  | 109.2 | 72.6      | 108.0 | 113.4 | 94.9  | 118.6      | 130.4 | 120.0 | 94.5  | 97.8   | 55.2    | 92.4    | 69.3  | 41.5        | 95.4   | 81.9   |
| Los Lagos     | 101.6         | 119.1 | 82.4  | 111.2 | 87.7      | 108.5 | 112.9 | 88.2  | 113.6      | 115.7 | 120.0 | 97.8  | 98.6   | 68.1    | 99.2    | 71.9  | 46.1        | 103.7  | 91.2   |
| Aysen         | 160.5         | 101.1 | 85.9  | 106.6 | 102.5     | 125.0 | 148.4 | 89.7  | 86.4       | 114.7 | 100.0 | 72.5  | 99.9   | 81.1    | 92.6    | 96.1  | 64.0        | 212.8  | 160.2  |
| Magallanes    | 97.6          | 77.9  | 89.4  | 81.8  | 117.4     | 117.0 | 144.0 | 80.6  | 89.8       | 69.1  | 0.0   | 42.9  | 100.1  | 252.7   | 113.8   | 110.6 | 105.9       | 138.2  | 131.5  |
| Metropol.     | 98.8          | 85.5  | 125.9 | 85.5  | 120.4     | 91.4  | 89.0  | 109.9 | 89.8       | 79.1  | 80.0  | 101.1 | 101.7  | 111.7   | 119.1   | 115.8 | 136.6       | 98.7   | 107.4  |
| INDEX         | 100.0         | 100.0 | 100.0 | 100.0 | 100.0     | 100.0 | 100.0 | 100.0 | 100.0      | 100.0 | 100.0 | 100.0 | 100.0  | 100.0   | 100.0   | 100.0 | 100.0       | 100.0  | 100.0  |
| COUNTRY TOTAL | 1.7           | 0.9   | 8.5   | 30.3  | 4.8       | 5.4   | 2.7   | 74.8  | 5.9        | 19.1  | 0.5   | 9.1   | 71.6   | 30552.9 | 45227.1 | 83.6  | 70.9        | 4694.7 | 7346.0 |
| AVG           | 1.7           | 0.9   | 7.6   | 32.1  | 4.3       | 5.4   | 2.9   | 69.7  | 5.8        | 19.3  | 0.5   | 8.3   | 71.5   | 34366.0 | 40545.3 | 80.1  | 58.5        | 5116.3 | 7476.7 |
| STD           | 0.3           | 0.1   | 1.3   | 4.5   | 0.8       | 0.8   | 0.5   | 6.0   | 0.7        | 3.3   | 0.2   | 2.2   | 1.3    | 16854.4 | 6251.3  | 14.8  | 22.5        | 1561.8 | 1608.8 |
| COEF.VAR.     | 19.2          | 16.3  | 17.2  | 14.1  | 19.6      | 14.5  | 18.5  | 8.7   | 12.7       | 17.0  | 39.5  | 26.4  | 1.8    | 49.0    | 15.4    | 18.5  | 38.4        | 30.5   | 21.5   |

|      |   |      |  |
|------|---|------|--|
| MECO | Medical consultations per inhab.          | INMO | Infant mortality                           |
| PACO | Para-medical consultations per inhab.     | MAMO | Maternal mortality                         |
| AVLE | Average lenght of stay in SNSSS hospital  | MALN | Malnutrition                               |
| MDIS | Medical discharges per bed                | HESN | Health expenditures per capita in the SNSS |
| DOCT | Doctors per 10000 inhabitants             | HETO | Total health expenditures per capita       |
| OTHE | Other medical staff per 10000 inhabitants | GDP  | GDP per capita in 1977 \$                  |
| BEDS | Beds per 1000 habitants                   | INCO | Regional average income                    |
| BEOC | Bed occupation index                      | URBN | % urban population                         |
| GEMO | General Mortality                         | URBZ | % population living cities above 20.000    |

TABLE 5.11.  
HEALTH INDICATORS - 1987  
(Index Total=100)

|               | 1 9 8 7       |       |       |       |           |       |       |       |            |       |       |       |       |         |         |       |       |             |        |
|---------------|---------------|-------|-------|-------|-----------|-------|-------|-------|------------|-------|-------|-------|-------|---------|---------|-------|-------|-------------|--------|
|               | CONSULTATIONS |       |       |       | RESOURCES |       |       |       | BIOMEDICAL |       |       |       |       | OTHERS  |         |       |       | EXPENDITURE |        |
|               | MECO          | PACO  | AVLE  | MDIS  | DOCT      | OTHE  | BEDS  | BEOC  | GEMO       | INMO  | MAMO  | MALN  | EXPE  | GDP     | INCO    | URBN  | URBZ  | HESN        | HETO   |
| Tarapaca      | 97.2          | 103.4 | 92.9  | 90.6  | 88.2      | 79.0  | 100.8 | 86.3  | 73.5       | 60.7  | 76.1  | 46.6  | 101.7 | 132.0   | 104.0   | 112.8 | 126.8 | 98.6        | 97.2   |
| Antofagasta   | 76.5          | 77.3  | 96.4  | 93.7  | 83.0      | 95.6  | 102.2 | 96.5  | 92.9       | 95.1  | 87.0  | 95.5  | 99.0  | 191.6   | 96.6    | 117.8 | 120.7 | 91.2        | 93.4   |
| Atacama       | 111.0         | 120.4 | 81.0  | 118.8 | 80.2      | 78.4  | 89.5  | 84.8  | 89.3       | 111.9 | 123.8 | 112.5 | 102.0 | 143.4   | 98.8    | 110.1 | 83.8  | 107.5       | 101.8  |
| Coquimbo      | 96.7          | 123.8 | 77.4  | 117.4 | 62.7      | 88.7  | 89.7  | 89.4  | 98.2       | 105.4 | 55.1  | 108.0 | 102.6 | 61.4    | 75.3    | 90.3  | 64.3  | 90.6        | 91.2   |
| Valparaiso    | 107.3         | 109.4 | 107.1 | 96.8  | 110.3     | 115.6 | 120.0 | 105.6 | 115.3      | 95.4  | 151.1 | 90.9  | 100.6 | 100.5   | 95.1    | 109.0 | 100.4 | 108.3       | 107.5  |
| O'higgins     | 101.6         | 99.0  | 73.8  | 126.8 | 76.2      | 80.9  | 89.8  | 98.6  | 103.6      | 96.2  | 84.9  | 112.5 | 99.9  | 123.0   | 79.8    | 79.4  | 43.7  | 82.1        | 81.4   |
| Maule         | 96.7          | 136.0 | 86.9  | 116.9 | 87.8      | 100.5 | 103.1 | 98.1  | 110.7      | 108.6 | 75.8  | 108.0 | 98.3  | 65.9    | 90.9    | 69.4  | 57.2  | 92.3        | 88.2   |
| BioBio        | 110.7         | 112.8 | 86.9  | 115.0 | 80.4      | 119.4 | 105.5 | 94.2  | 104.9      | 111.0 | 93.5  | 104.5 | 96.1  | 78.2    | 81.6    | 92.5  | 81.8  | 106.5       | 102.4  |
| Araucania     | 92.2          | 106.5 | 89.3  | 103.3 | 80.1      | 108.0 | 117.6 | 96.6  | 121.4      | 137.8 | 111.0 | 92.0  | 97.8  | 55.4    | 89.9    | 69.4  | 41.9  | 98.1        | 89.4   |
| Los Lagos     | 108.6         | 119.1 | 85.7  | 96.1  | 88.7      | 109.3 | 119.5 | 89.2  | 114.6      | 117.7 | 156.6 | 102.3 | 98.6  | 68.7    | 76.3    | 72.0  | 46.2  | 106.2       | 97.3   |
| Aysen         | 154.3         | 96.5  | 81.0  | 111.7 | 123.0     | 143.0 | 150.2 | 91.2  | 91.1       | 133.5 | 0.0   | 81.8  | 100.0 | 80.8    | 127.8   | 96.6  | 64.5  | 208.8       | 168.1  |
| Magallanes    | 98.5          | 77.0  | 95.2  | 74.1  | 121.5     | 119.6 | 144.3 | 84.8  | 91.1       | 88.6  | 136.0 | 45.5  | 100.1 | 250.2   | 116.6   | 110.5 | 105.9 | 132.3       | 121.1  |
| Metropol.     | 95.4          | 81.8  | 125.0 | 88.1  | 119.2     | 91.1  | 86.3  | 108.7 | 92.2       | 79.5  | 78.7  | 102.3 | 101.7 | 111.1   | 118.0   | 115.6 | 137.6 | 97.0        | 103.4  |
| INDEX         | 100.0         | 100.0 | 100.0 | 100.0 | 100.0     | 100.0 | 100.0 | 100.0 | 100.0      | 100.0 | 100.0 | 100.0 | 100.0 | 100.0   | 100.0   | 100.0 | 100.0 | 100.0       | 100.0  |
| COUNTRY TOTAL | 1.6           | 0.8   | 8.4   | 30.7  | 4.6       | 4.9   | 2.6   | 73.8  | 5.6        | 18.5  | 0.5   | 8.8   | 71.7  | 31766.0 | 47803.4 | 83.8  | 70.4  | 4919.8      | 7196.9 |
| AVG           | 1.7           | 0.9   | 7.6   | 31.8  | 4.2       | 5.0   | 2.8   | 69.5  | 5.6        | 19.1  | 0.5   | 8.1   | 71.6  | 35725.7 | 45990.0 | 80.3  | 58.2  | 5372.0      | 7431.4 |
| STD           | 0.3           | 0.1   | 1.1   | 4.5   | 0.9       | 0.9   | 0.5   | 5.3   | 0.7        | 3.7   | 0.2   | 1.9   | 1.3   | 17386.6 | 7652.4  | 14.8  | 22.4  | 1528.7      | 1514.1 |
| COEF.VAR.     | 16.5          | 16.8  | 14.4  | 14.2  | 20.3      | 18.1  | 18.1  | 7.7   | 12.9       | 19.5  | 43.0  | 23.3  | 1.8   | 48.7    | 16.6    | 18.4  | 38.4  | 28.5        | 20.4   |

|      |   |      |  |
|------|---|------|--|
| MECO | Medical consultations per inhab.          | INMO | Infant mortality                           |
| PACO | Para-medical consultations per inhab.     | MAMO | Maternal mortality                         |
| AVLE | Average lenght of stay in SNSSS hospital  | MALN | Malnutrition                               |
| MDIS | Medical discharges per bed                | HESN | Health expenditures per capita in the SNSS |
| DOCT | Doctors per 10000 inhabitants             | HETO | Total health expenditures per capita       |
| OTHE | Other medical staff per 10000 inhabitants | GDP  | GDP per capita in 1977 \$                  |
| BEDS | Beds per 1000 habitants                   | INCO | Regional average income                    |
| BEOC | Bed occupation index                      | URBN | % urban population                         |
| GEMO | General Mortality                         | URBZ | % population living cities above 20.000    |



From the table we can note that for the period under analysis, the regions receiving higher levels of expenditures per capita are Tarapaca, Antofagasta, Atacama, Valparaiso , Biobio, Aysen, Magallanes and Metropolitan, all of which are a high proportion of urban population. This pattern is very similar to that of GDP, and is the case of average income for Magallanes and Metropolitan. In sum, we observe a positive relation between health expenditures, urban population and regional incomes.

With regards to biomedical indicators, we notice, overall, that the regions showing levels above the national average, (this means, with a worse performance than the national average), are those that receive lower levels of health expenditures per capita. In fact O'higgins, Maule, Biobio, Aruacania and Los Lagos are those showing the worst performance in general, infant and maternal mortality. This matches the rural set of regions with some intermediates like Biobio. Two additional regions show a bad performance in the biomedical indicators, except in general mortality; they are Atacama and Aysen, both of which were previously selected as receiving above average health expenditures.

Life expectancy shows very small regional variations; it can be seen that it follows the regional distribution of GDP and Urban Population. There is an important exception in this distribution, the case of Coquimbo, which is often recognised as the poorest region of the country.

In sum, it is possible to mention that the biomedical indicators show, overall, that poor performance in this area is linked to rural and some intermediate regions or, most importantly, that health expenditures are lower in regions with poor bio medical performance.

The indicators of consultations and resources are mostly determined by the level of public expenditures, since public money will directly contribute to buy health resources and to pay salaries. The indicators of average length of stay and medical discharges are inversely related, the regions with longer

hospital stays are basically those receiving higher health expenditures. Whereas, those with higher medical discharges per bed are the ones receiving lower expenditures per capita; this appears to be a rationing system by which in order to decrease health costs the length of stay is reduced. This seems to be a compelled efficiency system, through which poor regions are forced to be efficient by shortening the stays in hospitals and increasing the medical discharges.

In relation to resource indicators it is important to note that the availability of doctors and other paramedical specialists per inhabitant is related to the number of consultations which these specialists can offer. But, in contrast to the other set of indicators, it is possible to observe a clear regional pattern; doctor availability is clearly related to urbanization, GDP and total health expenditures. It should be clear at this stage that poor regions are on average offering lower quality attentions to their inhabitants. There are important regional disparities in resources; for example, the Metropolitan region has twice as many doctors per person as Coquimbo.

Finally, on the indicator of bed availability, we note that poor regions are better endowed in relation to the national average. However this allocation is due to history and it does not indicate better hospital facilities: in fact the bed occupancy indicator shows that only Valparaiso and Metropolitan have above average bed occupancy, leaving the rest in a lower position.

In summary, it is possible to conclude with the evidence presented until now that, in broad terms, health expenditures tend to favour urban and higher income regions. This coincides with two of the competing hypotheses introduced in Chapter 3 (28). On the other side, poor rural or intermediate regions tend to have a lower level of health expenditures and a

.....  
28. As a reminder, the relevant competing hypotheses in this case are: (in brief)

No2. The richest regions will demand and obtain higher levels of social expenditures per capita.

No3. Social expenditure will be concentrated on more industrialized and urban regions.

lower performance in the biomedical indicators. Moreover, we conclude, as Cooper and Culyer (1970) did for England, that the indexes are usually related with one another so that a region performing poorly according to one criterion also did poorly according to another. At the same time some consultations and resource variables show that poor regions are, to some extent, facing a "compelled efficiency" by which they show a good performance in out-put indicators, such as average length of stay, but this does<sup>not</sup> match this with a better regional health status.

### Interregional Disparities

In relation to the interregional disparities we note that total health expenditures per capita show coefficients of variation ranging from 20.4% to 21.5%. Similarly health expenditures in the SNSS show higher coefficients ranging from 28.5% to 30.5%. It is possible to compare these findings with that of Noyce et al. (1974) for the English Health services; they obtained a coefficient of 14.2% considering 14 English regions, concluding that their results show important regional disparities in terms of health expenditures. Therefore, comparing these figures with the Chilean ones, we conclude that Chile shows considerably higher levels of regional inequalities.

The interregional disparities of resources and other indicators range somewhat below the levels of health expenditure indicators. Special attention should be given to medical consultations and doctor availability which show higher disparities. This may contribute to the continuation of disparities in health status. With regards to health and resource indicators we conclude, as Ugarte (1979), that despite some decreases in the interregional disparities, the regions with a poor performance have been consistently the same. According to Ugarte's findings in 1965, the worst performers were O'Higgins, Maule, Araucania and Los Lagos.

Although there has been no thorough study of the trends in regional inequalities, comparison with some previous estimates by the author for 1983 (<sup>29</sup>) show marginal decreases over time. In the case of total health expenditures the coefficient of variation for that year was 22.9% and for health expenditures in the SNSS it was equivalent to 28.8%. At the same time there have been no changes in the ranking or performance of the regions. This means that those regions with a good performance in 1983 are almost the same in 1987; this is demonstrated by the Spearman Rank correlations of 0.87 between 1983 and 1985, and of 0.72 between 1983 and 1987 (<sup>30</sup>).

## B.2.- Associations Between Health Variables

In order to test further the competing hypotheses and the variable relations described earlier, it was decided to calculate a (Pearson) correlation matrix to study the linear associations of the variables in use. This analysis was approached in three stages, socio economic indicators, biomedical indicators, and resources and consultations.

Let us start by reviewing the associations between health expenditures and socio economic indicators. It should be mentioned that the relations of both expenditure indicators, Total Health Expenditures (HETO) and SNSS Expenditures (HESN), along with the remaining of the indicators followed the same pattern; however, the correlations of the latter were usually weaker.

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29. Irarrazaval, I. Draft of PhD. Thesis - London School of Economics -London 1986.

30. The Spearman Rank Correlation between 1985 and 1987 was 0.91.

TABLE 5.12.

## CORRELATION MATRIX - HEALTH INDICATORS

|      | MECO    | PACO     | AVLE     | MDIS     | DOCT    | OTHE     | BEDS     | BEOC   | GEMO     | INMO     | MAMO  | MALN     | EXPE    | GDP     | INCO   | URBN    | URBZ  | HESN    | HETO |  |
|------|---------|----------|----------|----------|---------|----------|----------|--------|----------|----------|-------|----------|---------|---------|--------|---------|-------|---------|------|--|
| MECO | 1.00    |          |          |          |         |          |          |        |          |          |       |          |         |         |        |         |       |         |      |  |
| PACO | 0.16    | 1.00     |          |          |         |          |          |        |          |          |       |          |         |         |        |         |       |         |      |  |
| AVLE | -0.14   | -0.53 ** | 1.00     |          |         |          |          |        |          |          |       |          |         |         |        |         |       |         |      |  |
| MDIS | 0.23    | 0.58 **  | -0.74 ** | 1.00     |         |          |          |        |          |          |       |          |         |         |        |         |       |         |      |  |
| DOCT | 0.30    | -0.47    | 0.64 **  | -0.68 ** | 1.00    |          |          |        |          |          |       |          |         |         |        |         |       |         |      |  |
| OTHE | 0.40    | -0.15    | 0.17     | -0.25    | 0.46 *  | 1.00     |          |        |          |          |       |          |         |         |        |         |       |         |      |  |
| BEDS | 0.41 *  | -0.26    | 0.17     | -0.48 *  | 0.61 ** | 0.84 **  | 1.00     |        |          |          |       |          |         |         |        |         |       |         |      |  |
| BEOC | -0.13   | -0.16    | 0.51 *   | -0.01    | 0.17    | -0.06    | -0.31    | 1.00   |          |          |       |          |         |         |        |         |       |         |      |  |
| GEMO | -0.20   | 0.18     | -0.02    | 0.20     | -0.20   | 0.38     | 0.10     | 0.27   | 1.00     |          |       |          |         |         |        |         |       |         |      |  |
| INMO | 0.31    | 0.41     | -0.39    | 0.53 **  | -0.36   | 0.39     | 0.14     | 0.04   | 0.52 **  | 1.00     |       |          |         |         |        |         |       |         |      |  |
| MAMO | 0.04    | 0.19     | -0.04    | 0.00     | -0.09   | 0.16     | 0.11     | -0.09  | 0.32     | 0.33     | 1.00  |          |         |         |        |         |       |         |      |  |
| MALN | -0.02   | 0.52 **  | -0.31    | 0.69 **  | -0.48 * | -0.22    | -0.59 ** | 0.47 * | 0.39     | 0.50 *   | 0.15  | 1.00     |         |         |        |         |       |         |      |  |
| EXPE | 0.07    | -0.07    | 0.09     | -0.15    | 0.11    | -0.54 ** | -0.26    | -0.09  | -0.63 ** | -0.48 *  | -0.10 | -0.18    | 1.00    |         |        |         |       |         |      |  |
| GDP  | -0.23   | -0.57 ** | 0.15     | -0.48 *  | 0.33    | -0.09    | 0.19     | -0.36  | -0.46 *  | -0.68 ** | -0.20 | -0.59 ** | 0.24    | 1.00    |        |         |       |         |      |  |
| INCO | 0.05    | -0.44 *  | 0.45 *   | -0.56 ** | 0.73 ** | 0.20     | 0.39     | 0.04   | -0.29    | -0.32    | -0.27 | -0.41    | 0.11    | 0.35    | 1.00   |         |       |         |      |  |
| URBN | 0.00    | -0.50 *  | 0.46 *   | -0.52 ** | 0.42 *  | -0.15    | 0.00     | -0.01  | -0.71 ** | -0.67 ** | -0.27 | -0.45 *  | 0.53 ** | 0.67 ** | 0.34   | 1.00    |       |         |      |  |
| URBZ | -0.20   | -0.50 *  | 0.66 **  | -0.66 ** | 0.48 *  | -0.18    | -0.07    | 0.15   | -0.60 ** | -0.75 ** | -0.30 | -0.46 *  | 0.41    | 0.57 ** | 0.39   | 0.91 ** | 1.00  |         |      |  |
| HESN | 0.74 ** | -0.20    | 0.03     | -0.20    | 0.58 ** | 0.62 **  | 0.78 **  | -0.30  | -0.30    | 0.18     | -0.01 | -0.43 *  | 0.02    | 0.09    | 0.46 * | 0.17    | -0.01 | 1.00    |      |  |
| HETO | 0.65 ** | -0.36    | 0.23     | -0.38    | 0.70 ** | 0.61 **  | 0.76 **  | -0.25  | -0.38    | -0.03    | -0.10 | -0.53 ** | 0.11    | 0.27    | 0.50 * | 0.41 *  | 0.26  | 0.94 ** | 1.00 |  |

|      |   |      |  |
|------|---|------|--|
| MECO | Medical consultations per inhab.          | MAMO | Maternal mortality                         |
| PACO | Para-medical consultations per inhab.     | MALN | Malnutrition                               |
| AVLE | Average lenght of stay in SNSSS hospital  | HESN | Health expenditures per capita in the SNSS |
| MDIS | Medical discharges per bed                | HETO | Total health expenditures per capita       |
| DOCT | Doctors per 10000 inhabitants             | GDP  | GDP per capita in 1977 \$                  |
| OTHE | Other medical staff per 10000 inhabitants | INCO | Regional average income                    |
| BEDS | Beds per 1000 habitants                   | URBN | % urban population                         |
| BEOC | Bed occupation index                      | URBZ | % population living cities above 20.000    |
| GEMO | General Mortality                         |      |  |
| INMO | Infant mortality                          |      |  |

Author Calculations

See Text for explanations

Table 5.12. shows that HETO is positively correlated to Average Income (INCO) and Urban Populaton (URBN), both being correlations significant at the 0.01 level, although not very strong. The association with INCO is interesting since it shows a relation of health expenditures to the average income of families. In other words, it seems to be that the State favours the regions where richer families live, and does not favouring those that contribute more, in relative terms, to the national growth (<sup>31</sup>). For example, the Metropolitan region ranks between the first and the second place in INCO, whereas Antofagasta ranks in the sixth and tenth place. At the same time, Antofagasta ranks in the second place in GDP, whereas Santiago only ranks sixth place in the same variable. Antofagasta concentrates an important part of the copper and fisheries industry, whereas the Metropolitan region concentrates mainly services. It is possible to conceive that the State is responding to the pressures of individuals and other pressure groups, rather than rewarding those regions which contribute more to the national growth. Therefore, we have a situation where the second hypothesis should be considered, because richer regions are those receiving higher levels of social expenditure.

The positive correlation between health expenditures and urban population can be associated to the fact that doctors, hospitals and the medical consultations which they provide tend to be located in urban areas; therefore, public money will follow these initial allocations.

The correlations between health expenditures and biomedical indicators are on average weak and non-significant. This reveals that health expenditures are not associated with these indicators of basic needs. A similar finding was arrived at by Noyce et al.(1974) for Britain, finding a negative and non-significant correlation between infant mortality and health expenditures of various types. The exception to this weak association is the case of malnutrition which exhibits a negative correlation to health expenditures; this endorses the previous

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31. Note that this is, to some extent, just the opposite of what is stated in the competing hypothesis No.1.: Government will channel resources to the less wealthy regions measured in terms of basic needs.

statement of no clear relation between health expenditures and basic needs. Therefore, with regards to biomedical indicators we must reject the first hypothesis, because the Government is not channelling higher proportion of resources to poor regions (32).

Finally, in contrast to the previous group, the correlations between health expenditures and health resources are in general, significant (33) and positive. This is a rather obvious and multicollinear association, since higher health expenditures will represent better endowment in human resources and infrastructure. With regards to consultations, we note from table 5.12. that they have a lower non-significant correlation coefficients, with the exception of medical consultations. This shows that health expenditures are not clearly related to the number of consultations provided by the health services.

In sum, the correlation analysis has demonstrated that the allocation of health expenditures result in a rather regressive inter-regional allocation, favouring those regions with higher socio-economic standards and better health status indicators. At the same time poor regions show a lower performance in the same health indicators; in these regions health consultations are basically carried out through alternative cheaper ways of provision such as paramedical consultations, shorter periods of stay, etc.

### B.3.- Defining a Model to Analyse the Relation Between Health Expenditures and Health Indicators

The definition of a regression model to analyse the relation between health expenditures and health indicators was a difficult process because of the equation form defined. Since the dependent variable was always health expenditures, the form chosen was not a traditional equation for predicting health

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32. Poor regions are those with lower basic needs performance.

33. Correlations are significant at the 0.001 level.

status, unlike many of the equations published in the literature. Therefore an important set of traditional resource indicators had to be used with great care in avoiding multicollinearity. This led to the study of over 80 regression equations, and so to finally to select the six better models.

In order to obtain a better goodness of fit of the regression models, the equations were also estimated in semi-log and log-log forms. These equations produced only marginal increments in the adjusted R square; hence these solutions were not considered, since the parameters are much too difficult to interpret. As in the case of correlation analysis, the regressions were run with two alternative dependent variables, Total Health Expenditures (HETO) and Health Expenditures in the National System of Health Services (HESN). The results were again very similar in both cases; however, HETO showed a better goodness of fit.

The analysis is presented in three separate forms depending on the type of explanatory variables used: first, biomedical indicators; second, resources and consultations; third, a mixture of the three groups of indicators. In all the equation forms, socioeconomic indicators were introduced to examine the original hypotheses.

Equations No. 1 and 2 in Table 5.13. attempt to determine to what extent the variations in health expenditures can be related to biomedical indicators. We note that these equations capture only from 35 to 42% of the interregional variations in HETO, (a low proportion of the total variance), therefore a first conclusion is that biomedical and socioeconomic indicators are incapable in themselves of explaining a large proportion of the variations in health expenditures. In other words, this means that health expenditures are better explained by the addition of other variables not included in the present equation. At the same time, we note that Average Income and especially Urban Population are the variables with higher standardised partial regression coefficients (Betas), indicating that marginal relative changes in these variables will influence more the predicted value of HETO. Hence, we conclude again as in



hypotheses Nos. 2 and 3, that the allocation of health expenditures are influenced by external factors such as Income and urban population, as opposed to being an explicit result of the regional status.

Equations No. 3 and 4 analyse the interregional variations in health expenditures using indicators of resources and consultations as independent variables. Most resource and consultations indicators are, to some extent, a result of the level of expenditures. For example, higher doctor availability will mean higher expenditures and salaries, etc. However, these indicators are also a product of previous allocations, since they are very difficult to change from one year to another for instance the case of beds per habitants (BEDS) and medical consultations (MECO). Nevertheless, resources and consultations are showing the regional impact of pre-existing allocations, therefore it is interesting to analyse to what extent the present regional allocations are still perpetuating the pre existing regional inequalities.

We note in first place, that the equations account for larger proportions of total variance. However, if Bed Availability (BEDS), Medical Discharges (MDIS) or Medical Consultations (MECO) are used in the same equation there is an unavoidable problem of multicollinearity. Therefore, we should look to the importance of only one indicator of resources and consultations, such as MECO, BEDS, or MDIS and contrast it to the socioeconomic indicators. Using this approach, we note in equations 3 and 4 that the betas of Urbanization (URBZ) are in the range of the other indicators, meaning that URBZ does influence the regional allocation of HETO. This again supports hypothesis No. 3 of urban bias in the allocation of health resources. It is also noted that INCO does not explain much of the total variance due to a problem of multicollinearity.

TABLE 5.13.

## REGRESSION ANALYSIS - HEALTH EXPENDITURES

| No.DEPENDENT | AREA         | INDICATORS | MDIS    | BEDS     | GEMO     | INMO   | MALN   | INCO  | URBN   | URBZ   | Adjusted R sq. |
|--------------|--------------|------------|---------|----------|----------|--------|--------|-------|--------|--------|----------------|
| 1 HETO       | Biom.+Other  |            |         |          |          |        | -254.9 | 0.07  | 17.119 |        | 0.35           |
| t Ratios     |              |            |         |          |          | (-2.1) | (2.2)  | (1.1) |        |        |                |
| Betas        |              |            |         |          |          |        | -0.324 | 0.319 | 0.16   |        |                |
| 2 HETO       |              |            |         |          | 219.195  |        |        | 0.103 | 64.225 |        | 0.42           |
| t Ratios     |              |            |         |          | (3.1)    |        |        | (3.6) | (3.6)  |        |                |
| Betas        |              |            |         |          | 0.52     |        |        | 0.47  | 0.602  |        |                |
| 3 HETO       | Res.+Consul. |            | 259.563 | 3216.439 |          |        |        | 0.042 |        | 50.882 | 0.81           |
| t Ratios     |              |            | (5.4)   | (10.7)   |          |        |        | (2.2) |        | (6.3)  |                |
| Betas        |              |            | 0.724   | 1.083    |          |        |        | 0.193 |        | 0.733  |                |
| 4 HETO       |              |            | 241.52  | 3379.794 |          |        |        |       |        | 54.108 | 0.79           |
| t Ratios     |              |            | (4.9)   | (11.0)   |          |        |        |       |        | (6.4)  |                |
| Betas        |              |            | 0.673   | 1.138    |          |        |        |       |        | 0.779  |                |
| 5 HETO       | All          |            | 178.83  | 3217.163 | -584.7   |        |        |       |        | 34.404 | 0.85           |
| t Ratios     |              |            | (4.0)   | (11.9)   | (-3.2)   |        |        |       |        | (3.7)  |                |
| Betas        |              |            | 0.498   | 1.069    | -0.292   |        |        |       |        | 0.496  |                |
| 6 HETO       |              |            | 197.237 | 3121.824 | -523.358 |        |        | 0.029 |        | 34.27  | 0.86           |
| t Ratios     |              |            | (4.4)   | (11.6)   | (-3.1)   |        |        | (1.7) |        | (3.7)  |                |
| Betas        |              |            | 0.55    | 1.037    | -0.262   |        |        | 0.133 |        | 0.493  |                |

NOTE: In all equations HETO is the dependent variable

MDIS Medical discharges per bed  
 BEDS Beds per 1000 habitants  
 GEMO General Mortality  
 INMO Infant mortality  
 MALN Malnutrition  
 HETO Total health expenditures per capita  
 INCO Regional average income  
 URBN % urban population  
 URBZ % population living cities above 20.000

The final group of equations incorporates a selection from all the indicators used to explain the variations in HETO. In equation No.5, we observe that the most important variable of the equation is BEDS, which is related to the historical allocations of health expenditures. The regions better endowed in this resource are the same as in 1970 and 1987; the same can be said for those with a scarce endowment of beds.

There is no specific evidence that the original allocations are regressive in regional terms, but according to the historical basis as described in the beginning of the

chapter, many areas of expenditure were basically a result of organised pressure groups of industrial workers and employees (white collar workers), and not of the very poor. The second most important variable in the equation is urbanization, which again reinforces the previous conclusions concerning urban bias. It is interesting to analyse the fact that general mortality appears with a negative sign, which implies that higher mortality rates are associated with expenditures; therefore, the expenditure allocations will not be related to health needs <sup>(34)</sup>.

In order to test further the original hypotheses, regional average income (INCO) was introduced as an explanatory variable in equation No. 6, obtaining only a minimal increase in the adjusted coefficient of determination, and a non significant t-statistic. In other words, INCO does not influence significantly the allocations of health expenditures.

In summary, this section has reinforced the conclusions obtained in sections B.1. and B.2., concerning the validity of hypothesis 3, which is related to the urban bias in regional allocation. However, this section has not provided clear evidence to support hypothesis No.2, which predicts that rich regions would obtain higher shares of expenditures.

In addition to testing the original hypotheses, it was desired to examine the relations between a traditional health indicator and other variables. This analysis is aimed to determine, in an alternative form, the influence of health expenditures and other socioeconomic indicators on the evolution of health status. The health status indicator chosen is life expectancy (EXPE), which has been widely preferred as the best indicator of health status <sup>(35)</sup>. According to this choice, variables highly correlated with EXPE, such as general mortality (GEMO) and infant mortality (INMO), are not considered in the models.

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34. It should be noted that the marginal changes in GEMO will influence less HETO than a similar (proportional) change in BEDS, since the beta of the latter is larger.

35. See: F. Stewart- Planning to Meet Basic Needs.

In table 5.14. we present five equations which attempt to examine the relationship between EXPE and some explanatory variables. It is noted in the first three equations that they account for a small proportion of total variance. In the first equation the three explanatory variables have a significant t-statistic, showing that EXPE is explained by an indicator of bed availability with a negative sign; this means that EXPE is not necessarily related to in-patient hospital care but to other forms of preventive medicine. The equation also shows that HETO is the second most important variable in explaining the variance in EXPE. In contrast to bed availability, Total health expenditures (HETO) is a variable that can be affected for obtaining higher levels of expenditures. Finally, as may be predicted malnutrition has an inverse effect on EXPE; therefore a decrease in malnutrition is associated with extended life expectancy (EXPE).

TABLE 5.14  
REGRESSION ANALYSIS - LIFE EXPECTANCY

| No. DEPENDENT VARIABLE | MECO  | OTHE   | BEDS   | MALN   | URBN  | HETO  | Adjusted R sq. |
|------------------------|-------|--------|--------|--------|-------|-------|----------------|
| 1 EXPE                 |       |        | -2.34  | -0.28  |       | 0.00  | 0.38           |
| t Ratios               |       |        | (-4.9) | (-2.7) |       | (3.4) |                |
| Betas                  |       |        | -1.03  | -0.43  |       | 0.68  |                |
| 2 EXPE                 |       |        | -1.37  |        | 0.03  | 0.00  | 0.34           |
| t Ratios               |       |        | (-2.3) |        | (2.2) | (1.4) |                |
| Betas                  |       |        | -0.56  |        | 0.38  | 0.39  |                |
| 3 EXPE                 | 0.79  |        | -0.86  |        | 0.05  |       | 0.34           |
| t Ratios               | (1.5) |        | (-2.4) |        | (4.0) |       |                |
| Betas                  | 0.21  |        | -0.35  |        | 0.44  |       |                |
| 4 EXPE                 | 1.15  | -0.91  |        |        | 0.04  |       | 0.55           |
| t Ratios               | (2.6) | (-5.0) |        |        | (4.0) |       |                |
| Betas                  | 0.31  | -0.60  |        |        | 0.44  |       |                |
| 5 EXPE                 | 0.29  | -1.30  |        |        | 0.02  | 0.00  | 0.59           |
| t Ratios               | (0.5) | (-5.2) |        |        | (1.2) | (2.2) |                |
| Betas                  | 0.08  | -0.86  |        |        | 0.20  | 0.51  |                |

MECO Medical consultations per inhab.  
 OTHE Other medical staff per 10000 inhabitants  
 BEDS Beds per 1000 habitants  
 MALN Malnutrition  
 HETO Total health expenditures per capita  
 URBN % urban population

In relation to the models estimated earlier, it is important to note that HETO has a significant influence in determining the health status of a region; therefore, its allocation is relevant for the health prospects of a region.

The second equation was designed to check the influence of urban population in explaining life expectancy. When URBN is introduced it causes HETO to lose its significance and decreases its importance in terms of contribution to the total variance explained. However, it shows that EXPE is not only explained by health status or resource indicators but by other socioeconomic indicators. This is in line with a variety of studies that use non health indicators to predict the variations in EXPE, for example, literacy (<sup>36</sup>).

Equations Nos. 3 and 4 have a similar structure of explanatory variables but with different proportions of total variance explained. However, both equations show that URBN does help to explain an important proportion of total variance in EXPE. In Equation No.4, we note that the most important is the Consultations of other non medical staff (OTHE), which shows a negative sign. At the same time, changes in medical consultations (MECO) influence EXPE in a positive way.

The final equation is based on equation No. 4, with the addition of health expenditures (HETO). It shows an overall better goodness of fit, although it has a weaker contribution of medical consultations (MECO) and urban population (URBN). We found again the rivalry between HETO and URBN, in this case HETO proves to be stronger than URBN in contributing to the total variance in EXPE. HETO is not only significant but, according to its beta, the marginal changes in it will influence EXPE in an important manner.

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36. See: F. Stewart Op. cit.

In sum, we must acknowledge that we have not obtained equations with a very large adjusted coefficient of determination. This means that the variance of EXPE may also be explained by other non health indicators such as literacy, water availability, calorie consumption, etc. However, the partial significance of the parameters allows us to conclude that EXPE can be explained in an important manner through health expenditures and urban population, in addition to other resource indicators.

Therefore, the regional allocation of health expenditures does appear to affect the overall health status of the population and, for this reason, great care has to be used in the process of allocating it, since it may reinforce or improve the inequality in regional health status.

#### 5.4.C. Section Summary and Conclusions: Resource Allocation and its Regional Impact

This section has shown that it is possible to estimate the regional social expenditures for the health sector. Although some assumptions were needed to reach the final figures, our findings suggest that according to the criteria pre-defined in the methodology the results have a high degree of accuracy. The estimates indicate that more than 85% of the expenditure was allocated according to criterion A, that is, with a clear regional accounting system from the original data source.

The rest of the section is dedicated to the analysis of the relation between the regional allocation of social expenditures and regional needs. In this regard, we also test the feasibility of some competing hypotheses defined in Chapter Three.

In order to tackle this question it was necessary to consider some indicators of need in the health sector. The indicators were presented in three areas: biomedical, (including infant mortality, life expectancy and others); consultations, (including average length of stay in hospitals, medical consultations and others); Resources, (which included doctor availability, bed availability and others).

The data analysis was approached in three stages. In the first place, some measures of statistical dispersion were considered. This measure gave a first insight into the problems involved and was useful for testing the inter-regional disparities. In the second place, correlation analysis was used to examine the association between health indicators of need and regional expenditures. Finally, with the aid of regression analysis an attempt was made to define a model that helped to interpret the relation between health expenditures and health indicators.

However, despite the different approaches of each stage, all were aimed at the same objective, to test the relation

between health expenditures and health indicators of need. Therefore, we draw some general conclusions from the three stages.

The findings support in a straightforward manner the conclusion that the richest regions obtain higher levels of expenditures; they also indicate that social expenditures in health reach higher levels in urban regions. Therefore, there are grounds to accept hypotheses two and three, which state these principles. However, the analysis also indicates that regions with poor performance in biomedical indicators are usually rural, low-income regions. Moreover, correlations between health expenditures and biomedical indicators are on average weak and non-significant. The only exception was malnutrition which shows a significant negative correlation to health expenditures. These facts, and other aspects referred to in the text, lead us to reject the hypothesis that government is channeling its funds to the less well off regions measured in terms of their basic needs (Hypothesis No.1).

In the analysis of the Health sector we had the opportunity to contrast our findings with similar studies for Britain. Most of the results obtained in the present study were concordant with similar findings for the United Kingdom. In relation to health expenditures, it was found that Chile has higher levels of inequality in the allocation of regional health expenditures than Britain. In fact, the estimates indicate that Chile has almost double the British level of inequality in regional health expenditures. Moreover, it is not only important to note the higher levels of inequalities in the allocation of health expenditures but the trends observed in their allocation.

However, it has to be said that the country does show some important positive signs in the Health Sector. Although there are some regional disparities and the regions which performed poorly in the past tend to maintain their position, the absolute levels of health indicators do show that the country as a whole has improved its health conditions. An indication of this are the low levels of infant mortality and the high levels of life expectancy which are almost comparable to developed



nations.

Many of the national reforms introduced did have an important impact, such as in the case of targeting programmes to poor people. But we consider that, if the aim is to continue improving the health conditions, it will be necessary to take more seriously the regional allocation of expenditures, in order to redress the historical trends.

To conclude this section, let us point out to the reader that this section's conclusion may appear not very surprising considering the earlier conclusions of section 5.2.. In section 5.2. we indicated that despite serious attempts at decentralizing the ministerial organization and finance, most of its decisions are still taken in a centralized approach without much consideration of the regional dimension. However, it is important to demonstrate that the planning and budgeting procedures do not occur in a vacuum, but rather they produce clear allocation patterns as have been shown here.

## CHAPTER SIX

### EDUCATION

#### 6.1 BACKGROUND TO THE ORGANIZATION AND FINANCE OF THE EDUCATIONAL SYSTEM IN CHILE

Since the beginning of its independent life, Chilean governments have shown a deep concern over educational matters. The 1828 constitution established that primary schools were to be created under municipal tuition. In 1833, the first organic law of primary education ruled that public schools would be financed by the state but administered by municipalities. It also defined a control system for educational activities. However, in practical terms the state central bureaucracy did not transfer much in the way of resources to the local level and, through the control function maintained on educational structure which worked in a centralized form. In 1850 the country had only 1.5 million people, out of which 50,000 were in primary education.

At the beginning of the century, despite important efforts of successive governments, it was still not possible to make the educational system grow at a rate sufficient to offset the growth rate of population and the previous deficits. By 1900, the country had some 3 million inhabitants of which 150,000 were registred in primary education. This means that during this fifty year period, the total population of the country was doubled, whereas the educational system was tripled.

By 1925, primary education reached the status of a constitutional guarantee and was declared compulsory for all citizens. This meant that primary education was thought of as an elementary vehicle for the development of a person. At the same time it also meant that the state should provide free education to all the population in order to allow people access to the system. Education was also declared as a priority function of the state, so that among state functions education became one of the most important. Municipal powers were restricted once again, by allowing them only to provide primary education.

Between 1950 and 1975, despite that the population grew by less than two times, as a result of the mid sixties educational reforms, primary education grew five times reaching to a peak of 2.3 million students. During the period between 1960 and 1985 there was a 35% increase in the number of educational buildings, whereas enrollment grew by 60%; this made it necessary to have two and three shifts in school buildings in order to cope with the educational demands. There are some authors that have challenged this huge increase in school enrollment as it might have resulted in a loss in the quality of education (1).

In relation to preschool education, it must be said that despite some isolated attempts since 1909, this level of schooling was not organized until the forties (2), when the state adopted a leading role in developing this type of education. This coincides with the creation of a Department of Preschool Education within the Ministry of Education.

However, until 1965, preschool education was really still being developed as a transitory step to primary education; there was no defined curriculum. In sum, it was appreciated as an annex to primary education. In 1970, the creation of the National Board for Nurseries (Junta Nacional de Jardines Infantiles JUNJI) marks an important change, as for the first time pre-school education was approached in an ample range considering the situation of children from zero to six years old.

In Chile, school meals have been provided by the National Board for School Assistance and Scholarships (Junta Nacional de Auxilio Escolar y Becas JUNAEB). Between the early sixties and late seventies, JUNAEB not only financed but produced school meals. However, after a decade following this system growing problems of distribution and lack of control started to occur. Since 1960, the JUNAEB has also run a variety of smaller programmes, such as scholarships for children who resided in

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1.  
See: Prieto, A. (1983).

2. In 1940 the Conucil for Nurseries and Christmas Committees is founded. This fact may have helped the institutionalization of pre school education.

remote areas with no secondary education or the programme for school textbooks.

In sum, by the late seventies Chile had a well developed educational system, probably one of the better organized of Latin America. Following the educational reforms of the mid-sixties and into the early eighties there have been no major changes in the educational system. The only exception was the creation in 1974 of the Regional Ministerial Secretariats (SEREMIs) as part of the decentralization proposals of the government. The SEREMIs were in charge of the administration and the operation of public schools. In turn each SEREMI had Provincial Directorates to help in the supervision and control of school performance in accordance to the ministerial regulations.

Until 1980, the Ministry was the main provider of pre school, primary and secondary education. The distribution of student enrollment per level of education was the following: 6% in preschool, 74% in primary and 20% in secondary (3).

With regards to the type of institution (dependencia): 80% of the students were registred in ministerial publicly financed schools, 14% were registred in private subsidized schools (free of charge), and the remaining 6% were enrolled in private fee-paying schools.

The evolution of illiteracy may help to indicate the educational performance of the country. Literacy is an important indicator as it shows not only the capacity to read and write, but it can also be thought of as an indicator of the general level of education.

.....  
3. Secondary enrollment can be split up into general education (Cientifico Humanista) 70%, and vocational technical education (Tecnico profesional) 30% of secondary registrations.

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TABLE 6.1

EVOLUTION OF CHILEAN ILLITERACY RATE

| YEAR | %    |
|------|------|
| 1904 | 49.7 |
| 1920 | 36.7 |
| 1930 | 25.3 |
| 1940 | 27.1 |
| 1950 | 19.8 |
| 1960 | 15.2 |
| 1970 | 10.7 |
| 1982 | 8.9  |

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SOURCE:

INE Censos de poblacion y Vivienda

NOTE: From 1904 to 1980 figures were calculated from the population over 10 years old. From 1982, the figure is calculated from the population over 15 years.

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As can be seen in Table 6.1., Chile has experienced a considerable increase in the literacy of the population. However, some gross inequalities still remain. In 1982 the urban illiteracy rate was 5.8%, whereas the rural rate was 20%. This fact shows that the geographical dimension is an important variable to be considered when analysing the different educational levels.

## 6.2. EDUCATION FINANCE AND ORGANIZATION

### A. Present Educational System

In this section we describe and discuss the most important features of the educational system in Chile and its recent developments. It is important to devote some time to this area as most of the issues concerning ministerial finances and organization will be drawn from the present organization.

As in the case of the Ministry of Health, Education also experienced major organizational changes in the early 1980's. The changes attempted to address the most important educational problems of the period: centralization, low quality of education, rigid curricula, inadequate supervision, variable attendance rates and others.

The institutional changes can be presented in two areas: i) the transfer of public schools to the administration of municipalities. This transfer also involved the creation of a subvention scheme similar to that educational vouchers applied in other countries; ii) The decentralization of the ministerial institutional functions. This involved the strengthening of the SEREMIs role and of other tiers of the ministerial structure.

#### A.1. The Transfer of School Administration to Municipalities

The transfer of school administration to municipalities was aimed at promoting the decentralization of ministerial tasks by improving administration, increasing enrolment, and upgrading the quality of education. The transfer process actually involved four steps: the creation of a municipal institution to run public schools; the transfer of public property; the re-allocation of teachers, and the creation of a subvention scheme to finance the transferred schools.

## Municipal Organization

In order to carry out the school administration, the municipalities created two alternative institutions to run local education:

- Private Corporations for Social Development
- Municipal Education Departments

Although the first alternative was the one most widely supported by the central government, its legal situation is still dubious, as the Supreme Court of Justice has ruled out the qualification of these institutions as "private". The highest authority of the Corporation is the local Mayor (<sup>4</sup>) who has the power to nominate an Executive Director. Moreover, most of the Corporations' resources come from public sector transfers.

As a result of the legal void, many municipalities created their own Educational Departments. Therefore, in this case teachers ended up as municipal employees.

## The Transfer of Property

The transfer of property to the municipalities was arranged through a legal procedure called Comodato (<sup>5</sup>). Under this scheme municipalities received school buildings for a period of up to 99 years. This transfer involved no pecuniary reimbursement from the municipality to the central ministry.

The Ministry of Education also signed agreements to transfer schools to private institutions. Some of these transfers were similar to the municipal ones, in the sense that a former public school was transferred to a charity, thus becoming a private subsidized school. However, this alternative was mostly used for the transfer of Vocational Technical Schools to entrepreneur associations related to the area of each vocational school.

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4. It must be remembered that during the military rule all Mayors were nominated from Central government.

5. Law Decree No. 1-3063 Ministry of Interior.

According to Varas (1983), between December 1980 and September 1982, 5800 schools were transferred from the ministry to municipalities and private institutions. However, due to the recessionary period being faced by the country, the process was temporarily terminated at the end of 1982.

#### Reallocation of teachers

The "transfer" of teachers from public schools to Municipal Corporations was not an easy task; there were important claims about the low efficiency levels of the educational system, low salaries and an excess of teachers. For the teachers themselves the transfer involved losing the status of civil servants and its corresponding pay scale and accepting the pay system of the private sector. Under this scheme all teachers were eligible to receive a full severance payment.

One argument used by the central government for decentralizing teachers was the need to provide local authorities with more freedom to allocate resources. If the Ministry had maintained its payroll the local discretion would have been limited severely.

#### Subvention Scheme for Financing Transferred Schools

The subvention scheme consisted of a payment made per student attending school. The aim was to encourage school administrators to attract more students and to keep them attending school, since payments were based on daily attendance.

The payment, which was the same for municipal and private subsidised schools, was equal to the average expenditure per student of the Ministry of Education in 1980. This provision was very attractive for private subsidised schools as their costs per student were estimated to be 70% of the Ministerial average costs.

According to Law Decree No. 3476 of 1980, eleven different levels of payments were established, each of which related to



alternative combinations of the type of education (i.e. preschool, basic, median), the level of education (i.e. in basic education there are 3 cycles: 1-2, 3-5,6-8), and school time table (i.e. day or evening). The payment per student was measured in terms of a unit of account that increased monthly with inflation (Unidad Tributaria Mensual UTM).

Due to the 1982-1983 economic crisis, the reforms were halted and the indexed payments were changed to a system in which payments were adjusted in accordance to the increase of wages and salaries of the public sector. However, since inflation was higher than wage increases, payments per students fell by about 20% of their real value between 1982 and 1985. As a result of this situation, municipalities soon face serious financial deficits. This deficit was also increased by the loss of students to private subsidised schools and by the excess of teachers.

At the same time as the payment per student was losing its real value, so too were teachers' salaries. Important pressures began to come from teachers who wanted to receive the original benefits they would have had as public employees (6). As a result of these pressures, central government became involved again in teachers' wages policy creating a special fiscal fund to meet their demands. Simultaneously, the Ministry did not allow municipalities to fire the "excess" teachers. According to ODEPLAN (1985) the excess of teachers was a real issue. The student/teacher ratio was 24 in municipal schools in contrast to 40 in private subsidized schools. The low ratio in municipal schools was the main reason why the costs per student in municipal institutions were higher than in private subsidized schools.

In 1986 the Ministry changed policy to one which would begin to redress the municipal deficits. It firstly limited the resources to be transferred to meet the financial deficits; it also lifted the restriction on municipalities to firing teachers

.....  
6. At this stage there were still some teachers not being transferred to municipalities. They were not suffering the economic restrictions of the rest.

(<sup>7</sup>). In 1987, the subvention law was modified to create new unit of account: the Unit for Subvention in Education (USE). The new unit would be indexed to the changes in wages and salaries of public sector employees which means that it would increase below the inflation rate. Finally, in the same year the Ministry introduced a further change which would consider a "rural factor" in increasing the base level of payments per student (<sup>8</sup>). In the case of rural schools, i.e., those more than 5 kilometres outside the nearest urban limit, the payment per student was to be weighted by a factor that became greater as the number of students in a school became fewer (<sup>9</sup>).

## A.2. Ministerial Functions and Decentralization

Prior to the 1980's reform the Ministry of Education concentrated on the provision of education. This included the administration and finances of almost 10,000 schools, 90,000 teachers and the supervision and educational control of almost 3 million students.

One of the most important changes in the reform was the separation of the Ministerial normative and administrative functions. The administrative function was left to the municipalities and the normative function remained in the Ministry. Within this latter function the Ministry would define the objectives, plans and programmes of study, as well as specify the number and length of classes. It also would define the ages and entrance pre-requisites for all educational levels. Finally, It had to regulate the functions and structure of the teaching staff.

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7. Some 5,500 teachers were fired between 1986 and 1987.  
In 1985, according to the Ministry of Education there were 88,000 teachers in basic education of which 54,000 belonged to municipal schools.

8. Law No. 18 591 Art. 27 3-Jan.-1987.

9. In addition to this rural factor teachers also enjoy a hardship allowance (asignacion de zona).

Another ministerial function was the supervision of the quality of education. In this regard the Ministry undertook some national tests to measure the quality of education in all Chilean primary schools (<sup>10</sup>).

Finally, the ministry took on number of functions related to the control of the subvention scheme. According to Law Decree No. 3476, the ministry was given the duty of controlling the daily registrations of students as the per-student payment would be based on this. Any discrepancy found on the books would result in reducing or withholding a proportional part of the monthly payments. The ministry also had to control any charges made to students or their parents (<sup>11</sup>).

Some of these last functions <sup>e</sup>wre decentralized through SEREMIs as they defined an annual timetable of school activities and supervised the educational performance. However, the control of the subvention scheme relied mostly on the Provincial Directorates which were meant to control periodically the school registrations in both municipal and private subsidised schools.

As mentioned earlier, the administration and production of education relies on the municipalities. They can organize the municipal educational system through a "Private" Social Development Corporation or through Municipal Educational departments.

In figure 6.1. the ministerial organization is described from the point of view of student choices. In the mid 1980's a person had three main alternatives for accessing education in Chile: municipal, private subsidized and private for pay schools. Within the public sector the only available alternative was municipal education, which accounted for over 68% of total school registrations. In the private sector there are two alternatives: private subsidized schools, accounting for 27% of schools

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10. Sistema de medicion de la Calidad de la educacion- SIMCE.

11. The law allows some minimum fixed charges related to initial registration fee and an annual contribution to the parents associations.

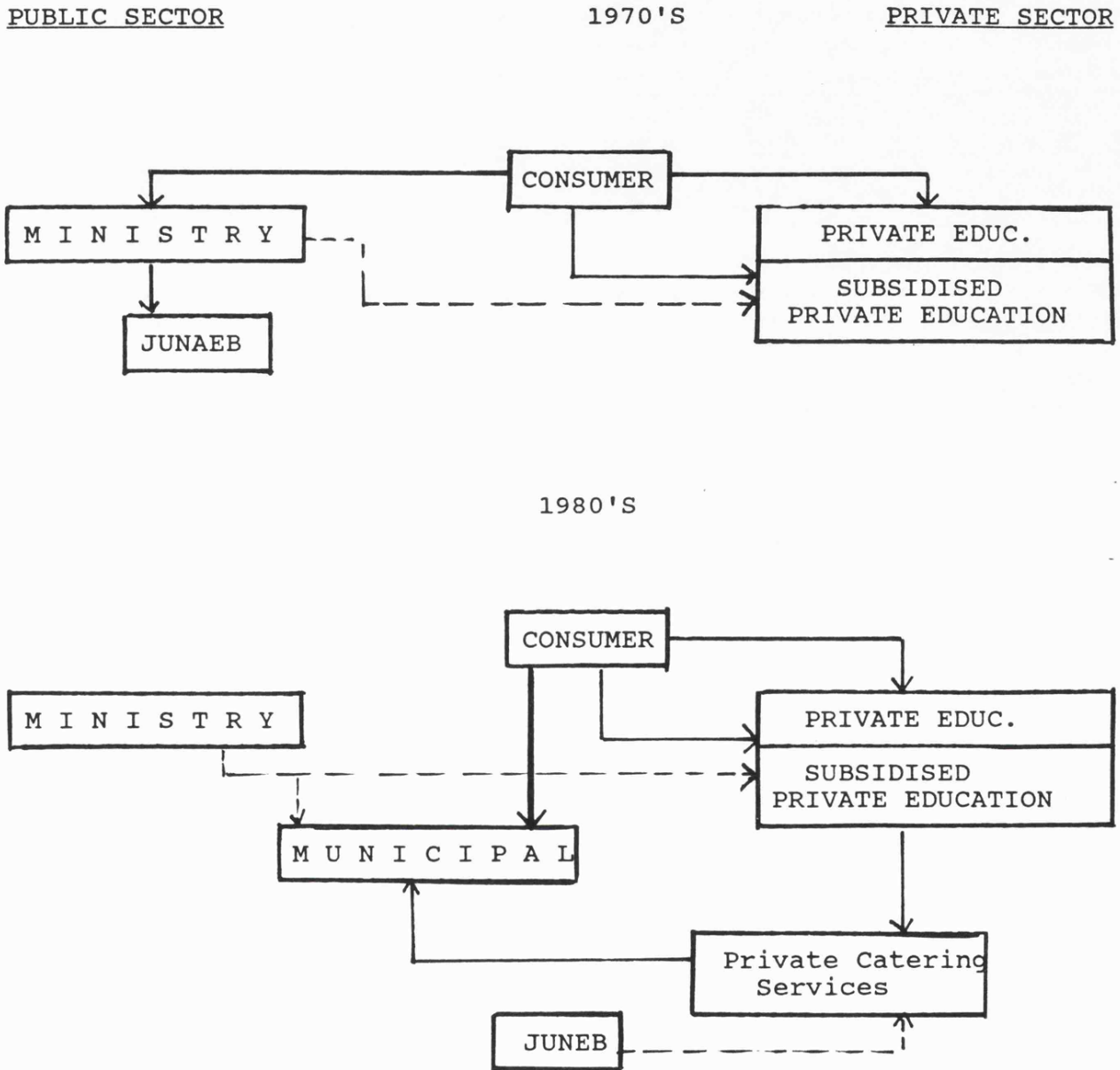
registrations and receiving public finances through municipalities; and private for pay schools, which only account for 5% of total registrations. The figure shows that the consumer has no direct relation with the Ministry itself, was the case in the seventies. The dotted line only shows a financial link between the Ministry and municipal schools.

In relation to pre-school education, in the early 1970's there were three main providers of pre-school education: The Ministry of Education, JUNJI and various private institutions (<sup>12</sup>). The Ministry offered pre-school education in its own primary schools to children between 5 to 6 years accounting for 58% of total pre-school registrations. The JUNJI was an institution directly accountable to the ministry offering education to children from 0 to 6 years; it accounted for 10% of total pre-school education. Lastly, private pre-school education accounted for the remaining 32% of total registrations. Overall, there were almost 100,000 children attending pre-school education. This figure implies a coverage of 6.5% of the children between 0 to 6 years.

After the 1980's reforms, the organization looks very much like the rest of the educational system for this period. In addition to the three described instances, some privately subsidised institutions were introduced which accounted for almost 37% of the total pre-school enrollments in 1986. These pre-schools are now also managed by the municipalities, as they were transferred simultaneously with the rest of the schools.

.....  
12. Since 1925, labour legislation requires that a nursery must be provided in every factory or institution which has recruited more than 20 women with small children.

FIGURE 6.1.  
The Developments of the Ministry of Education Organization



In the early 1980's JUNJI was re-structured. It was now conceived of as a delegated institution, that is, as a semi-autonomous public organization accountable to the Ministry of Education<sup>13</sup>). At the same time JUNJI also concentrated more on the nutritional aspects of pre-schooling, giving 80% of the daily calories to those children attending its schools. The programme was also re-defined with a targeting aim to focus on poor children. Therefore, some selection procedures were defined to achieve this aim. However, JUNJI continues to be financed through budget allocations without being incorporated to the fee-for-students scheme of subventions.

Parallel to JUNJI there is a private foundation related to municipal voluntary organizations (Fundacion Nacional de Ayuda a la Comunidad FNAC) which also runs nursery schools. The finance of this institution comes from public sources through the Social Fund. As in JUNJI's case, FNAC is also targeted at poor children.

Finally, there are now an important number of private subsidised nursery schools, which accounted for 22% of children enrollments in 1986. The ministry pays to private subsidised pre-school a monthly subvention, which is in fact a grant to finance the activities of these schools

The National Board for School Assistance (JUNAEB) also experienced a redefinition of its objectives. The main aims of the programme were to i) reduce drop-out and to increase school attendance rates by attracting students through the meals offered and ii) to provide nutritional support for the low income children. In the late 1970's the broad social policy aim of targeting was increased; the selection procedure used included the use of the national means test (Ficha CAS) and the teacher opinion about the student health situation. JUNAEB has attempted various combinations of indicators in addition to these two: indicators of low weight at birth, school achievement and others. Some of these have proved to be too complicated for most administrators. The aim here was to move away from the rather

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13. In the Chilean common day language there is some confusion about this evolution as it is presented as decentralization but in our terms it is a case of delegation.

"urban" distribution of resources, and so JUNAE B defined some rural quotas for school meals. The weakness of this approach is the high probability of stigmatising students as only some students of a class will be entitled.

JUNAE B is case of a semi-autonomus institution that entitled to make public tenders for the production and distribution of school meals. From 1976 JUNAE B started making some changes in its financial and production system. It firstly started by delegating the production and supplies to private companies. Then it moved to organize public tenders handing over all the production and distribution of the programme to the private sector. However, JUNAE B retains its financial and control functions.

As a result of the economic crisis, JUNAE B continued and even increased its expenditures during this period. However, in 1986 the Ministry reduced the amount of resources transfered to JUNAE B. The result of this was a decrease in 8% in the total number of luncheons served between 1985 and 1986. In an attempt to redress this tendency some municipalities beganto contribute to JUNAE B in order to have a better provision of school meals in their area.

In 1986 JUNAE B school meals programme covered 35% of the children enrolled in basic education (<sup>14</sup>).

### A.3. Enrolment and coverage

In Table 6.2. it is possible to observe the development of Pre-school Education in the last years. We note that there has been an important increase in the number of children attending this type of education. In 1987, the proportion of children attending pre-school education in relation to all children of the revelevant ages was 20%; this is an increase in 6.4 percentage points since 1980 (<sup>15</sup>).

.....  
14. This figure is 10 percentage points above 1980.  
Source: JUNAE B.

15. According to the Superintendencia of Education in 1970 the coverage of pre-school education was 3.9%.

TABLE 6.2.

PRESCHOOL ENROLLMENT BY INSTITUTION  
1980-1986

| Private |           |           |           |       |         |       |        |
|---------|-----------|-----------|-----------|-------|---------|-------|--------|
| JUNJI   | M.Educat. | Municipal | Subsidied | FNAC  | Private | TOTAL |        |
| 1980    | 47690     | 91501     |           | 8368  | 23386   | 27525 | 198470 |
| 1981    | 47614     | 19518     | 71803     | 12890 | 27736   | 23625 | 203186 |
| 1982    | 47529     | 17058     | 70827     | 29853 | 32086   | 19259 | 216612 |
| 1983    | 44917     | 16309     | 72903     | 37102 | 37748   | 20055 | 229034 |
| 1984    | 47847     | 18685     | 84974     | 54523 | 43410   | 18001 | 267440 |
| 1985    | 53578     | 20280     | 93883     | 67833 | 40548   | 20256 | 296378 |
| 1986    | 71758     | 20568     | 94506     | 75542 | 43507   | 22654 | 328535 |
| 1987    | 72417     | -----     | 220030    | ----- | 43500   | ----- | 335947 |

| Private |           |           |           |      |         |       |           | Coverage |
|---------|-----------|-----------|-----------|------|---------|-------|-----------|----------|
| JUNJI   | M.Educat. | Municipal | Subsidied | FNAC | Private | TOTAL | Child.0-6 |          |
|         |           |           |           |      |         |       | years     |          |
| 1980    | 24.0      | 46.1      | 0.0       | 4.2  | 11.8    | 13.9  | 100.0     |          |
| 1981    | 23.4      | 9.6       | 35.3      | 6.3  | 13.7    | 11.6  | 100.0     |          |
| 1982    | 21.9      | 7.9       | 32.7      | 13.8 | 14.8    | 8.9   | 100.0     |          |
| 1983    | 19.6      | 7.1       | 31.8      | 16.2 | 16.5    | 8.8   | 100.0     |          |
| 1984    | 17.9      | 7.0       | 31.8      | 20.4 | 16.2    | 6.7   | 100.0     |          |
| 1985    | 18.1      | 6.8       | 31.7      | 22.9 | 13.7    | 6.8   | 100.0     |          |
| 1986    | 21.8      | 6.3       | 28.8      | 23.0 | 13.2    | 6.9   | 100.0     |          |
| 1987*   | 21.6      | ---       | 65.5      | ---  | 12.9    | ---   | 100.0     |          |

SOURCE: Informe Social ODEPLAN 1986

Compendio Estadístico

Superintendencia de Educacion

\* M.Educat.+ Municipalities+Priv.Subs.

In the same table the share of the different institutions offering pre-school education can also be seen. It can be noted that as a result of the municipalization process the share of the Ministry of Education decreases dramatically after 1980, whereas the municipal and private subsidised schools begin to absorb a greater share. At the same time, both JUNJI and FNAC have maintained their relative shares.

The distribution of pre-school enrolment in 1986 showed that almost 57% of the enrolments were in public institutions



accountable to the Ministry of Education. A further 36% of the enrolments were in publicly financed private institutions. Therefore, the overall situation is that almost 93% of pre-school education in Chile is publicly financed.

Despite the increases in pre-school education the system covers only 20% of the children, and there are increasing pressures for more places to assist women participating in the labour force.

The development of Basic Education is analysed in Table 6.3. We observe again trends similar to those in the case of pre-school education. From 1980 onwards most ministerial education has been transferred, mostly to municipal and private subsidized schools, ending in 1987 with no schools depending directly upon the Ministry. In contrast to pre-school education it is possible to notice that private subsidised education has increased its share in the total. This is probably a response to the incentives created by the subvention scheme (<sup>16</sup>).

In relation to the coverage of basic education it is necessary first to explain this concept. The official ages for basic education are between 6 and 13 years old. Therefore, the coverage is often calculated as the porportion of children enrolled in primary education in relation to the total number of children between 6 and 13 years old. This usually gives in the Chilean case coverages above 100%. An alternative to avoid this problem is to measure coverage in basic education considering in the denominator the total number of children between 6 and 14 years old; this has been done in several studies. The objective here is to count the children who have repeated a year of schooling or have entered late into the system. In any case we are more concerned with an indicator that shows the availability of education and its evolution. Therefore, as long as it is consistent over time we do not question in depth what the exact denominator should be (<sup>17</sup>).

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16. There is a futher type of basic education specifically for children with learning problems. Special education accounts for 1% of total enrollments.

17. In section 6.4. we use another further definition of basic education coverage. The origin of this is the different age intervals considered in the population projections.

TABLE 6.3.

BASIC EDUCATION ENROLMENT BY INSTITUTION  
1980-1986  
(Thousands of children)

|      | Ministry  |           | Private   |         | TOTAL  |
|------|-----------|-----------|-----------|---------|--------|
|      | Education | Municipal | Subsidied | Private |        |
| 1980 | 1743.9    |           | 306.2     | 136.4   | 2186.5 |
| 1983 | 215.0     | 1309.3    | 448.5     | 112.3   | 2085.1 |
| 1984 | 196.2     | 1249.4    | 511.6     | 88.6    | 2045.8 |
| 1985 | ----      | 1406.8    | 549.2     | 106.4   | 2062.4 |
| 1986 | 173.1     | 1172.6    | 594.9     | 107.5   | 2048.1 |
| 1987 |           | 1299.3    | 592.3     | 115.7   | 2007.3 |

|      | Ministry  |           | Private   |         | TOTAL |
|------|-----------|-----------|-----------|---------|-------|
|      | Education | Municipal | Subsidied | Private |       |
| 1980 | 79.8      | 0.0       | 14.0      | 6.2     | 100.0 |
| 1983 | 10.3      | 62.8      | 21.5      | 5.4     | 100.0 |
| 1984 | 9.6       | 61.1      | 25.0      | 4.3     | 100.0 |
| 1985 | ----      | 68.2      | 26.6      | 5.2     | 100.0 |
| 1986 | 8.5       | 57.3      | 29.0      | 5.2     | 100.0 |
| 1987 | 0.0       | 64.7      | 29.5      | 5.8     | 100.0 |

SOURCE: Informe Social ODEPLAN 1986  
Compendio Estadístico  
Superintendencia de Educación

In Table 6.4. it is possible to observe the different measures of basic education coverage for the last seven years. We note that both methods follow the same pattern. From 1980 to 1987 the system has decreased from 108.8 to 104.7% in its coverage. The Ministerial response for this declination is the decrease in the birth rate since 1970 and an important reduction in drop out and repetition rates.

Median education (secondary) in Chile has two main alternatives: i) A scientific humanistic curriculum which involves a cycle of four years preparing the students for further education; ii) Technical vocational curriculum which involves a cycle of five years giving its graduates a technical qualification upon completion.

| TABLE 6.4.                  |                                 |                                 |                         |
|-----------------------------|---------------------------------|---------------------------------|-------------------------|
| COVERAGE IN BASIC EDUCATION |                                 |                                 |                         |
|                             | Coverage<br>Child.6-13<br>years | Coverage<br>Child.6-14<br>years | Ministerial<br>Coverage |
| 1980                        | 108.8                           | 96.5                            | ---                     |
| 1983                        | 106.1                           | 94.0                            | 95.2                    |
| 1984                        | 104.7                           | 92.7                            | 96.7                    |
| 1985                        | 105.7                           | 93.7                            | 97.8                    |
| 1986                        | 104.7                           | 92.8                            | 96.2                    |
| 1987                        | ---                             | ---                             | 96.3                    |

SOURCES

Informe Social Odeplan  
Compendio Estadístico  
Superintendencia de Educación

The developments in median education after 1980 appear in table 6.5. In 1987 total enrolment reached a peak of 695,000 students, which gives a coverage of 79.3. It is interesting to note in the table the rapid progress made by private subsidied education, which again seems to be a result of the new subvention scheme for secondary education.

TABLE 6.5.

MEDIAN EDUCATION ENROLMENT BY INSTITUTION  
(1980-87)  
(Thousands of students)

|      | M. Educat.Private |           |         | TOTAL | COVERAGE |
|------|-------------------|-----------|---------|-------|----------|
|      | Municipal         | Subsidied | Private |       |          |
| 1980 | 406.4             | 86.0      | 49.3    | 541.7 |          |
| 1983 | 410.2             | 151.9     | 51.2    | 613.3 |          |
| 1984 | 400.9             | 184.2     | 52.1    | 637.2 |          |
| 1985 | 397.2             | 216.6     | 54.2    | 668.0 |          |
| 1986 | 394.1             | 233.9     | 52.1    | 680.1 |          |
| 1987 | 414.7             | 227.8     | 53.3    | 695.8 |          |
|      |                   |           |         |       |          |
|      | M. Educat.Private |           |         | TOTAL | COVERAGE |
|      | Municipal         | Subsidied | Private | TOTAL | COVERAGE |
| 1980 | 75.0              | 15.9      | 9.1     | 100.0 |          |
| 1983 | 66.9              | 24.8      | 8.3     | 100.0 | 70.7     |
| 1984 | 62.9              | 28.9      | 8.2     | 100.0 | 73.3     |
| 1985 | 59.5              | 32.4      | 8.1     | 100.0 | 76.2     |
| 1986 | 57.9              | 34.4      | 7.7     | 100.0 | 77.3     |
| 1987 | 59.6              | 32.7      | 7.7     | 100.0 | 79.3     |

NOTE: M.Educat. - Municipal includes Scientific-humanistic and Technical Vocat.

SOURCE: Informe Social ODEPLAN 1986  
Compendio Estadístico  
Superintendencia de Educación

The overall figures of total enrolment for the three years under analysis appear in Table 6.6. It can be seen that almost two thirds of all students are in basic education, whereas median education includes around 20%. Higher education has around 5% of all students. It is interesting to keep these figures in mind as in the next section we will discuss the shares of expenditure which each level of education receives from the Ministry.

| TABLE 6.6.                                   |                  |                  |                  |
|--|------------------|------------------|------------------|
| DISTRIBUTION OF TOTAL ENROLMENT IN EDUCATION |                  |                  |                  |
|  | 1985             | 1986             | 1987             |
| Pre-School                                   | 202,252          | 209,970          | 228,117          |
| Special                                      | 31,017           | 29,749           | 31,272           |
| Basic  | 2,062,344        | 2,048,107        | 2,007,503        |
| Median                                       | 667,797          | 680,038          | 695,863          |
| High. Educat.                                | 150,715          | 152,875          | 156,755          |
| <b>TOTAL</b>                                 | <b>3,114,125</b> | <b>3,120,739</b> | <b>3,119,510</b> |
| (% Percentages)                              |                  |                  |                  |
|  | 1985             | 1986             | 1987             |
| Pre-School                                   | 6.5              | 6.7              | 7.3              |
| Special                                      | 1.0              | 1.0              | 1.0              |
| Basic  | 66.2             | 65.6             | 64.4             |
| Median                                       | 21.4             | 21.8             | 22.3             |
| High.Educat.                                 | 4.8              | 4.9              | 5.0              |
| <b>TOTAL</b>                                 | <b>100.0</b>     | <b>100.0</b>     | <b>100.0</b>     |

SOURCE:  
Superintendencia de Educacion

To conclude this section it is interesting to have an insight into the average educational level of the Chilean population. This information was obtained from the sample survey CASEN in 1987 (<sup>18</sup>). The educational levels were calculated for people above 15 years old. The estimated national average was found to be 8.6 years of schooling. This figure denotes an important increase in the years of schooling as some earlier figures indicate that in 1970 the average years of schooling were 4.3. (<sup>19</sup>). However, there are still important differences to be tackled; the estimated urban schooling average was 9.2 years whereas the rural average was only 5.7 years.

18. Haindl, Budinich and Irarrazaval op, cit.

19. Compendio de Informacion Estadistica  
Superintendencia de Educacion.

#### A.4. Higher Education

Although universities are formally related to the Ministry of Education they are independent bodies with their own internal regulations. For this reason it was decided to introduce them in a separate section.

Before the latest university reforms of 1981 there were eight national universities covering around 7.2% of the population between 18 and 24 years old; they received around 30% of total Ministerial expenditures (<sup>20</sup>). The two main state universities, the University of Chile and the State Technical University, were national universities with their headquarters in Santiago and some regional branches elsewhere.

In general, it was thought that the regional branches were poorly administered from the central headquarters. Another opinion was that universities had no incentives to increase enrolment or quality as their finances were based on budget allocations.

The reforms introduced in Law Decree No.4 of 1981 had three main aims: i) to open more alternatives to higher education, ii) to decentralize main state universities and iii) to change the financial scheme of universities.

The new law authorised the creation of new alternative institutions of higher education: private universities, Professional Institutes (Polytechnics) and Centres of Technical Instruction. All of them were freely allowed to set their own tuition fees and the courses to be offered but were obligated to submit their programmes for Ministerial approval. In the case of Private Universities and Professional Institutes, in order to ensure a minimum quality of education, they were required to arrange for external examiners during the first five graduating classes. The Centres of Technical Instruction were established to provide technical degrees in a variety of areas through courses lasting 2 years.

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20. In 1974 universities received more than 45% of the Ministerial budget,

In Table 6.7. we can observe the evolution of enrolment in the different types of higher education. While universities have grown by 28% since the creation of the private universities, professional institutes have doubled their enrolment during the same period. The most spectacular development is in the case of the Centres of Technical Instruction, which in 1987 accounted for more than 30% of higher education enrollments.

| TABLE 6.7.                          |              |                     |                    |        |
|-------------------------------------|--------------|---------------------|--------------------|--------|
| TOTAL ENROLMENT IN HIGHER EDUCATION |              |                     |                    |        |
|                                     | Universities | Profess. Institutes | Centres Tech.Inst. | TOTAL  |
| 1981                                | 99428        | 14041               | 0                  | 113469 |
| 1982                                | 108049       | 25244               | 39702              | 172995 |
| 1985                                | 113625       | 32233               | 50425              | 196283 |
| 1986                                | 127362       | 29160               | 57852              | 214374 |
| 1987                                | 127099       | 29656               | 67583              | 224338 |
| 1988                                | 125529       | 33787               | 73832              | 233148 |
| (% Distribution)                    |              |                     |                    |        |
|                                     | Universities | Profess. Institutes | Centres Tech.Inst. | TOTAL  |
| 1981                                | 87.6         | 12.4                | 0.0                | 100.0  |
| 1982                                | 62.5         | 14.6                | 22.9               | 100.0  |
| 1985                                | 57.9         | 16.4                | 25.7               | 100.0  |
| 1986                                | 59.4         | 13.6                | 27.0               | 100.0  |
| 1987                                | 56.7         | 13.2                | 30.1               | 100.0  |
| 1988                                | 53.8         | 14.5                | 31.7               | 100.0  |

SOURCE: Compendio Informacion Estadistica  
Superintendencia de Educacion

The decentralization aim was approached by giving "independance" to each regional branch of the two main state universities. Therefore, most branches were transformed into either regional universities or professional institutes. In the cities where the two unversities had branches they were usally amalgamated into a single institution.

The new financial scheme for universities changed the old system of budgetary allocations to five different financial sources: i) direct transfers, ii) indirect transfers, iii) student loans iv) research grants and v) tuition fees. The first

three are publicly financed whereas research grants have a mixed finance and tuition fees are private charges to students. In 1987 the three public allocations to universities were distributed in the following form: direct transfers 65%, indirect transfers 11% and student loans 24%. However, the initial legal setting designated that by 1987 the three publicly financed transfers were going to have an equal share of one third each.

Direct transfers were related to the old system of budget allocations to universities. In 1980 the government decided that the historical shares of the budget allocation for each university were to be used to allocate this item in the future <sup>(21)</sup>. The original aim here was to begin to move away from the historical allocations by giving each year a greater share of resources to the other two public sources of finances. Through this procedure the system was to become more responsive to the real demand for higher education. It was stated that by 1986 the direct fiscal contribution would be only a third of the total university revenues. However, the 1982 - 1983 financial crisis hit the educational budget and important cuts were made in all the financial sources; at the same time the direct transfer was frozen in 1982.

Indirect transfers are per-student payments given by the government to each university or professional institute recruiting students (1st. year) from the top 20.000 scores in the Aptitude Test <sup>(22)</sup>. This scheme was aimed to encourage universities to raise the quality of the education offered and to compete in attracting students.

This scheme ended up favouring traditional universities rather than regional universities as the traditional universities were more able to attract the best students. This area departed largely from the initial aims of Law Decree No. 4 which stated that by 1987 indirect transfers should have been a third of the

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21. In the case of regional universities they were to receive proportionally their share in their original State university budget.

22. The aptitude test is a national test that is a pre-requisite to enter the university. On average, only 28% of the 130,000 students taking the test annually will have a place in a university.



public resources to universities which in practice contributed only 11%.

Student loans (<sup>23</sup>) also departed from the original legal settings the programme has not yet reached to cover a third of the publicly financed transfers to universities. Throughout the entire period since university loans have been offered, resources have been insufficient. In 1987 only 33% of the students applying for a loan obtained 100% of their request; the rest received only a proportion of their payments.

Law Decree No. 4 was modified in 1987 to create a student loan fund. Through this scheme each university administers its own funds instead of the Ministry. For this purpose an initial capital base was established for each institution. Special Treasury bonds were created for this objective. The distribution of these bonds was based on the historical shares of student loans per higher education institution. Each university has now the authority to allocate the loans according to their own rules.

The two other financial sources now available are tuition fees and research grants. Research grants are managed by the Fund for Development of Science and Technology. All universities compete for these funds on a project basis. In 1987, almost 78% of the research grants were allocated to the eight "original" universities. Tuition fees now reflect the actual cost of teaching.

#### 6.2.B. Public Expenditure in Education

In Table 6.8. it is possible to observe the trends of public educational expenditures for the last 10 years. The two series considered have a common origin, both having been elaborated by public institutions. Both series have been adjusted by the National Institute of Statistics consumer price index and follow the same patterns.

.....  
23. Student loans only cover tuition fees.

| TABLE 6.8.                       |  |         |  |        |
|----------------------------------|--|---------|--|--------|
| PUBLIC EXPENDITURES IN EDUCATION |  |         |  |        |
| YEAR                             | PUBLIC EXPENDITURES IN EDUCATION<br>(Millions of 1989 pesos) |         | EDUCATION EXPENDITURES<br>per CAPITA<br>(1989 pesos) |        |
|                                  | M.Educat.COMPTROLLER   |         | M.Educat.COMPTROLLER                                 |        |
| 1978                             |  | 141,002 |  | 13,036 |
| 1979                             |  | 169,174 |  | 15,414 |
| 1980                             |  | 153,470 |  | 13,771 |
| 1981                             | 196,512  | 197,394 | 17,349   | 17,426 |
| 1982                             | 226,781  | 211,383 | 19,688   | 18,351 |
| 1983                             | 180,868  | 177,291 | 15,437   | 15,131 |
| 1984                             | 189,557  | 180,808 | 15,904   | 15,170 |
| 1985                             | 185,400  | 189,085 | 15,295   | 15,599 |
| 1986                             | 180,740  | 176,776 | 14,662   | 14,340 |
| 1987                             | 169,030  | 159,287 | 13,483   | 12,706 |
| 1988                             | 164,935  |         | 13,020   |        |

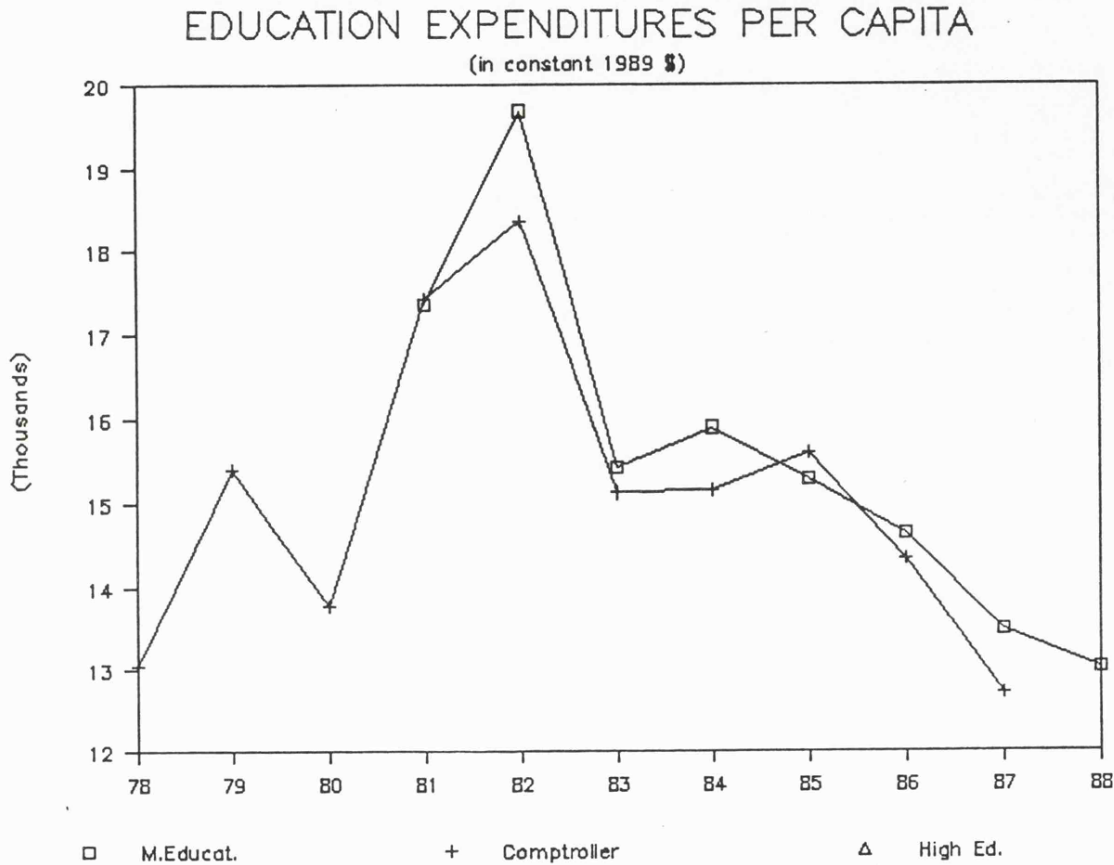
Source:

1. Compendio de Informacion Estadistica  
Superintendencia de Educacion
2. Contraloria General de la Republica  
Informes Gestion Financiera 1986 and 1987

NOTE: Deflated by the National Institute of Statistics C.P.I.

As in the case of health it can be noted that the peak in the period considered was reached in 1982 when educational expenditures accounted for 5% of G.D.P. or above 220 billions of Chilean pesos. It is interesting to note that educational expenditures grew, according to Ministerial sources, by 15% between 1981 and 1982 while the country experienced a 14% decrease in its G.D.P. This again lead us to consider the expenditures in this sector as countercyclical. However, as economic recession carried on to 1983, public finances were severely constrained producing a drastic decrease of 20% in education expenditures. A result of this was the freezing of subventions by mid 1982.

FIGURE 6. 2.



The trends of per capita expenditures in education can be followed in Figure 6.2. As expected they follow the same pattern of total expenditures but show a somewhat more drastic decrease during the crisis period. The ministerial estimates of education expenditures are in general above the Comptroller estimates but as they use the same deflators there are no significant differences. Both show the 1982 fall and the 1985 decreasing trend as a result of the reduction in the indirect transfers to universities.

### 6.2.C. Expenditure Structure

In this section we discuss the economic and institutional expenditure structure of the Ministry of Education. As in the

previous chapter, it was necessary to eliminate some transfers and deflate the original figures in to obtain the figures of Table 6.9. (24). The aim of this section is to provide a general background to the ministerial finances which will be discussed in more depth in Section D.

### Economic Expenditure Structure

**Personnel:** As a result of the introduction of the subvention scheme and the resulting transfers of schools to municipalities all teachers are paid from the municipalities. Therefore, the proportion of expenditures being spent on personnel by the Ministry has been decreasing since the introduction of this scheme.

The expenditures in this area were halved between 1986 and 1987 as a result of the successful completion of the transfers of schools to municipalities. After this year the only teachers to remain in the ministerial payroll were those performing functions within the central bureaucracy.

**Social Welfare Provisions:** Social Welfare Provisions represent a negligible proportion of educational expenditures. They are concentrated in maternal leaves and severance payments.

**Transfers:** As has been explained earlier, it is important to clarify the purpose of transfers. In the case of the Ministry of Education most transfers, either to private or to public institutions, are given to institutions performing educational functions formerly carried out or financed from the Ministerial budget. Therefore, no double accounting occurs as the transfers are to finance activities outside the public sector budget. Nowadays many of these institutions have been delegated or deconcentrated. Therefore, the Ministerial financial role is constrained to transferring the resources to them.

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24. Due to a printing constraint Table 6.9. is presented in two pages. The first page includes the actual expenditure figures and the second the percentage distribution.

TABLE 6.9.

PUBLIC EXPENDITURES IN EDUCATION  
(Millions of \$ 1987)

| 1985          | Directs.             |                | Educt.&Cult.  |               | JUNJI         | Subsidies      | H. Educ.       | TOTAL           |
|---------------|----------------------|----------------|---------------|---------------|---------------|----------------|----------------|-----------------|
|               | G.Sec.& Ad.Education | Services       | JUNAEB        | Services      |               |                |                |                 |
| Personnel     | 1157.6               | 16572.6        | 698.5         | 247.7         | 1914.8        | 0.0            | 0.0            | 20591.1         |
| G. & S. Cons. | 1619.7               | 0.0            | 285.8         | 195.3         | 349.0         | 0.0            | 0.0            | 2449.8          |
| Soc.Wel.Prov. | 3.9                  | 0.0            | 10.4          | 0.0           | 14.8          | 0.0            | 0.0            | 29.1            |
| Transfers     | 10500.5              | 1140.3         | 246.1         | 8965.4        | 1342.5        | 71162.7        | 32479.0        | 125836.5        |
| Cap.Inv.      | 246.5                | 0.0            | 40.2          | 33.8          | 32.9          | 0.0            | 0.0            | 353.5           |
| Finan.Inv.    | 0.0                  | 0.0            | 1.4           | 0.0           | 0.0           | 0.0            | 0.0            | 1.4             |
| Other         | 221.5                | 71.2           | 14.9          | 10.6          | 16.7          | 35.7           | 0.0            | 370.7           |
| <b>TOTAL</b>  | <b>13749.7</b>       | <b>17784.1</b> | <b>1297.4</b> | <b>9452.7</b> | <b>3670.7</b> | <b>71198.5</b> | <b>32479.0</b> | <b>149632.1</b> |
| 1986          | Directs.             |                | Educt.&Cult.  |               | JUNJI         | Subsidies      | H. Educ.       | TOTAL           |
|               | G.Sec.& Ad.Education | Services       | JUNAEB        | Services      |               |                |                |                 |
| Personnel     | 1166.0               | 12982.3        | 725.2         | 251.0         | 2119.4        | 0.0            | 0.0            | 17243.8         |
| G. & S. Cons. | 1260.3               | 0.0            | 267.0         | 165.3         | 366.8         | 0.0            | 0.0            | 2059.4          |
| Soc.Wel.Prov. | 1.9                  | 0.0            | 15.2          | 0.0           | 30.0          | 0.0            | 0.0            | 47.1            |
| Transfers     | 556.3                | 1220.0         | 603.1         | 8306.8        | 1459.8        | 81976.8        | 31176.0        | 125298.8        |
| Cap.Inv.      | 230.9                | 0.0            | 134.7         | 26.0          | 25.3          | 0.0            | 0.0            | 416.9           |
| Finan.Inv.    | 0.0                  | 0.0            | 0.0           | 0.0           | 0.0           | 0.0            | 0.0            | 0.0             |
| Other         | 34.5                 | 87.5           | 9.2           | 679.2         | 1.6           | 120.2          | 0.0            | 932.3           |
| <b>TOTAL</b>  | <b>3249.9</b>        | <b>14289.8</b> | <b>1754.4</b> | <b>9428.4</b> | <b>4002.8</b> | <b>82097.0</b> | <b>31176.0</b> | <b>145998.4</b> |
| 1987          | Directs.             |                | Educt.&Cult.  |               | JUNJI         | Subsidies      | H. Educ.       | TOTAL           |
|               | G.Sec.& Ad.Education | Services       | JUNAEB        | Services      |               |                |                |                 |
| Personnel     | 1866.2               | 1863.3         | 699.3         | 251.0         | 2159.8        | 0.0            | 0.0            | 6839.6          |
| G. & S. Cons. | 570.2                | 3.2            | 224.3         | 163.8         | 344.3         | 0.0            | 0.0            | 1305.8          |
| Soc.Wel.Prov. | 1.1                  | 0.0            | 104.0         | 0.0           | 17.0          | 0.0            | 0.0            | 122.1           |
| Transfers     | 600.1                | 3733.4         | 838.7         | 7048.9        | 1368.2        | 83326.0        | 28848.9        | 125764.2        |
| Cap.Inv.      | 62.5                 | 0.0            | 38.1          | 29.7          | 18.8          | 0.0            | 0.0            | 149.1           |
| Finan.Inv.    | 0.0                  | 0.0            | 0.0           | 0.0           | 0.0           | 0.0            | 0.0            | 0.0             |
| Other         | 12.7                 | 21.5           | 22.8          | 21.4          | 1.0           | 183.4          | 0.0            | 262.8           |
| <b>TOTAL</b>  | <b>3112.8</b>        | <b>5621.4</b>  | <b>1927.2</b> | <b>7514.8</b> | <b>3909.1</b> | <b>83509.4</b> | <b>28848.9</b> | <b>134443.6</b> |

## SOURCE:

Author Calculations based on:

Estados de Ejecucion Presupuestaria del Sector Publico  
Contraloria General de la Republica

TABLE 6.9.

PUBLIC EXPENDITURES IN EDUCATION  
(% Structure)

| 1985          | Directs.             |          | Educt.&Cult. |       | JUNAEB | JUNJI | Subsidies | H. Educ. | TOTAL |
|---------------|----------------------|----------|--------------|-------|--------|-------|-----------|----------|-------|
|               | G.Sec.& Ad.Education | Services | JUNAEB       | JUNJI |        |       |           |          |       |
| Personnel     | 8.4                  | 93.2     | 53.8         | 2.6   | 52.2   | 0.0   | 0.0       | 13.8     |       |
| G.& S. Cons.  | 11.8                 | 0.0      | 22.0         | 2.1   | 9.5    | 0.0   | 0.0       | 1.6      |       |
| Soc.Wel.Prov. | 0.0                  | 0.0      | 0.8          | 0.0   | 0.4    | 0.0   | 0.0       | 0.0      |       |
| Transfers     | 76.4                 | 6.4      | 19.0         | 94.8  | 36.6   | 99.9  | 100.0     | 84.1     |       |
| Cap.Inv.      | 1.8                  | 0.0      | 3.1          | 0.4   | 0.9    | 0.0   | 0.0       | 0.2      |       |
| Finan.Inv.    | 0.0                  | 0.0      | 0.1          | 0.0   | 0.0    | 0.0   | 0.0       | 0.0      |       |
| Other         | 1.6                  | 0.4      | 1.1          | 0.1   | 0.5    | 0.1   | 0.0       | 0.2      |       |
| TOTAL         | 9.2                  | 11.9     | 0.9          | 6.3   | 2.5    | 47.6  | 21.7      | 100.0    |       |

| 1986          | Directs.             |          | Educt.&Cult. |       | JUNAEB | JUNJI | Subsidies | H. Educ. | TOTAL |
|---------------|----------------------|----------|--------------|-------|--------|-------|-----------|----------|-------|
|               | G.Sec.& Ad.Education | Services | JUNAEB       | JUNJI |        |       |           |          |       |
| Personnel     | 35.9                 | 90.8     | 41.3         | 2.7   | 52.9   | 0.0   | 0.0       | 11.8     |       |
| G.& S. Cons.  | 38.8                 | 0.0      | 15.2         | 1.8   | 9.2    | 0.0   | 0.0       | 1.4      |       |
| Soc.Wel.Prov. | 0.1                  | 0.0      | 0.9          | 0.0   | 0.7    | 0.0   | 0.0       | 0.0      |       |
| Transfers     | 17.1                 | 8.5      | 34.4         | 88.1  | 36.5   | 99.9  | 100.0     | 85.8     |       |
| Cap.Inv.      | 7.1                  | 0.0      | 7.7          | 0.3   | 0.6    | 0.0   | 0.0       | 0.3      |       |
| Finan.Inv.    | 0.0                  | 0.0      | 0.0          | 0.0   | 0.0    | 0.0   | 0.0       | 0.0      |       |
| Other         | 1.1                  | 0.6      | 0.5          | 7.2   | 0.0    | 0.1   | 0.0       | 0.6      |       |
| TOTAL         | 2.2                  | 9.8      | 1.2          | 6.5   | 2.7    | 56.2  | 21.4      | 100.0    |       |

| 1987          | Directs.             |          | Educt.&Cult. |       | JUNAEB | JUNJI | Subsidies | H. Educ. | TOTAL |
|---------------|----------------------|----------|--------------|-------|--------|-------|-----------|----------|-------|
|               | G.Sec.& Ad.Education | Services | JUNAEB       | JUNJI |        |       |           |          |       |
| Personnel     | 60.0                 | 33.1     | 36.3         | 3.3   | 55.3   | 0.0   | 0.0       | 5.1      |       |
| G.& S. Cons.  | 18.3                 | 0.1      | 11.6         | 2.2   | 8.8    | 0.0   | 0.0       | 1.0      |       |
| Soc.Wel.Prov. | 0.0                  | 0.0      | 5.4          | 0.0   | 0.4    | 0.0   | 0.0       | 0.1      |       |
| Transfers     | 19.3                 | 66.4     | 43.5         | 93.8  | 35.0   | 99.8  | 100.0     | 93.5     |       |
| Cap.Inv.      | 2.0                  | 0.0      | 2.0          | 0.4   | 0.5    | 0.0   | 0.0       | 0.1      |       |
| Finan.Inv.    | 0.0                  | 0.0      | 0.0          | 0.0   | 0.0    | 0.0   | 0.0       | 0.0      |       |
| Other         | 0.4                  | 0.4      | 1.2          | 0.3   | 0.0    | 0.2   | 0.0       | 0.2      |       |
| TOTAL         | 2.3                  | 4.2      | 1.4          | 5.6   | 2.9    | 62.1  | 21.5      | 100.0    |       |

Capital and Financial Investment: These two areas of expenditure have a negligible impact on the budget. However, it should be remembered that municipalities are now investing in school maintenance.

### Institutional Expenditure Structure

Under the heading institutional expenditure structure we have put together some ministerial Departments performing related activities. The purpose of this aggregation is to help the reader to not be confused by so many small institutions.

General Secretariat and Administration: This area includes the Undersecretariat, Superintendency of Education and Budget Office (25). The expenditures are concentrated in personnel and goods and services for consumption as these institutions are the central bureaucracy of the Ministry (26). The regional ministerial branches (SEREMIs) are administratively dependent to the Undersecretariat.

Directorates of Education: This area includes the Directorates for Primary, Secondary and Professional Education, and the Directorates for Extra-mural Activities and Higher Education. This area is related to the old ministerial structure which administered and planned the provision of all educational levels. Under the new ministerial structure most teachers have been transferred to municipalities. Therefore, the Directorates of Education are concentrated now in the normative role of the Education Ministry (27).

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25. Until mid 1987, Superintendency of Education was the official name of the present Directorate of Planning and Budgeting. However, this new structure applies only to the internal ministerial organization. In terms of the Budget Law it still makes its allocation to the Superintendency and the Budget Office separately.

26. In 1985 the Undersecretariat received some extraordinary funds to compensate the salaries of municipal teachers. For the subsequent years the Ministry of Finance created a special allocation to tackle this problem.

27. In 1987 the General Directorate of Education made some extraordinary transfers to accomplish the regulation of Law Decree No. 3166.

**Educational and Cultural Services:** These services include the Directorate for Public Libraries, The National Council of T.V., The Construction Society for Educational Buildings, the Council of Rectors (University Chancellors) and the Fund for Development of Science and Technology. These last two institutions are related to higher education.

The expenditure structure of these services is related to personnel, goods and services, and transfers. With regards to this last item it must be said that most transfers here are to finance private subsidiary services such as private museums and others.

**JUNAEB:** According to the new role of the National Board for School Assistance described in the previous section, this department now only regulates and finances the private production of school meals. Therefore, its expenditures are basically transfers to the private sector to pay for the delivery and production of school meals.

**JUNJI:** The National Board for School Nurseries is an institution which has not been grossly changed through the implementation of the 1980's reforms. Therefore, an important part of the administration and production of the nurseries is still managed from the central headquarters of JUNJI. This means that it still has a higher proportion of labour costs. However, JUNJI has transferred the production of the meals given to children attending to its centres to private companies. Therefore, transfers to the private sector are also an important area of expenditure.

**Subsidies:** The subsidies programmes are the transfers that the Ministry of Education makes to municipalities or private subsidied schools. This programme accounts for more than half of the ministerial budget. Its share has been growing as a result of the culmination of the municipalization process (28).

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28. This has affected simultaneously the budgets of the General Secretariat and Administration and the Directorates of Education, producing a proportional decrease of their expenditures as their roles are being delegated to municipalities.



Higher Education: This programme transfers the public resources to universities according to the three financial sources explained earlier.

To conclude this section it is interesting to review the distribution of educational expenditures per level of education. In Table 6.10. it can be noted that basic education accumulates more than 50% of the Ministerial expenditures; however, this is proportionally lower than its average share of 65% of total registrations (<sup>29</sup>). If this same analysis is made for higher education, it is noted that it accumulates more than 20% of total ministerial expenditures, while it produces less than 5% of total registrations. According to ministerial figures the per capita cost of a student in higher education is six times more expensive than a basic education registration. This raises a number of questions related to the fairness in the allocation of the educational budget and to what extent a developing country can afford an expensive university scheme when many of its more fundamental needs are still not satisfied.

According to Raczynski's (1986) estimates there has been a significant change in the distribution of education expenditures per educational levels. In 1970 basic education accounted for 34% of educational expenditures whereas higher education accounted for 31%. The present ministerial estimates show that these shares had changed in an important way by the end of 1980's when basic education and higher education received 52% and 22% of total education expenditures respectively. These changes were part of a ministerial policy to increase the expenditures on basic education and so to provide better service and especially, to increase the coverage.

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29. See Table 6.6.

| TABLE 6.10.                                |         |         |         |
|--|---------|---------|---------|
| PUBLIC EXPENDITURES PER LEVEL OF EDUCATION |         |         |         |
| (Thousands of 1988\$)                      |         |         |         |
|  | 1985    | 1986    | 1987    |
| Pre-School                                 | 9,823   | 10,735  | 10,738  |
| Basic                                      | 88,525  | 82,715  | 78,877  |
| Median                                     | 33,114  | 32,091  | 27,585  |
| High. Educat.                              | 34,073  | 35,925  | 32,830  |
| Other                                      | 1,178   | 1,055   | 1,964   |
| TOTAL                                      | 166,712 | 162,522 | 151,994 |
| (% Percentages)                            |         |         |         |
|  | 1985    | 1986    | 1987    |
| Pre-School                                 | 5.9     | 6.6     | 7.1     |
| Basic                                      | 53.1    | 50.9    | 51.9    |
| Median                                     | 19.9    | 19.7    | 18.1    |
| High.Educat.                               | 20.4    | 22.1    | 21.6    |
| Other                                      | 0.7     | 0.6     | 1.3     |
| TOTAL                                      | 100.0   | 100.0   | 100.0   |

SOURCE:  
Superintendencia de Educacion

#### 6.2.D. Budgeting and Planning

This section discusses how the Ministerial budget is organised. It also looks at the relations between planning and budgeting as this is an important area to consider for policy implementation. As in the case of the health sector, we will give an outline of the different phases of the educational budget giving special detail to the new subvention scheme and the budgetary allocations to universities.

The Educational budget also follows the patterns and procedures of the national one as it is constrained by the same time table and deadlines.

## Formulation

The Superintendency of Education, which acts as the ministerial planning and budgeting office, prepares at the beginning of May each year a set of instructions for the budget preparation of each agency. The instructions require a description of the agencies norms, policies and functions. They also ask for a description of the institutional goals, which should include ways of assessing them. To the knowledge of the author the description of objectives in education seems to be one of the most exhaustive of all social sectors. Moreover, in a budget annex each agency must justify all its expenditures with a maximum breakdown for each item. For example, there is a special section for describing all the purchases related to computing equipment, computing services and related requirements.

The Superintendency instructions define an expenditure framework according to the Budget Office proposals. Any savings apart from these estimates will be allocated in a more open way by the agencies in a so called "expansion budget".

In the case of the educational sector, more than 99% of its budget comes from the Treasury Fiscal Contribution. Therefore, the problem of revenue estimates is not a great concern as in the case of other social ministries that have important revenues of operation.

The preparation of the budget blueprint by each agency follows closely the Superintendency instructions. All the objectives, functions and goals are cautiously defined. In some cases an effort is made to demonstrate the goal achievement of the previous years. In the area of personnel, agencies must explain their requirements for professionals and other bureaucrats. This is despite the law fixing the total personnel endowment per agency.

The Superintendency of Education will consolidate the blueprints of each agency's budget and put each in line with the Budget Office initial estimates. After this stage there should be an internal round of discussions between the Superintendency and

the agencies regarding the last minute changes. However, as some officials said, "this will depend on the authority willingness". This means that discussions will not always take place, depending upon who is running the Superintendency and how close to the Budget Office schedule they are.

As a result of this procedure there is usually no possibility for the agencies to employ different tactics to obtain higher allocations. Any deliberate underestimation will be assessed by the Superintendency.

In relation to the subventions to municipal and private schools, the Subvention Department prepares a detailed report including information about daily attendance and registrations for the past three years. From this basis it estimates the next year's expenditures considering the historic trends, the expected developments of the population structure and any new schools to be opened. With this information the Superintendency estimates the annual expenditures of this area.

University budgets are a completely separate issue. The Budget Office (Ministry of Finance) defines the total amount of resources to be distributed through the three financial sources. Overall, universities are free to set their own budgets and will bargain directly with the Budget Office over the structure of it; this is especially relevant in the case of universities contracting debts. Therefore, as far as university budgets are concerned the universities will by-pass the ministerial budget office. Universities have the obligation to inform the Ministry of Education of their total expenditures but this does not even entail sending a complete budget to them.

The case of Educational and Cultural Services is similar to that of the universities in the sense that they are free to spend their budget allocations. As delegated institutions the ministry can only advise in their finance plans. However, delegated institutions must make some concessions to the ministry as it manages the cash flow to the services from the Treasury. Therefore, although they have no direct power to ask for changes in the Services' budgets, the ministerial Budget Office can

extert a great deal of pressure on them.

### Authorisation

Once the budget is consolidated by the Superintendency it is sent to the Budget Office (Ministry of Finance). After the budget is approved the Superintendency prepares a "Report on the budget variations". This document discusses the departures of the final approved budget in relation to the version sent to the Ministry of Finance. This report will usually include a number of norms for spending agencies in order to adjust the original expenditure figures to the approved ones.

### Implementation

Unlike the health budget, in the case of education we found considerable restrictions in the implementation phase. There are monthly meetings between the ministry and the budget office for programming the cash flow. Most times the monthly expenditures need to be justified again although they had been explained in the original budget. It is even necessary to discuss the last cash flow in December when it is common to receive the remainder of the annual budget allocation.

Under these circumstances the Superintendency also makes provisions by withholding part of the prospected expenditures to the agencies in order to have cash for an unpredicted financial circumstance.

The main explanation for this rather different approach to the management of educational expenditures by the Budget Office is the following: In 1987, the subvention programme for municipalities and private schools accounted for more than 60% of the ministerial budget<sup>(30)</sup>; this is almost 2% of the national G.D.P. For this considerable area of expenditure the Budget Office (M. Finance) has only an estimated annual expenditure but no legal ceiling. According to the subvention law, a payment

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30. This proportion has been growing since the implementation of the "municipalization" law in 1980. In 1981, this area of expenditure was 23% of the ministerial budget.

should be made for any children attending school, providing that the other pre-requisites are fulfilled. Therefore, the Budget Office keeps tight control over the expenditures in subventions. Every month it requires a plain <sup>report</sup> about the development of school attendances and its related prospective payments.

There is no comprehensive evaluation phase of the educational budget. However, it has to be acknowledged that there are some attempts to include a description of goal achievement in the budget; But these explanations are scarcely considered by the bureaucrats.

In sum, the educational budgetary process and specially the formulation phase has an incremental approach. Most expenditure explanations will be continued from one year to another. The Superintendency will only take notice of changes introduced in relation to the previous years. As in the health sector, we found again here that the overall budgetary procedures are known by most agencies.

Having described the ministerial budget we will now discuss in more detail the budgetary implications of the subvention scheme and university budgets.

#### Subvention Scheme for Financing Transferred Schools

In section 6.2.A. we described the basic elements of the subvention scheme and its latest developments. It is interesting to discuss now some of the implications that this system of payment entails. There are two issues to consider here.

In relation to the levels of payments, it should be mentioned that they are related to the levels and types of education and a regional hardship compensatory allowance. Which, according to the former Director of Planning and Budgeting, is totally insufficient to offset the different prices and transport costs the regions face. In this area the Ministry has recently made a step forward with the introduction of the rural factor compensating small rural schools for their proportionally smaller enrollments. However, this new regulation applies only to those

schools having less than 60 students. Therefore, there are a wide range of unforeseen situations, especially relative to median education, which have no relevant financial incentive for offsetting regional hardships (<sup>31</sup>). In sum, if there is a genuine desire to have expenditure allocations more in line with regional needs, this problem should be accounted for.

Another problem in this area is related to the contributions that municipalities can make for their own municipalized schools. These contributions had their origin in the 1982 -1983 economic crisis when the subventions per student were frozen and it was required to compensate teachers' salaries with their own funds and additional contributions from central government. After the crisis a number of municipalities continued with this policy in order to maintain better facilities. Through these resources some schools were able to buy computer equipment, improve their libraries, build gymnasiums, and improve their facilities in general. Nevertheless, as can be guessed, poor municipalities were unable to grant these additional resources for improving facilities; in fact, any surplus resources were used to make some structural improvements to the educational buildings or, in some smaller rural municipalities, were used to build new median education schools.

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31. There is again a problem of economies of scales here. It will usually be more expensive (in per capita terms) for a municipality to run a single median school than running five or six of them simultaneously. In the latter case, the municipality can easily hire teachers for less frequent subjects such as Gymnastics, Arts, Music and others. It can define a rota system for these "specialised" teachers among its median schools. In the case of a small municipality it will have to afford to contract teachers for these subjects on a part time basis making special allowances for attracting them.

Regarding this latest issue we accept a principle of "local autonomy" by which each municipality should be free to use their resources in the areas they desire. But, we have to consider that the starting point is very unequal. Some rich municipalities may be able to spend on improving school facilities whereas most poor municipalities will have to begin by improving the physical conditions of the buildings or by hiring more teachers. Therefore, if the government is really concerned with redressing the pre-existing regional educational inequalities, or at least defining some similar starting points, it ought to consider a poverty-compensatory element in the calculation of the subvention per student.

In addition to the previous statement, it is important to bear in mind that the coverage of basic education has reached a very high level of over 93% in any of the measures included in Table 6.4. Therefore, any marginal increase in coverage, which is very similar for all regions, will not imply an important increase in the availability of resources to each municipality. So, if the real concern is to increase student attendance and diminish early drop-outs, we need to define a special financial incentive considering the cost of attempting to recuperate early school leavers (<sup>32</sup>).

Finally, it can be noted that although the subvention scheme can be thought of as a fund involving considerable amounts of regional (i.e. municipal) discretion, the central government controls it tightly.

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32. According to some field work experience the recuperation of an early school leaver after a year off of school will cost on average double that of a "normal student". The "recuperated" student will need special dedication including more teaching hours, special materials and additional specialists, such as psychologists and others.



During the 1982-1983 economic crisis the central government set a clear precedent by which it became the only institution to tackle and solve problems. It firstly ruled out municipal discretion in dealing with teachers by making a national agreement with teachers involving extraordinary funds. It also decided to freeze the subventions for a period to solve central government financial hardships and by transferring part of the burden to municipalities. The central government also changed the subvention law to require from every private subsidized school to be opened a formal permission by the regional ministerial secretariat (SEREMI). This permission is beyond a requirement of some minimal educational standards as the SEREMI has the power to decide whether or not a school is needed. This was a method of stopping further increases in subventions. Finally, the central government also kept close control over the ministerial budget by discussing periodically the cash flow of the approved monthly allocations for expenditures. In our view therefore, willy-nilly, the government has introduced a clear signal to municipalities: central government is in the last resort responsible for municipalized education, especially during financial hardship. This situation may alter the central-local relations. As Jones (1978) has pointed out, local decision makers will try to place the responsibility for their spending decisions on the centre and will concentrate on pressing central government for more resources.

## Universities

The basic elements of university finance and organization were described in section 6.2.A. In summary, the reforms were aimed originally to increase the fiscal resources available to universities through a scheme promoting competence and incentives. However, the 1982 - 1983 economic crisis made drastic reductions in the actual expected expenditures. This meant that most of the fiscal allocations continued to be distributed according to their historical basis, thus helping to carry on with the pre-existing inequalities of the sector.

At the same time, the only contention for resources to take place was among the eight traditional universities (<sup>33</sup>), which received the lion's share of the resources (75% in 1987). Although we consider the creation of regional universities an interesting step towards a regional development capacity, it is not sensible to think that these universities are in a position to compete with the traditional ones; they cannot attract the best students and they have low historical allocations. In fact these new allocations have above all decreased their historical shares in public expenditures.

One alternative that may help regional universities would be to allow regions to transfer part of their resources from the regional investment fund to their universities on a project basis. The regional investment fund in this way would be approached not only as providing capital investment but also human.

#### Planning

The Superintendency of Education used to be the main planning and budgeting office of the Ministry. As in the case of the Ministry of Health, the Superintendent was the third in the hierarchy after the Minister and the Undersecretary. However the planning structure has now changed to mainly four departments of equal status accountable to the Undersecretariat. We describe each of them separately.

**Directorate of General Education:** Its main role is to define the educational policies for pre-school, basic and median education. Under this directorate is the Centre for Research and Teacher Training. This Centre has played an important role in the past in the definition of educational policies.

**Directorate of Extra-mural Activities:** This area organizes and plans all the extra-programmatic activities for children, such as cultural competitions and others.

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33. The eight traditional universities are the pre-reform (1980) universities.

Directorate of Higher Education: The main task of this Directorate is to define the policies toward higher education. It keeps close control of the development in higher education through the approval of new institutions it also gathers financial information about them.

Directorate of Planning and Budgeting: This is the new name for the Superintendency of Education. Its main activities comprise the control and financial planning of the subvention scheme through its department of subventions.

Some activities related to the administration of the subvention scheme include controlling the payments of subventions and children attendance.

Through the consolidation of the agencies' budgets the Directorate of Planning can develop most of its planning capacity by influencing and adjusting their budgets in line with the ministerial aims. However, as has been mentioned earlier this tends to be a rather routine activity aimed to put in line the agencies proposals with the initial ministerial expenditure limits. Therefore, the formal "link" between planning and budgeting appears to be related to the Planning Directorate capacity to consolidate other agencies budgets.

We found again that educational planning and policy definition seemed to be a separate issue from finance and budgeting. The Planning and Budgeting Directorate has spent a considerable time designing ways to control the subvention scheme including methods to prevent the adulteration of attendance lists. It has also devoted some time to an analysis of the extent to which the subvention scheme has helped to increase the attendance and coverage of the different levels of education. These initiatives, although valuable ones, have been constrained very much on the administrative side. From the educational view; there is now in Chile a widespread consensus that the main educational problem is not principally quantity but quality of education. This has been shown by the studies of the ministerial Centre for Research and Teacher training and indeed many other studies by private research institutes. Moreover, there is now a

national test for the quality of education in all schools. But there has not been a joint attempt to link educational performance or an indicator of educational quality to financial rewards. This is difficult not only because of teachers' inertia but mostly because of the ministerial incapability of approaching simultaneously educational and financial problems.

To conclude this section we would like to stress the system's weaknesses and strengths.

The first problem outlined here is related to financial uncertainty. As we mentioned, the Directorate of Planning and Budgeting must renegotiate every month the cash flow with the Budget Office (Ministry of Finance). This process of renegotiations and changes to original budget ends up in the Directorate of Planning and Budgeting making its own provisions in order to offset potential financial hardships. As is common to expect, most uncertainties are transferred to lower-tier agencies, thus producing the problem of repetitive budgeting.

A second problem, we find again, is that of unaware incrementalism. Although in the case of Education incrementalism is confined to the main ministerial agencies, they have not taken advantage of it <sup>(34)</sup>. Every year agencies justify all their expenditure items in great detail. This is despite the fact that these explanations will usually not be considered by the budget officers.

A third problem is that of the reduced links between budgeting and planning. The Directorate of Planning and Budgeting tends to look at an agency's budget in a financial perspective failing to consider its actual policy implications. At the same time, the agencies are happy seeing that their budgets have not been dramatically changed. But according to some officials, the agencies fear to make changes in the actual structure of the budget.

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34. However, the subvention programme takes a rather rational approach of studying past expenditures in the previous years. But it does not take previous commitments as granted.

Although the new subvention scheme has transferred an important amount of financial discretion to the regional level (i.e. municipalities), it has weakened the Ministry's power to implement alternative policies through the resources for education. The Budget Office (Ministry of Finance) now controls to a much greater extent the procedures for allocating the resources for school education as it manages a large proportion of public expenditures. In sum, the Ministry has the potential to change some elements in the allocation scheme of subventions in order to implement the suggestions concerning the quality of education prepared by the Centre for Research and Teacher Training and others. But to make these changes and produce simultaneously a link between policy proposals and finances it is necessary to convince firstly the ultimate manager of the educational resources, the Budget Office (M. of Finance).

One positive aspect of budget formulation is its transparent and clear procedure. This approach help the agencies to know what to do and how to approach the formulation of the budget. In fact, some agencies are even taking provisions against possible uncertainties due to the central level withholding their resources. Part of this "transparent" procedure are some efforts to make the budgeting process more rational and available to the agencies. Furthermore, we have not come across any other social sector in which such an effort is made to communicate and explain to the agencies the changes between the last proposal of the budget and the approved one.

Another interesting aspect of the finance and organization of the Ministry of Education is its potential capacity to consider means against ends simultaneously. As an apparent inheritance of the budgeting attempts made by the ministry in the early 1970's, they consider it important to justify their expenditure figures not only in accounting terms <sup>(35)</sup> but also in terms of goal achievements and beneficiaries. It may be true that this information is still overlooked by the bureaucrats but we see the root for a more comprehensive way of organizing and assessing the ministerial finances. There is also an area of

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35. i.e. defining the prices used and the appropriate items of expenditures.

great potentiality in the subvention scheme, in so far as the allocation procedures are beginning to be made more in line with the policy proposals that the Ministry itself suggests.

#### 6.2.E. Discretionary Powers over Resources and Decisions

In this section we follow the methodological approach for testing the discretionary powers over public resources described in Section 4.4. This method implies a qualitative approach towards to measuring these aspects.

For the analysis of this problem, three forms of government intervention are outlined in Table 6.11.: Regulation, Finance and Production.

##### E.1. Regulation

In this form of government intervention, we defined earlier three categories: Central, Regional and Shared regulation. In the case of the educational sector it is necessary to add another: Delegated regulation. This applies mostly to semi-autonomous agencies which were created as ministerial services but were lately given autonomy as delegated institutions. These agencies have the following common features: they have headquarters separate from the Ministerial ones; most of them are not organised on a regional basis or, if they do have regional branches, they will not use the Ministry of Education infrastructure; and finally, their directors are usually appointed directly by the President with the advice of the Minister of Education.

In relation to the definition of the educational agencies' tasks and functions it was found that most of them are centrally defined. The exception to this rule are the delegated institutions which are allowed to define their own tasks but are still under the broader education regulations.

The other exception are universities, which are autonomous institutions that have to "relate to the government through the

Ministry of Education". Therefore, each university is able to define its own structure and functional organization. Universities were considered in category Regional; meaning that they are considered to be the most discretionary educational agencies (<sup>36</sup>). This applies also to their source of authority control (<sup>37</sup>).

The source of the agencies' autonomy was found to be more diversified than the definition of functions. Most ministerial agencies are considered to have as the origin of their authority, the central government. However, as in the case of the Ministry of Health, the Regional Ministerial Secretariats (SEREMIs) dependent upon the undersecretariat have a mixed source of authority: the central ministry and the region; therefore they were considered under the category: Shared.

The main difference with the previous rows in Table 6.11. are the cases of JUNAEB and JUNJI. These are semi-autonomous institutions that were made independent from the Ministry of Education. Therefore, their authority lies mostly in themselves but their basic functions were defined by the Ministry.

Regarding the control of agencies' functions, the discretionary levels are presented just as in the previous row of Table 6.11. The only difference here is the case of the programme of subsidies. As is known, the subsidies are the subvention payments to all levels of education. Although the educational tasks and programmes are defined centrally the control of these functions are performed by the provincial directorates of education that extend from the SEREMIs. Therefore, control is a shared responsibility.

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36. During the Military government the Rectors (Chancellors) of most universities were appointed directly by the President of the Republic. Despite that this was an important loss for university autonomy, this situation did not change dramatically the structure of the relations between universities and the Ministry of Education.

37. Public universities are subject to financial auditing by the Comptroller but this is not seemed as harming its autonomy.

TABLE 6.11.

DISCRETIONARY POWERS OVER RESOURCES AND DECISIONS IN EDUCATION

| Govt. Intervention Forms    | G.Sec.& Adm. | Directorates<br>Education | Educat. & Cult.<br>Services | JUNAEB    | JUNJI     | SUBSIDIES | Hg. Educat. | Hg. Educat. | TOTAL    |
|-----------------------------|--------------|---------------------------|-----------------------------|-----------|-----------|-----------|-------------|-------------|----------|
| <b>REGULATION</b>           |              |                           |                             |           |           |           |             |             |          |
| Who Defines Tasks           | Centre       | Centre                    | Delegated                   | Centre    | Centre    | Centre    | Regional    | Regional    | Centre   |
| Source of Authority         | Shared       | Centre                    | Delegated                   | Delegated | Delegated | Centre    | Regional    | Regional    | Shared   |
| Control                     | Shared       | Centre                    | Delegated                   | Delegated | Delegated | Shared    | Regional    | Regional    | Shared   |
| <b>FINANCE</b>              |              |                           |                             |           |           |           |             |             |          |
|                             | CMF 96%      | CMF 100%                  | CMF 96%                     | CMF 8%    | CMF 64%   | FSSA 100% | BF 100%     | BF 100%     | CMF 16%  |
|                             | BF 4%        |                           | BF 4%                       | SPF 92%   | SPF 36%   |           |             |             | SPF 7%   |
|                             |              |                           |                             |           |           |           |             |             | FSSA 55% |
|                             |              |                           |                             |           |           |           |             |             | BF 22%   |
| <b>PRODUCTION</b>           |              |                           |                             |           |           |           |             |             |          |
| Personnel                   | Centre       | Centre                    | Centre                      | Shared    | Centre    | Regional  | Regional    | Regional    | Regional |
| Field Administration Levels | 2            | 1                         | 1                           | 4         | 1         | 4         | N/A         | N/A         | 3        |

NOTE: See text for explanations

FINANCE: CMF Centrally Managed Finance  
 SPF Specific purpose Fund  
 FSSA Fund Subsiding Specific Activity  
 BF Block Fund  
 RMF Regionally Managed Finance

PRODUCTION: Levels of Field Administration  
 1 Central  
 2 Regional  
 3 Area  
 4 Local



## E.2. Finance

In the area of finance, we work with the five pre-defined forms of financing social programmes. The analysis will be based on the column referring to the total forms of finance for the Ministry of Education.

Centrally Managed Finance (CMF) is related to those funds over which the region has no discretion as their allocation is decided upon by the centre. Only 16% of the educational resources are considered to be in this category. This is an important departure from the Ministry of Health in which 70% of its resources were estimated as CMF. The low proportion of CMF in Education gives a clear initial indication that in financial terms the regions do enjoy more discretionary powers in this area. The institutions having their finances managed centrally correspond basically to the central bureaucracy of the Ministry.

Specific purpose funds are related to funds transferred to an institution with a pre-defined specific objective being the eligibility criteria defined centrally. In this case the institution or its regional branch has discretion for selecting the individual beneficiary. This is the case of JUNAEB's programme of school meals and JUNJI's feeding programme for its nurseries. SPF accounts for 7% of total educational expenditures, an identical proportion to that of the Ministry of Health.

The Funds for Subsidising a Specific Activity (FSSA) accumulate the largest share of educational expenditures, being equivalent to 55% of total educational expenditures. In this case the region or the regional educational agency has more discretion to spend their resources within some defined activities. The large share of FSSA in total educational expenditures, as opposed to the total expenditures of other sectors, is explained by the subvention programme. In contrast to the FAPs (Fee for Service Scheme in Health), the subvention programme in education does consider personnel costs. This implies that regions are able to manage a greater proportion of the budget.

Finally, Block Funds (BF) accumulate 22% of total educational expenditures. This is 20 percentage points above the share of BF in health. We have considered under this category the resources that the state transfers to universities. It is important to note here that although universities (located in the capital or in regions) have large discretionary powers to manage their resources, this does not imply that the resources are necessarily allocated in a way to redress the regional inequalities.

### E.3. Production

As can be seen in Table 6.11., the ministerial bureaucracy recruit personnel and defines its policies at central level. This is also true in the case of most delegated agencies which have no regional branches. The main difference in the production scheme of education arises in subsidies, as all school teachers are now recruited and managed at a regional level (i.e. municipal). However, there are still some interferences by the central level into personnel policies. The ministry as a whole has been categorized as regional as more than two thirds of the personnel working in the educational sector are managed in a discretionary manner either by municipalities or universities.

Finally, in relation to the levels of field administration we note considerably more levels than in the case of the health sector. This is due to the municipalization process of education that allowed the municipalities to run the local schools. However, it ought to be remembered that the Chilean municipalization process is less complex than the new British scheme. In the Chilean case most of the administrative functions related to the production and finance of education are performed by the municipal corporations or municipal departments of education. In the British case most of the school management is carried out by the school boards.

It would have been interesting to consider other dimensions of the production of education in Chile, but there are no relevant research studies on this area. According to some educational experts, a feature of the Chilean curriculum is its

national application. This implies that all public schools follow the same programme regardless of where they are located and the socio-economic background of the students. However, some ministerial officials mentioned that the ministry is now taking important steps to assure the decentralization of the national curriculum which has been so far applied throughout the country. Local schools have still complained that the ministerial "minimal" curriculum is too long to be properly complemented by local additional courses. There are also simultaneous fears of stepping aside of the ministerial curriculum as the performance tests are prepared on a national basis.

To finish this section we summarise the findings for the three forms of government intervention. Before proceeding with the summary it is important to reiterate that universities are considered as regulated semi-autonomous institutions. Therefore, their very inclusion in the educational budget makes automatically a tendency toward decentralization within the continuum previously defined.

In relation to regulation the central ministry plays an important normative role in defining the broader policies to be applied in the sector. In fact, in a unitary state it is difficult to think that the ministry can decentralize completely its regulation functions. However, part of the functions attached to regulation, according to our definition, such as the control of agencies, are done in a delegated approach. Overall, considering the delegated, central and deconcentrated approaches found within the ministry, we consider that the ministry has mostly a deconcentrated approach to regulation.

In the case of finance, it is possible to note a clear difference to the Ministry of Health. From our estimates, we found that only 16% of the funds were defined as centrally managed finances. Therefore, 84% of the educational funds are managed in a way in which the regions may exert some influence on their allocation.

Finally, in the area of production we also found a departure from the Ministry of Health, as all teachers are now

recruited and managed by the municipality. At the same time most educational services are delivered through lower tiers of field administration. Therefore, we consider this function as a decentralized one.

#### 6.2.F. Summary and Conclusions: Organization and Finance of Education

In section 6.2. we have described the organization and finance of the educational sector in Chile. One of the most important recent developments in the sector is the municipalization of basic and Median education (primary and secondary). This significant change implied four major aspects:

- i) The definition of a local organization to manage the schools; the alternative defined here were private Corporations for Social Development or Municipal Educational Departments.
- ii) The transference of educational buildings to municipalities was done through a legal arrangement of a "non-payment leasing" to municipalities.
- iii) Reallocation of teachers: This involved the re-hiring of most ministerial teachers by the local authorities.
- iv) The creation of a financial scheme to finance the transferred schools. In this area the government created a subvention scheme that involves a payment per-student attending schools, a system similar to educational vouchers.

An additional important transformation of the educational system during the last decade was the redefinition of the ministerial role as a normative institution. This implied not only the transfer of school administration to other institutions but also a delegation of a number of educational related activities.

Regarding the developments in enrolment and coverage in the different levels of education we observed important increases. From 1980 to 1987 the coverage of pre-school education rose from 14% to 20% of the relevant population. In the case of median school between 1983 and 1987 it rose by almost 9 percentage points. However, basic education coverage has been stagnant as it

has reached its maximum levels of coverage. Therefore, the marginal increases have been more difficult to achieve.

In this area we suggested that it is necessary to define a payment per-student (subvention) that reflects the different regional costs of living. It should also consider the municipal capability or incapability to contribute to education with their own resources. In addition, we also suggested that it is necessary to consider within the subvention scheme a financial incentive that makes more attractive to schools the enrollment of early school leavers. Furthermore, through the subvention scheme it is even possible to envisage a mechanism by which the schools receive a financial incentive for their proportional improvements in the quality of education. The information for implementing this suggestion is now available.

In relation to the ministerial budgeting and planning schemes we acknowledged its transparent and organised procedures that may appear as an application of a rational method. However, we found that because of the considerable amount of resources managed by the Ministry of Education, the Budget Office (M. of Finance) controls tightly the ministerial expenditures. This situation affects the ministry and the ministerial agencies, producing considerable uncertainty in the short term availability of resources and their implementation of policies. In addition to these problems we also found, as in the case of health that after giving formal approval to the expenditures the Ministry of Education does possess increasing amounts of discretion. This is specially clear in the areas of finance and production of education in which the delivering agencies enjoy a great extent of regional discretion.

In sum, we consider that education does enjoy considerable amounts of discretion for the management of its resources and decisions. But it has not made total use of this as it has been tightly controlled by the Ministry of Finance as a result of the 1982-1983 economic crisis. It is perfectly possible now for the Ministry of Education to start linking its financial allocations to the educational aims and being able therefore to solve part of the existing educational problems.

### 6.3. DISTRIBUTIVE EFFECTS OF EDUCATIONAL POLICIES

This section aims to review the redistributive impact of education expenditures in relation to the poor population. As explained in section 4.3., the poor population was defined to be the lower 30% of the income distribution. In the case of education expenditures only two programmes are defined as poverty-targeting programmes, these are JUNAEB's school meals and JUNJI's pre-school nurseries.

Despite the fact that poverty targeting programmes account for only 9% of the ministerial expenditures, the government has defined poverty-targeting as an aim that encompasses all social programmes. Therefore, we will be assessing the proportion of direct education expenditures which reach the lower 30% of the population.

In order to evaluate the state transfers in education (education expenditures) reaching the population it was necessary to define four methodological approaches according to the different types of educational programmes. Most of the information used in this section comes from Haindl and Weber (1986) and Haindl, Budinich and Irarrazaval (1989). As mentioned previously, before these studies are based on two country-wide sample surveys for 1985 and 1987. The survey asked every student attending school about the type of education, his/her year in school and also the name and address of the school. This information was cross-referenced with the ministerial list of schools indicating to which schools the rural factor and compensatory deficits applied. In the case of higher education it also asked every student attending a university or a professional institute if they were receiving a student loan.

#### School Education

As was mentioned earlier the cost for the maintenance of a student in a public or private subsidised school depends on four components:

- Subvention unit for the eleven different levels.

- Hardship allowance (<sup>38</sup>)
- Rural factor (if applicable)
- Ministerial transfer to compensate the municipal educational deficit.

Therefore, the following formulae was applied for each child attending to public or a private subsidised school.

State            --  
 Transfer    |    Subvention unit            Hardship            Rural    Compensatory  
 to an        = | according to the    \* allowance +    factor+ deficits  
 individual |    educational level  
                  --

### Higher Education

In the case of Higher Education the estimation process was carried out differently. For each student enrolled in higher education the direct and indirect transfers were allocated according to the total amount of transfers received by each university divided by the number of students enrolled in it.

The state cost of student loans was estimated to be the difference between the 1% annual real interest rate charged to students and the market interest rate.

### JUNAEB

Through JUNAEB's information the average cost of a school breakfast or lunch was obtained. These costs were transferred into monthly costs (<sup>39</sup>). The resulting figures were imputed to every child receiving breakfast, lunch or both meals.

.....  
 38. The hardship allowance and the rural factor take account of the additional costs arising in the countryside for producing the same educational services as the cities. Therefore, they imply additional resources but not necessarily more services available.

39. The daily cost were transformed into monthly by multiplying them by 20. This considers that a month will have on average 20 working days.

## JUNJI

The procedure for JUNJI was similar to that of JUNAEB. The average estimated cost of a monthly tuition for a child was obtained directly from JUNJI. This cost was then imputed to every child attending one of JUNJI's pre-school nurseries.

Once the per capita monthly costs of each educational programme were obtained it was possible to estimate the proportion of the state expenditure on education being received by the population or each income decile.

Before analysing the actual redistributive effects of educational expenditures it is necessary to estimate the proportion of total public expenditures accounted for by the direct social expenditures (<sup>40</sup>).

Table 6.12. shows the estimates of the proportion of direct social expenditures in education in relation to public expenditures. In contrast to the health sector, contributions in education are really a negligible amount as education is by definition a free service. Another difference arises regarding the administration costs which are also a small proportion of public expenditures in this sector. However, this is basically due to an accounting procedure rather than a reality. What happens here is that all the administration costs involved in school education are included within the programme of subsidies and it is not possible to disaggregate them.

The bottom line of Table 6.12. shows that direct social expenditures in education capture on average 95% of total public expenditures in the same sector. This figure appears as a very high proportion of total expenditures. Therefore, our estimates of the redistributive effects for this sector will be more representative of the total public sectoral expenditures than in any other sector.

.....  
40. In other words, the proportion of the taxpayers financed expenditures.



| TABLE 6.12.   |         |         |
|---|---------|---------|
| ESTIMATES OF DIRECT SOCIAL EXPENDITURES AS A PROPORTION OF<br>TOTAL PUBLIC EXPENDITURES IN EDUCATION<br>(Millions of 1987 \$) |         |         |
|   | 1985    | 1987    |
| a) Total public expenditure in Education  | 149,632 | 134,444 |
| - Contributions paid  | 328     | 1,012   |
| b) Fiscal Social Expenditures in Education  | 149,304 | 133,432 |
| - Administration costs  | 6,572   | 6,103   |
| c) Direct social expenditures in Education  | 142,732 | 127,329 |
| c) / a) %   | 95.4    | 94.7    |

Author calculations based on:

Table 6.9.

Ley de Presupuestos del Sector Publico 1985 -1987

Haindl & Weber 1986

Haindl, Budinich and Irarrazaval 1989

The redistributive effects of education expenditures are shown in table 6.13. As was done for the health sector, we estimated the proportion of the direct social expenditures reaching to the lower 30% of the population. These figures were obtained by comparing the share of the bottom 30% in relation to the total direct expenditures in education.

In table 6.13. it is possible to note that the two poverty targeted programmes have different levels of progressiveness although both of them have experienced increases in this regard. As was mentioned in section 6.2.A. JUNAEB has been redefining its selection procedures for its schools meals programmes during the last years. This has produced a move toward progressiveness. In JUNJI's case, it has also made some efforts in relation to the selection procedures. But it is constrained by the original location of the school nurseries, which are located not in the poorest areas. Therefore, it is more difficult to increase progressiveness in this programme.

|      |            | Total<br>Direct Exps. | Share of<br>Bottom 30% | %    | TYPE OF PROGRAMME    |
|------|------------|-----------------------|------------------------|------|----------------------|
| 1985 | Pre-school | 6,953                 | 3,129                  | 45.0 | Slightly Progressive |
|      | Basic Ed.  | 64,999                | 30,550                 | 47.0 | Slightly Progressive |
|      | Median Ed. | 26,999                | 9,911                  | 36.7 | Slightly Progressive |
|      | Hg. Educ.  | 33,947                | 4,074                  | 12.0 | Regressive           |
|      | Sch. Meals | 9,834                 | 5,999                  | 61.0 | Progressive          |
|      | TOTAL      | 142,732               | 53,667                 | 37.6 | Slightly Progressive |
| 1987 | Pre-school | 9,746                 | 4,785                  | 49.1 | Slightly Progressive |
|      | Basic Ed.  | 58,415                | 28,682                 | 49.1 | Slightly Progressive |
|      | Median Ed. | 22,810                | 8,280                  | 36.3 | Slightly Progressive |
|      | Hg. Educ.  | 28,849                | 2,337                  | 8.1  | Regressive           |
|      | Sch. Meals | 7,509                 | 5,106                  | 68.0 | Very Progressive     |
|      | TOTAL      | 127,329               | 49,174                 | 38.6 | Slightly Progressive |

Author calculations based on:

Table 6.9.

Haindl & Weber 1986

Haindl, Budinich and Irarrazaval 1989

Basic and median education are both categorised as slightly progressive programmes. This is an important achievement for programmes that are not poverty-targeted and have high coverages of the beneficiary population. As can be seen in table 6.13., although both programmes belong to the same category they do show different percentages of progressiveness. This can be interpreted by the fact that basic education has been compulsory for a long period achieving very high levels of coverage among the poor. Whereas, median (secondary) education has been expanding only in the last two decades and is still not well developed in many poor areas especially in the country-side.

It is interesting to recall here our early suggestion regarding possible changes in the subvention scheme. A financial incentive for additional recruitments of early school leavers will certainly make the expenditures in education more progressive.

Higher education has always been included in the traditional definition of social expenditure in Chile. One can always challenge that approach by arguing that higher education has never been defined as a redistributive programme but as a way to increase the nation's human capital and secure its development. However, higher education is one of the most regressive programmes of all social sectors. In fact, during the period under analysis its distribution has worsened. This may be due to the changes in the student loans' management. These changes involved the transference of the loans' resources to the universities making them financially responsible for their recuperation. Therefore, some universities have opted for a criteria of loan recuperability instead of redistributive impact when allocating student loans.

Overall we found that, although a minor proportion of educational expenditures are poverty-targeted programmes, the total expenditures do show a degree of progressiveness. However, the degree of progressiveness seen here is lower than that of health which does not have a single poverty-targeted programme. Therefore, if the government is keen to maintain this aim it should consider some measures to increase the redistributive effects of educational expenditures.

## 6.4. REGIONAL ALLOCATION OF EDUCATIONAL EXPENDITURES

### 6.4.A. Data Constraints and Methodology

The regional expenditures in education were estimated according to the methodology described in section 4.4. Overall, it was possible to regionalize 77% of the total expenditures according to criterion A which represents the higher level of quality in the estimations.

#### Regional Allocation by Institutions

**General Secretariat and Administration:** This area includes the Undersecretariat, Superintendency of Education and the Budget Office. These institutions are related to the ministerial administrative bureaucracy both at national and regional levels. There is no specific information about the regional allocation of the expenditures on these institutions. They were allocated according to the national distribution of school registration (Criterion C) as the bureaucracy's duty is basically to administrate and manage the subventions to school education (<sup>41</sup>).

**Directorates of Education:** This area includes the Directorate for General Education, Higher Education and Extra-mural Activities. As in the previous case there was no consistent basis to regionally allocate these expenditures besides a sectorally related indicator.

These directorates perform basically a planning and policy definition role for all levels of education. Therefore, its activities benefit all the children attending school education in the country. Accordingly, the criterion to regionally allocate these expenditures was defined to be the regional distribution of school registrations (Criterion C). In contrast to the previous case, we used here the distribution of total registrations, (not only in public schools), as the activities of this

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41. The alternative indicator in this case was personnel as in the case of the Ministry of Health. However, this was dismissed as almost two thirds of education personnel is now hired by the municipalities and not by the central level.

Directorate benefit all the students attending both private and public schools.

TABLE 6.14.

CRITERIA OF REGIONAL ALLOCATION OF EDUCATIONAL EXPENDITURES

| 1985          | Directs.             |          | Educt.&Cult. |       |           |          | TOTAL |     |
|---------------|----------------------|----------|--------------|-------|-----------|----------|-------|-----|
|               | G.Sec.& Ad.Education | Services | JUNAEB       | JUNJI | Subsidies | H. Educ. |       |     |
| Crit. A       |                      |          |              |       | 100       | 100      | 69    |     |
| Crit. B       |                      |          | 92           | 100   |           |          | 8     |     |
| Crit. C       | 100                  | 100      | 8            |       |           |          | 21    |     |
| Crit. D       |                      |          | 100          |       |           |          | 1     |     |
| TOTAL         | 100                  | 100      | 100          | 100   | 100       | 100      | 100   |     |
| % Min. Budget | 9                    | 12       | 1            | 6     | 2         | 48       | 22    | 100 |

| 1986          | Directs.             |          | Educt.&Cult. |       |           |          | TOTAL |     |
|---------------|----------------------|----------|--------------|-------|-----------|----------|-------|-----|
|               | G.Sec.& Ad.Education | Services | JUNAEB       | JUNJI | Subsidies | H. Educ. |       |     |
| Crit. A       |                      |          |              |       | 100       | 100      | 78    |     |
| Crit. B       |                      |          | 88           | 100   |           |          | 8     |     |
| Crit. C       | 100                  | 100      | 12           |       |           |          | 13    |     |
| Crit. D       |                      |          | 100          |       |           |          | 1     |     |
| TOTAL         | 100                  | 100      | 100          | 100   | 100       | 100      | 100   |     |
| % Min. Budget | 2                    | 10       | 1            | 6     | 3         | 56       | 21    | 100 |

| 1987          | Directs.             |          | Educt.&Cult. |       |           |          | TOTAL |     |
|---------------|----------------------|----------|--------------|-------|-----------|----------|-------|-----|
|               | G.Sec.& Ad.Education | Services | JUNAEB       | JUNJI | Subsidies | H. Educ. |       |     |
| Crit. A       |                      |          | 94           |       | 100       | 100      | 84    |     |
| Crit. B       |                      |          | 6            | 100   |           |          | 8     |     |
| Crit. C       | 100                  | 100      |              |       |           |          | 7     |     |
| Crit. D       |                      |          | 100          |       |           |          | 1     |     |
| TOTAL         | 100                  | 100      | 100          | 100   | 100       | 100      | 100   |     |
| % Min. Budget | 2                    | 4        | 1            | 6     | 3         | 62       | 21    | 100 |

NOTE: See text for explanations

Educational and Cultural Services: These services include a variety of activities related to education and culture but not assimilable directly to the rest of the activities of the ministry. They account for only 1.2% of the ministerial expenditures. The only two more specific ones, (the Council of University Rectors and the Fund for Development of Science and Technology), were added to university expenditures and regionalized accordingly. For the remainder of the educational services we used a general indicator for their regional allocation: the regional distribution of population (Criterion D). We assumed here that the benefits of these services follow the regional distribution of the population. This is very likely in most cases, especially in the National Council of T.V.

JUNAEB: In the case of JUNAEB's school meals the regional allocation was slightly more complicated. From the ministerial statistical sources it was possible to obtain the regional distribution of the number of breakfasts and luncheons served during the year. JUNAEB provided us with the information to find the unitary average regional cost of each type of school meal. Therefore, we estimated the regional expenditure in school meals by multiplying the number and types of school meals served in a region times its average costs. These figures were lately adjusted to the Comptroller expenditure figures. This procedure corresponds to Criterion B as we had a specific indicator to estimate the regional allocation. On average 92% of JUNAEB expenditures were regionally allocated according to Criterion B.

The remaining 8% of JUNAEB's expenditures were related to the programmes of scholarships and student homes. As there was no statistical information for these smaller programmes apart from the national figures, they were regionalized according to the regional structure of the expenditure in school meals. In this case this constitutes an indirect indicator, Criterion C.

JUNJI: The case of JUNJI's regional allocation process was very similar to that of JUNAEB. JUNJI provided the statistics for the number of children attending the three different programmes of nurseries and the average cost of each one. With this information

we estimated the total regional expenditures in these programmes. These results were also adjusted to Comptroller figures. The main difference with the JUNAEB case was that the average costs provided had a national basis instead of a regional one. We consider this regional allocation under Criterion B.

**Subsidies:** The Subvention Office within the Directorate of Planning and Budgeting keeps a close follow-up on the subventions paid for each educational level and the compensatory factors when they are applicable. From their statistical information it was possible to compute the total expenditures on this programme per region. This is considered as Criterion A.

**Higher Education:** The expenditures in higher education were regionally distributed according to the allocation that each university receives from the Ministry of Finance. The three forms of public transfers were considered here. Since the location of each university is known, the regionalization of its expenditures consisted in summing up all the university expenditures for each region. This allocation was categorised under Criterion A.

However, this allocation assumes that the expenditures made by the university in a certain region benefit the same region. It is known that in the case of universities located in Valparaiso and Bio-Bio an important proportion of its students are from Santiago. Therefore, it is possible that some of these students will return to their original region. Unfortunately, there is no information on the original place of residence of the students attending these universities. In sum, it is feasible to think that this regional allocation of university expenditures underestimates its regional regressiveness; but there is no additional information to adjust this problem.

The estimates of the regional educational expenditures appears in columns BMED, BMHE and SCHE in table 6.15 to 6.17.

#### 6.4.B. Regional Expenditures and Regional Needs

This section addresses the second main topic of this research. The link between regional social expenditures and regional needs. In the first section we discussed the procedures and financial strategies that the Chilean government makes to allocate its social expenditures.

To discuss and analyse the relation between regional expenditures and regional needs we must define indicators of both. In the previous section we explained how the regional allocation of expenditures was approached and the steps involved in its estimation. Therefore, it is necessary now to spend some time introducing and describing the needs indicators.

In the case of education, as in most social sectors, it is difficult to define a precise indicator of need as they embrace wider aspects such as cultural affairs. Moreover, most studies trying to define a good indicator of need are usually constrained by the information available. This research was also influenced by these constraints.

The list of educational indicators selected and its index appear in Table 6.15 to 6.17. Each of these indicators are introduced now:

##### Basic and Median Education Coverage:

Perhaps one of the best approximations to a needs indicator in education would have been an indicator of the proportion of children in school age not registered in schools. However, this indicator is usually approached oppositely as an indicator of coverage (instead of non-coverage). The Ministry of Education does not calculate regional coverage rates. They were estimated following the ministerial criteria but with some constraints due to some restrictions in the regional population projections of age group. Basic education coverage was estimated dividing total registration for that educational level by the population from 5 to 14 years old. In the case of median education the age group was from 15 to



19 years old (42).

In addition to basic and median coverage we estimated the total coverage of the educational system considering total enrolment and the population from 5 to 19 years old.

The educational indicators can consider additional dimensions beside those showing access to education. In this regard we included indicators which showed the educational performance of children. This dimension can also speak out on the needs of those actually enrolled in education. These indicators are processed by the Ministry of Education.

**Promotion rate:** This is the number of students that approved after the final year examination. The rate considers the number of approved students divided by the total number of students at the end of the year.

**Failure rate:** This is the number of students who did not pass the final year examinations. The rate is computed by dividing the number of failed students by the total number of students at the end of the year.

.....  
42. This does not coincide with the official age groups of 6 to 13 in basic education. In the case of median education the official age definition is from 14 to 17 years old.

Therefore, our coverage estimates are not fully comparable to the ministerial national figures. However, our figures were computed in a systematic way following the ministerial procedure.

Drop-out rate: This is the number of students who, because of their formal or informal withdraw from the school, are not in conditions to be examined. The rate is computed by dividing the number of students withdrawn in relation to the total number of students at the end of the year (<sup>43</sup>).

Attendance rate: This is the proportion of students attending school in relation to the total number of registered students. This rate is calculated on a monthly basis.

Student-teacher ratio: The ratio between the number of students divided by the number of teachers is a traditional indicator of human resources availability in education.

In addition to the educational indicators we included other socio-economic indicators in this area. The purpose of this was to provide information to test the competing hypotheses defined earlier; the indicators are:

|      |   |
|------|---|
| GDP  | Regional G.D.P. per capita                              |
| INCO | Regional average income                                 |
| URBN | % urban population                                      |
| URBZ | % population living in cities above 20,000 inhabitants. |

Finally, in relation to expenditure indicators we defined three alternative indicators. The aim here was to be able to test the relations between the different major areas of expenditures. All these indicators were defined in per capita terms.

BMED: Includes all school education (pre-school, basic and median), related services and the general ministerial expenditures. It excludes the expenditures in higher education.

.....  
43. Because of a change in the definition of the drop-out rate since 1986, the estimates for 1985 are not fully consistent with those of 1986 and 1987.

BMHE: Includes all the expenditures of BMED as well as the expenditures of higher education.

SCHE: Includes only school educational expenditures (pre-school, basic and median) and the expenditures on the school meals programme.

### B.1. Preliminary Data Analysis

In this preliminary data analysis it is important to pay considerable attention to the regional patterns of the different indicators in an attempt to provide some initial conclusions about the associations between them. The information for this sector appears in tables 6.15. to 6.17.

In relation to the indicators of educational performance it is possible to note that the regions showing promotion levels above the national average are basically those previously defined as urban, including Tarapaca, Antofagasta, Atacama, Valparaiso, Magallanes and Metropolitan. By an obvious contrast the regions showing failure levels above the national average are those defined as rural and intermediate. Drop-out rates follow a somewhat erratic pattern. It is surprising to see that the two most densely populated regions had consistently above average drop-out drop-out. This problem has been usually associated with rural children helping their families during the crop season. However, this argument can still be considered valid as most rural regions also show above average drop-out rates.

TABLE 6.15.  
EDUCATION INDICATORS - 1985  
(Index Total=100)

|               | 1 9 8 5      |       |       |       |       |       |       |       | OTHERS  |         |       |       | EXPENDITURE |         |         |  |
|---------------|--------------|-------|-------|-------|-------|-------|-------|-------|---------|---------|-------|-------|-------------|---------|---------|--|
|               | EDUC. INDIC. |       |       |       |       |       |       |       |         |         |       |       |             |         |         |  |
|               | PROM         | FAIL  | DROP  | ATTE  | BACV  | MECV  | COVE  | S/TR  | GDP     | INCO    | URBN  | URBZ  | BMED        | BMHE    | SCHE    |  |
| Tarapaca      | 103.5        | 71.6  | 99.9  | 98.9  | 95.7  | 111.8 | 99.5  | 92.9  | 136.5   | 85.7    | 113.3 | 127.3 | 114.9       | 118.4   | 116.6   |  |
| Antofagasta   | 94.1         | 90.7  | 94.3  | 101.3 | 96.3  | 121.6 | 103.1 | 99.7  | 200.3   | 83.2    | 118.5 | 119.9 | 125.8       | 143.7   | 130.4   |  |
| Atacama       | 99.2         | 103.7 | 93.9  | 101.6 | 102.2 | 115.4 | 106.1 | 105.5 | 148.7   | 82.8    | 110.3 | 83.9  | 138.2       | 117.1   | 139.4   |  |
| Coquimbo      | 101.9        | 92.6  | 75.1  | 103.0 | 103.0 | 93.6  | 100.1 | 97.8  | 61.1    | 69.0    | 90.2  | 63.7  | 123.8       | 106.8   | 121.7   |  |
| Valparaiso    | 102.7        | 84.4  | 110.7 | 100.1 | 95.6  | 112.5 | 99.9  | 94.3  | 99.4    | 90.8    | 109.3 | 101.4 | 79.4        | 89.1    | 76.4    |  |
| O'higgins     | 98.7         | 103.7 | 89.6  | 100.6 | 99.4  | 90.5  | 97.4  | 105.4 | 122.9   | 79.4    | 78.9  | 43.1  | 103.5       | 80.8    | 100.4   |  |
| Maule         | 98.6         | 124.7 | 110.4 | 102.3 | 104.8 | 82.0  | 99.4  | 96.3  | 65.7    | 83.3    | 68.8  | 57.4  | 105.9       | 87.5    | 104.5   |  |
| BioBio        | 98.5         | 133.6 | 110.7 | 99.8  | 102.7 | 94.6  | 100.4 | 93.3  | 79.9    | 88.6    | 92.5  | 81.6  | 114.4       | 108.8   | 113.1   |  |
| Araucania     | 93.9         | 133.6 | 99.1  | 100.3 | 108.1 | 81.9  | 101.2 | 91.6  | 55.6    | 94.3    | 69.6  | 41.3  | 128.6       | 107.8   | 130.7   |  |
| Los Lagos     | 100.5        | 113.5 | 108.0 | 99.8  | 103.0 | 75.7  | 96.6  | 91.9  | 66.9    | 98.2    | 71.5  | 46.0  | 114.5       | 107.3   | 115.0   |  |
| Aysen         | 102.0        | 102.2 | 97.9  | 100.4 | 98.5  | 71.0  | 92.6  | 80.2  | 81.5    | 93.8    | 95.8  | 63.8  | 214.2       | 167.2   | 240.0   |  |
| Magallanes    | 103.1        | 64.2  | 97.6  | 102.2 | 90.1  | 100.3 | 92.6  | 83.7  | 260.1   | 117.5   | 110.8 | 105.8 | 118.9       | 104.7   | 149.2   |  |
| Metropol.     | 103.4        | 81.4  | 112.7 | 98.8  | 97.8  | 109.8 | 100.6 | 109.9 | 110.0   | 117.0   | 116.0 | 135.5 | 83.0        | 94.9    | 80.2    |  |
| INDEX         | 100.0        | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0   | 100.0   | 100.0 | 100.0 | 100.0       | 100.0   | 100.0   |  |
| COUNTRY TOTAL | 88.5         | 8.8   | 7.5   | 89.5  | 85.6  | 53.4  | 74.7  | 23.6  | 29406   | 42788   | 83.3  | 71.4  | 9639        | 12344   | 21815   |  |
| AVG           | 88.5         | 8.8   | 7.5   | 90.1  | 85.4  | 51.8  | 74.1  | 22.6  | 33673.2 | 38952.8 | 79.8  | 58.8  | 11604.7     | 14247.5 | 27145.6 |  |
| STD           | 2.8          | 1.9   | 0.8   | 1.1   | 3.9   | 8.4   | 2.7   | 1.9   | 17068.2 | 5681.6  | 14.9  | 22.6  | 3036.0      | 2991.0  | 8508.9  |  |
| COEF.VAR.     | 3.1          | 21.3  | 10.3  | 1.3   | 4.6   | 16.2  | 3.6   | 8.4   | 50.7    | 14.6    | 18.7  | 38.5  | 26.2        | 21.0    | 31.3    |  |

|      |                                     |      |  |
|------|-------------------------------------|------|--|
| PROM | Promotion rate in school education  | S/TR | Student - teacher ratio                                    |
| FAIL | Failure rate in school education    | GDP  | GDP per capita   |
| DROP | Drop - out rate in school education | INCO | Regional average income                                    |
| ATTE | Attendance rate in school education | URBN | % urban population   |
| BACV | Basic education coverage            | URBZ | % population living in cities above 20,000                 |
| MECV | Median education coverage           | BMED | Educational expenditures per capita                        |
| COVE | Total education coverage            | BMHE | Educational expenditures per capita including higher educ. |
|      |                                     | SCHE | Expenditures in school education per capita                |

TABLE 6.16.  
EDUCATION INDICATORS - 1986  
(Index Total=100)

|               | 1 9 8 6     |       |       |       |       |       |       |       | OTHERS  |         |       |       | EXPENDITURE |         |         |
|---------------|-------------|-------|-------|-------|-------|-------|-------|-------|---------|---------|-------|-------|-------------|---------|---------|
|               | EDUC.INDIC. |       |       |       |       |       |       |       | GDP     | INCO    | URBN  | URBZ  | BMED        | BMHE    | SCHE    |
|               | PROM        | FAIL  | DROP  | ATTE  | BACV  | MECV  | COVE  | S/TR  |         |         |       |       |             |         |         |
| Tarapaca      | 102.6       | 71.2  | 105.2 | 99.0  | 97.3  | 109.8 | 100.3 | 91.4  | 133.7   | 83.8    | 113.0 | 127.3 | 119.0       | 117.3   | 118.5   |
| Antofagasta   | 103.0       | 76.8  | 76.8  | 100.8 | 98.1  | 125.0 | 105.1 | 104.5 | 190.5   | 78.2    | 118.1 | 119.9 | 129.3       | 150.6   | 130.6   |
| Atacama       | 100.5       | 107.3 | 62.8  | 101.1 | 104.9 | 115.6 | 108.0 | 108.7 | 142.0   | 78.9    | 110.3 | 83.9  | 139.7       | 120.4   | 93.0    |
| Coquimbo      | 101.1       | 91.3  | 85.0  | 102.1 | 104.7 | 93.1  | 101.1 | 102.6 | 61.3    | 68.5    | 90.1  | 63.7  | 125.2       | 109.7   | 120.8   |
| Valparaiso    | 100.8       | 77.7  | 115.5 | 100.3 | 97.7  | 110.3 | 100.9 | 96.3  | 100.5   | 92.1    | 109.2 | 101.4 | 79.7        | 88.9    | 81.0    |
| O'higgins     | 98.2        | 121.7 | 98.6  | 100.8 | 103.0 | 89.2  | 99.4  | 103.3 | 122.1   | 78.2    | 79.2  | 43.1  | 101.8       | 79.6    | 99.0    |
| Maule         | 97.9        | 123.6 | 102.6 | 101.3 | 105.4 | 80.3  | 99.2  | 97.1  | 65.8    | 83.4    | 69.3  | 57.4  | 103.5       | 86.2    | 101.9   |
| BioBio        | 97.8        | 121.2 | 113.1 | 100.6 | 103.5 | 94.4  | 100.9 | 96.2  | 77.6    | 85.3    | 92.5  | 81.6  | 113.2       | 108.6   | 111.6   |
| Araucania     | 94.8        | 148.4 | 126.4 | 99.7  | 109.1 | 82.7  | 102.0 | 94.2  | 55.2    | 92.4    | 69.3  | 41.3  | 129.6       | 109.6   | 127.9   |
| Los Lagos     | 98.0        | 116.4 | 116.7 | 99.4  | 104.2 | 73.7  | 96.5  | 93.0  | 68.1    | 99.2    | 71.9  | 46.0  | 116.9       | 109.5   | 117.1   |
| Aysen         | 99.3        | 105.5 | 108.1 | 100.2 | 98.4  | 73.2  | 92.7  | 83.7  | 81.1    | 92.6    | 96.1  | 63.8  | 230.4       | 180.2   | 235.4   |
| Magallanes    | 105.0       | 63.5  | 55.3  | 101.3 | 90.8  | 96.2  | 91.9  | 89.4  | 252.7   | 113.8   | 110.6 | 105.8 | 122.6       | 109.4   | 144.8   |
| Metropol.     | 101.0       | 75.3  | 133.9 | 99.0  | 98.7  | 111.0 | 101.6 | 105.6 | 111.7   | 119.1   | 115.8 | 135.5 | 82.5        | 93.6    | 82.9    |
| INDEX         | 100.0       | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0   | 100.0   | 100.0 | 100.0 | 100.0       | 100.0   | 100.0   |
| COUNTRY TOTAL | 88.8        | 7.7   | 3.5   | 90.4  | 83.6  | 54.5  | 73.9  | 24.1  | 30552.9 | 45227.1 | 83.6  | 71.4  | 9263        | 11844   | 24517   |
| AVG           | 88.8        | 7.7   | 3.5   | 90.8  | 84.6  | 52.6  | 73.9  | 23.5  | 34366.0 | 40545.3 | 80.1  | 58.8  | 11353.0     | 13333.2 | 29506.3 |
| STD           | 2.3         | 1.9   | 0.8   | 0.8   | 3.9   | 8.7   | 3.1   | 1.7   | 16854.4 | 6251.3  | 14.8  | 22.6  | 3288.2      | 3091.3  | 9269.8  |
| COEF.VAR.     | 2.6         | 24.9  | 22.9  | 0.9   | 4.6   | 16.6  | 4.2   | 7.1   | 49.0    | 15.4    | 18.5  | 38.5  | 29.0        | 23.2    | 31.4    |

|      |                                     |      |  |
|------|-------------------------------------|------|--|
| PROM | Promotion rate in school education  | S/TR | Student - teacher ratio                                    |
| FAIL | Failure rate in school education    | GDP  | GDP per capita   |
| DROP | Drop - out rate in school education | INCO | Regional average income                                    |
| ATTE | Attendance rate in school education | URBN | % urban population   |
| BACV | Basic education coverage            | URBZ | % population living in cities above 20,000                 |
| MECV | Median education coverage           | BMED | Educational expenditures per capita                        |
| COVE | Total education coverage            | BMHE | Educational expenditures per capita including higher educ. |
|      |                                     | SCHE | Expenditures in school education per capita                |

TABLE 6.17.  
EDUCATION INDICATORS - 1987  
(Index Total=100)

|               | 1 9 8 7     |       |       |       |       |       |       |       | OTHERS  |         |       |       | EXPENDITURE |         |         |
|---------------|-------------|-------|-------|-------|-------|-------|-------|-------|---------|---------|-------|-------|-------------|---------|---------|
|               | EDUC.INDIC. |       |       |       |       |       |       |       | GDP     | INCO    | URBN  | URBZ  | BMED        | BMHE    | SCHE    |
|               | PROM        | FAIL  | DROP  | ATTE  | BACV  | MECV  | COVE  | S/TR  |         |         |       |       |             |         |         |
| Tarapaca      | 101.8       | 71.0  | 113.3 | 99.1  | 97.2  | 117.6 | 102.4 | 92.2  | 132.0   | 104.0   | 112.8 | 126.8 | 127.1       | 119.0   | 122.3   |
| Antofagasta   | 102.4       | 80.0  | 75.6  | 100.3 | 101.7 | 126.7 | 108.4 | 111.8 | 191.6   | 96.6    | 117.8 | 120.7 | 127.9       | 154.1   | 126.1   |
| Atacama       | 100.4       | 105.4 | 77.1  | 100.7 | 103.2 | 113.4 | 106.3 | 110.2 | 143.4   | 98.8    | 110.1 | 83.8  | 137.0       | 120.2   | 133.1   |
| Coquimbo      | 101.4       | 86.6  | 90.0  | 101.3 | 103.7 | 93.7  | 100.5 | 107.3 | 61.4    | 75.3    | 90.3  | 64.3  | 122.5       | 109.0   | 117.8   |
| Valparaiso    | 101.2       | 80.1  | 108.3 | 100.7 | 96.8  | 108.4 | 100.0 | 98.3  | 100.5   | 95.1    | 109.0 | 100.4 | 80.8        | 89.7    | 85.3    |
| O'higgins     | 99.1        | 116.1 | 89.7  | 101.0 | 105.4 | 88.2  | 100.6 | 100.9 | 123.0   | 79.8    | 79.4  | 43.7  | 92.7        | 72.2    | 93.1    |
| Maule         | 99.0        | 118.3 | 87.4  | 100.3 | 103.7 | 80.3  | 97.9  | 98.6  | 65.9    | 90.9    | 69.4  | 57.2  | 99.7        | 83.4    | 98.5    |
| BioBio        | 98.4        | 117.2 | 108.3 | 101.3 | 103.9 | 95.2  | 101.4 | 101.4 | 78.2    | 81.6    | 92.5  | 81.8  | 110.3       | 107.1   | 109.8   |
| Araucania     | 95.3        | 148.3 | 128.1 | 99.0  | 106.1 | 82.1  | 99.6  | 95.9  | 55.4    | 89.9    | 69.4  | 41.9  | 125.8       | 107.1   | 122.1   |
| Los Lagos     | 97.9        | 117.9 | 120.7 | 99.1  | 103.9 | 75.1  | 96.4  | 95.1  | 68.7    | 76.3    | 72.0  | 46.2  | 120.1       | 112.3   | 122.8   |
| Aysen         | 98.4        | 111.3 | 121.1 | 100.1 | 98.0  | 73.2  | 92.4  | 88.9  | 80.8    | 127.8   | 96.6  | 64.5  | 218.6       | 170.2   | 218.2   |
| Magallanes    | 104.0       | 72.3  | 47.3  | 100.4 | 91.7  | 95.0  | 92.4  | 98.5  | 250.2   | 116.6   | 110.5 | 105.9 | 122.0       | 110.3   | 135.0   |
| Metropol.     | 100.7       | 75.5  | 133.2 | 99.2  | 96.0  | 110.4 | 99.7  | 100.6 | 111.1   | 118.0   | 115.6 | 137.6 | 85.2        | 95.0    | 83.1    |
| INDEX         | 100.0       | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0   | 100.0   | 100.0 | 100.0 | 100.0       | 100.0   | 100.0   |
| COUNTRY TOTAL | 89.9        | 6.9   | 3.2   | 91.3  | 82.5  | 55.8  | 73.6  | 24.5  | 31766.0 | 47803.4 | 83.8  | 70.4  | 8349        | 10724   | 24491   |
| AVG           | 89.9        | 6.9   | 3.2   | 91.5  | 83.2  | 54.1  | 73.5  | 24.5  | 35725.7 | 45990.0 | 80.3  | 58.2  | 10082.4     | 11957.9 | 29526.0 |
| STD           | 2.0         | 1.6   | 0.8   | 0.7   | 3.5   | 9.2   | 3.2   | 1.6   | 17386.6 | 7652.4  | 14.8  | 22.4  | 2755.6      | 2746.2  | 8024.4  |
| COEF.VAR.     | 2.2         | 23.0  | 23.8  | 0.8   | 4.2   | 17.0  | 4.4   | 6.4   | 48.7    | 16.6    | 18.4  | 38.4  | 27.3        | 23.0    | 27.2    |

|      |                                     |      |  |
|------|-------------------------------------|------|--|
| PROM | Promotion rate in school education  | S/TR | Student - teacher ratio                                    |
| FAIL | Failure rate in school education    | GDP  | GDP per capita   |
| DROP | Drop - out rate in school education | INCO | Regional average income                                    |
| ATTE | Attendance rate in school education | URBN | % urban population   |
| BACV | Basic education coverage            | URBZ | % population living in cities above 20,000                 |
| MECV | Median education coverage           | BMED | Educational expenditures per capita                        |
| COVE | Total education coverage            | BMHE | Educational expenditures per capita including higher educ. |
|      |                                     | SCHE | Expenditures in school education per capita                |

The interregional disparities among these indicators show that promotion rate has a very low coefficient of variation; this deserves a short explanation. In 1965 the government decreed that all children fulfilling a minimum attendance level during the year were to be promoted to the next year even if they had failed in the final examinations. This was firstly established for the first two years of basic (primary) education and then extended to the first four years (<sup>44</sup>). The aim here was to retain the children in the educational system despite bad performance in order to avoid an early leave due to repetition. Therefore, it is not surprising to find somewhat similar levels of promotion throughout all regions.

The student to teacher ratio indicates the human resources availability in education. The regional pattern here is one of urban and intermediate regions having above average endowments of teachers.

There is a very positive pattern in the case of school attendance. The table shows very little interregional dispersion on this indicator and a high national average of 90%, which has been growing during the period under analysis. The positive development of this indicator can be associated to the new subvention scheme which encourages schools to maintain high rates of attendancy in order to receive higher payment levels. However, there are still no empirical studies to prove this as of yet.

The regional patterns of educational coverage for basic and median education appear to follow some unexpected opposite courses. Basic education coverage shows a very low interregional dispersion whereas median education shows a coefficient of variation that is on average four times that of basic education. Moreover, the greater basic education coverages are obtained mostly in rural and intermediate regions, whereas high median coverage is obtained mostly in urban regions. The explanation for this situation is the following. As Raczinsky (1986) argues,

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44. Ministry of Education - Supreme Decree No. 27,954 and No. 38,063.

basic education has been expanding systematically throughout the country since the early sixties when it was already well established in most important cities. It firstly started expanding to the poor areas in important urban areas but as these began to be covered rural areas were also included. In recent years we observe the opposite trend, due partly to some demographic factors but also to the higher drop out rates in big cities. In the case of median education it has developed mostly in urban areas where it was possible to find large groups of children who had finished basic education (primary). This was certainly not the case of rural areas in which there was no secondary school at all and the children needed to go to the nearest urban centre to obtain secondary education. This situation is now beginning to reverse as many rural municipalities have established their own secondary schools in order to keep the potential subventions arising from those additional enrolments within their boundaries. For example Araucania, which is a rural region, has increased its median coverage at the same rate as the national level, but still lies below the national average of 55.8% (45).

As was explained in the previous section, we defined three indicators of educational expenditures. The first one (SCHE) includes only school education expenditures. The second (BMED) includes school education and ministerial bureaucracy expenditures. The third one (BMHE) includes school education, ministerial expenditures and higher education expenditures. Overall, the three expenditure indicators show similar regional patterns but different absolute levels.

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45. In order to avoid possible confusions in the interpretation of basic and median education coverage we defined a single measure of total educational coverage. This variable proved to be useful when analysing the associations and correlations between variables.



It is possible to gain an idea of the interregional disparities in educational expenditures by looking at their coefficients of variation. We note that they are in the range between 20 to 30, which is nearly the same as the health sector. Therefore, we can conclude that educational expenditures show at least an interregional disparity level as bad as the health sector, since these levels of coefficients of variations were already signaled as too high.

In relation to the patterns observed we noticed in the tables that the two regions having lower levels of expenditures any of the three indicators are Valparaiso and Santiago. This is an interesting departure from previous findings as this fact indicates that there is apparently no relation between educational expenditures and urban population. Therefore hypothesis No.3, which assumes a relation between these two variables, may be rejected (<sup>46</sup>).

From the opposite point of view, the regions with above average expenditures are also urban and intermediate regions such as Tarapaca, Antofagasta and Aysen (<sup>47</sup>). Therefore, it is not possible to draw conclusions about the feasibility of hypothesis No.3 on the evidence presented thus far.

The same can be said concerning hypothesis No. 2, which relates higher expenditures to richer regions. The only two regions that are consistently defined as "rich" under both indicators (GDP and INCO) are Magallanes and Metropolitan. The former registers systematically above average educational expenditures in the three indicators used, whereas Metropolitan does just the reverse.

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46. This finding might have appeared somewhat different if we would have been able to include the educational expenditures made from the municipal own resources in addition to the subventions. Unfortunately there is no statistical information about this aspect. However, some evidence suggest that rich municipalities are the ones contributing more to their own schools.

47. Araucania (rural region) can also be incorporated in this group.

## B.2. Associations Between Variables

The preliminary data analysis provided us with some interesting outlines of the regional patterns of educational indicators. However, the evidence is not sufficient to make conclusions concerning our competing hypotheses. In this section we attempt to address this issue through the analysis of the linear associations between the variables.

The starting point in this analysis is to test the associations between educational expenditures and the socio-economic indicators. On the right hand side of table 6.18. it is possible to observe the correlations coefficients amongst the different indicators of educational expenditures: BMED, BMHE and SCHE against the socio-economic indicators of regional well being (GDP per capita and Average Income) and the two indexes of urbanization. The findings are very clear: there are no significant linear associations between these two sets of variables.

Therefore, these results imply that we can not make any conclusions about hypotheses Nos. 2 and 3. In other words, this means that it is not possible to say that rich regions are or are not obtaining higher shares of educational expenditures or, in the case of the third hypothesis, that social services are product of urbanization and therefore urban regions enjoy or do not enjoy higher levels of expenditures.

Although this conclusion may look rather dissappointing it does contribute to clarify the scope of our discussion in this sector. It is possible to conclude therefore, that educational expenditures are probably associated to other socio-economic indicators not considered here and they are not associated with regional well being or urbanization (<sup>48</sup>). In practical terms, this means that the regional allocation of educational expenditures neither favours nor disfavours rich and urbanized regions. This is an interesting finding which allows us to disregard two of our earlier hypotheses.

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48. At least in the way we have defined them here.

TABLE 6.18

CORRELATION MATRIX - EDUCATION INDICATORS

|      | PROM     | FAIL     | S_TR    | DROP     | ATTE  | BACV     | MECV    | COVE    | BMED    | BMHE    | SCHE  | GDP     | INCO | URBN    | URBZ |
|------|----------|----------|---------|----------|-------|----------|---------|---------|---------|---------|-------|---------|------|---------|------|
| PROM | 1.00     |          |         |          |       |          |         |         |         |         |       |         |      |         |      |
| FAIL | -0.82 ** | 1.00     |         |          |       |          |         |         |         |         |       |         |      |         |      |
| S_TR | 0.14     | -0.21    | 1.00    |          |       |          |         |         |         |         |       |         |      |         |      |
| DROP | -0.28    | 0.44 *   | -0.41 * | 1.00     |       |          |         |         |         |         |       |         |      |         |      |
| ATTE | 0.14     | -0.21    | 0.33    | -0.61 ** | 1.00  |          |         |         |         |         |       |         |      |         |      |
| BACV | -0.69 ** | 0.84 **  | 0.13    | 0.23     | -0.04 | 1.00     |         |         |         |         |       |         |      |         |      |
| MECV | 0.43 *   | -0.61 ** | 0.54 ** | -0.15    | 0.04  | -0.41    | 1.00    |         |         |         |       |         |      |         |      |
| COVE | -0.16    | 0.10     | 0.65 ** | 0.04     | 0.00  | 0.42 *   | 0.65 ** | 1.00    |         |         |       |         |      |         |      |
| BMED | -0.14    | 0.22     | -0.50 * | 0.07     | -0.04 | 0.04     | -0.38   | -0.29   | 1.00    |         |       |         |      |         |      |
| BMHE | -0.02    | 0.00     | -0.37   | 0.10     | -0.16 | -0.12    | -0.02   | -0.07   | 0.87 ** | 1.00    |       |         |      |         |      |
| SCHE | 0.00     | 0.01     | -0.48 * | -0.17    | 0.12  | -0.17    | -0.38   | -0.49 * | 0.92 ** | 0.79 ** | 1.00  |         |      |         |      |
| GDP  | 0.51 *   | 0.61 **  | 0.11    | -0.23    | 0.16  | -0.72 ** | 0.56 ** | -0.03   | -0.05   | 0.14    | 0.07  | 1.00    |      |         |      |
| INCO | 0.34     | -0.43 *  | -0.06   | -0.19    | -0.08 | -0.59 ** | 0.08    | -0.40   | -0.02   | 0.01    | 0.22  | 0.35    | 1.00 |         |      |
| URBN | 0.61 **  | -0.76 ** | 0.20    | -0.09    | -0.06 | -0.71 ** | 0.83 ** | 0.24    | -0.02   | 0.30    | 0.01  | 0.67 ** | 0.34 | 1.00    |      |
| URBZ | 0.57 **  | -0.73 ** | 0.17    | 0.01     | -0.23 | -0.68    | 0.80 ** | 0.23    | -0.24   | 0.13    | -0.19 | 0.57 ** | 0.39 | 0.91 ** | 1.00 |

PROM Promotion rate in school education S\_TR Student - teacher ratio  
 FAIL Failure rate in school education GDP GDP per capita  
 DROP Drop - out rate in school education INCO Regional average income  
 ATTE Attendance rate in school education URBN % urban population  
 BACV Basic education coverage URBZ % population living in cities above 20,000  
 MECV Median education coverage BMED Educational expenditures per capita  
 COVE Total education coverage BMHED Educational expenditures per capita including higher educ.  
 SCHE Expenditures in school education per capita

2 TAILED SIGNIFICANCE: \* 0.01 \*\* 0.001

In relation to the associations between educational expenditures and educational need indicators, it is interesting to analyse firstly the most traditional indicators of access to education. It is found that there is a significant negative correlation (0.01% level) between school education expenditure and total education coverage. This association should be interpreted with care; it means that the regional expenditures in school education are found to be higher in those regions with lower educational coverage. In other words, school expenditures favour those regions with poorer coverage in education. An example may illustrate this situation: Aysen appears in Tables 6.15 to 6.17. as the region having the highest index in school expenditures per capita; for the three years it has indexes above 210 while the next region following appears with an index of only 140. At the same time Aysen also shows indexes of total coverages of 92 which are the lowest of all regions during the three years under analysis. This implies that school expenditures are really being allocated in a way that favours those regions in greater need (<sup>49</sup>).

Therefore, we are in a situation in which there is some empirical basis to accept the first hypothesis, which states that the government will channel a higher proportion of its funds to the less well off of regions measured in terms of their basic needs insatisfaction. It can be considered that there are certain conditions met which may imply accepting the first hypothesis, despite the fact that the correlation coefficient is not very high.

In table 6.18. it is also possible to observe that educational expenditure indicators are negatively correlated to the student-teacher ratio. This indicator is usually taken as an indicator of human resources endowment. A high student-teacher ratio indicate that the region has a worse endowment of teachers as more students will be dependent upon the same teacher. Therefore, the correlation found here means that higher educational (BMED) and school expenditures (SCHE) are associated

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49. Need as defined through the indicators in use.

with lower student to teacher ratios. This means a greater endowment of teachers. Following our earlier example, we found again that Aysen had consistently lower student-teacher ratios. In 1985 it had only 19 students per teacher as opposed to the national average of almost 24. In sum, this new finding contradicts our earlier statement as educational expenditures, in this case, favour a region which has an already better endowment of human resources.

It is difficult to elaborate a hierarchy of social indicators and we do not attempt to do it here. But it should be noted that in a study commissioned by the Ministry of Education at the Chilean Catholic University in 1984, it was found that there is no relation between student performance and physical and human endowments in schools. In fact, table 6.18. also shows that there is no relation between student-teacher ratio and promotion and failure rates. Therefore, we are bound to interpret this association between higher educational expenditures and better teacher endowment as a result of an administrative or historical process rather than as a result of a specific relationship between the two.

Summarising this section we conclude that in the case of educational expenditures there is no statistical basis to link the regional allocation of expenditures to urbanization or regional well being.

At the same time, we consider that there is some indication that educational expenditures are allocated in a way that favours regions in need of expanding their coverages.

### B.3. Defining a Model To Analyse the Relation Between Education Expenditures and Educational Indicators

In this section we test further our initial hypotheses related to the regional allocation of educational expenditures. Again, as in the case of the health sector, it was a difficult task to define a regression model that assisted in the explanation of the relation between educational expenditures and educational needs. Table 6.19 includes only the most interesting regression equations in relation to the subject of study; they were selected from the total regressions equations estimated.

Every regression equation which defined educational expenditures as dependant variable was run for the three alternative definitions of educational expenditures: school education expenditures (SCHE), school and ministerial expenditures (BMED) and ministerial and higher education expenditures (BMHE). Overall, the three alternative forms provided very similar findings, but in the case of using BMHE as a dependant variable it consistently showed lower goodness of fit. This may originate in the fact that BMHE incorporates higher education expenditures, but in the explanatory variables, none of the indicators include this dimension as it was not possible to define need indicators in the area of higher education. The regression functions were defined with the specific aim of testing the hypothesis described earlier. This implied that almost all the models considered had to have an indicator of urbanization, regional well being and a sectoral need indicator. In addition to these indicators, we also incorporated the variable school attendance (ATTE) as school and ministerial expenditures (BMED) are probably influenced by this variable as a result of the subvention scheme.

In relation to the models estimated here it is necessary to introduce a general caveat. Because most educational indicators available for the analysis usually represent a different dimension of the same problem they were found to be highly correlated amongst each other. For example, within the indicators of educational performance it was found that promotion and failure rates were correlated to each other and both with the

two indexes of urbanization and regional well being. Something similar occurred with the indicators of educational coverage. Therefore, it was very difficult to test the competing hypotheses, which by definition must consider the indicators of urbanization and well being, without avoiding a problem of multicollinearity. However, we attempted to define the regressions equations using as explanatory variables those which presented lower degrees of multicollinearity (50).

In table 6.19. it is possible to observe a set of regressions using educational expenditures as dependant variables. The first two equations use as dependant variables the expenditures in school education and the central ministry of education.

The first equation captures 44% of the interregional variations of school and ministerial expenditures. In this case it is noted that the predicted educational expenditures per capita are most influenced by median coverage, as it has the higher (negative) beta. This means that educational expenditures are allocated to those regions having a lower coverage of median education. In the same equation it is noticed that urban population (URBN) also presents a high standardised partial regression coefficient (Beta) implying that the allocation of resources favours urban regions. Finally, the betas also show that educational resources are inversely related to average regional income.

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50. As Kmenta (1971) has argued multicollinearity is a problem of degree not of kind. The meaningful distinction here is not between the presence or absence of multicollinearity but between its various degrees. A high degree of multicollinearity will arise whenever one or usually more than one explanatory variables are highly correlated, (some textbooks will mention that variables should be perfectly correlated), with another explanatory variable or linear combination of other explanatory variables. Multicollinearity will affect the stability of the estimated parameters making them unreliable. For these reasons we have constrained our analysis to the equations which can be assumed to have low degrees of multicollinearity.

TABLE 6.19.

## REGRESSION ANALYSIS - EDUCATION EXPENDITURES

| VARIABLE | PROM     | FAIL    | DROP    | ATTE    | MECV     | COVE     | BMED | INCO   | URBN   | Adj. R Sq. |
|----------|----------|---------|---------|---------|----------|----------|------|--------|--------|------------|
| 1 BMED   |          |         |         | 181.73  | -482.85  |          |      | -0.14  | 257.03 | 0.4413     |
| t Ratios |          |         |         | (0.5)   | (-5.8)   |          |      | (-2.3) | (4.9)  |            |
| Betas    |          |         |         | 0.06    | -1.37    |          |      | -0.31  | 1.23   |            |
| 2 BMED   |          | 1544.31 |         | 614.29  |          | -717.91  |      | -0.08  | 201.43 | 0.302      |
| t Ratios |          | (3.8)   |         | (1.4)   |          | (-3.2)   |      | (1.1)  | (3.6)  |            |
| Betas    |          | 0.97    |         | 0.21    |          | -0.70    |      | -0.19  | 0.96   |            |
| 3 SCHE   |          |         |         | 1940.40 | -1310.44 |          |      | -0.04  | 666.63 | 0.4869     |
| t Ratios |          |         |         | (2.0)   | (-5.9)   |          |      | (-0.3) | (4.7)  |            |
| Betas    |          |         |         | 0.24    | -1.33    |          |      | -0.04  | 1.14   |            |
| 4 SCHE   | -1425.74 |         | -914.41 |         |          | -1822.72 |      |        | 227.48 | 0.2741     |
| t Ratios | (-2.0)   |         | (-1.6)  |         |          | (-4.1)   |      |        | (2.0)  |            |
| Betas    | -0.40    |         | -0.22   |         |          | -0.64    |      |        | 0.39   |            |

|      |                                     |      |   |
|------|-------------------------------------|------|---|
| PROM | Promotion rate in school education  | INCO | Regional average income                     |
| FAIL | Failure rate in school education    | URBN | % urban population                          |
| DROP | Drop - out rate in school education | BMED | Educational expenditures per capita         |
| ATTE | Attendance rate in school education | SCHE | Expenditures in school education per capita |
| MECV | Median education coverage           |      |   |
| COVE | Total education coverage            |      |   |

It is interesting to note that this regression obtained a better goodness of fit with URBN and not with the more demanding definition of urbanization, which considers the proportion of population living in cities. Therefore, according to this first regression the regions obtaining proportionally higher educational resources are those that, although they are urban, do not have their population concentrated in large cities (i.e. Santiago and Valparaiso), and simultaneously have not the lower coverages in median education. Overall, regarding our hypotheses we can conclude that this regression partially supports the findings of the previous section in the sense that resource are being allocated to regions with deficit in educational coverage (Hypothesis No.1). In addition to the previous findings it gives also an indication of a positive relation between urban population and resource allocation (Hypothesis No.3, urban bias in resource allocation). Finally, it also gives some evidence to reject the second hypothesis, that social expenditures are



related to well being. Moreover, this equation presents a new dimension to the earlier findings which implied a simultaneity between needs indicators and urbanization. In earlier sections and especially the previous chapter, there always found to be a negative relation between needs indicators and urbanization, as urban regions were usually above average in most indicators.

Equation No. 2 supports the basic explanations given in No.1. However, in this case we introduce a new indicator of need: failure rate. This indicator is in apparent competition with total coverage in education but it contributes to support the same findings. Nevertheless, this new indicator produces the effect that the overall regression goodness of fit decreases capturing only 30% of the total variance. The high regression coefficient of failure rate implies that expenditures are allocated to those areas in which students are performing badly. Simultaneously, the equation also shows that expenditures are also allocated to the regions with lower educational coverage. Therefore, we have now more grounds to accept hypothesis No.1, which states that the government will channel its resources to the regions in most need (<sup>51</sup>). The equation also shows that urban population is a good predictor of educational expenditures, as explained in equation No.1.

Equation No.4 is a development of equations Nos. 2 and 3. In this equation we tested new educational indicators and withdrew average income (INCO), as its contribution to the total variance in earlier similar equations was negligible. The equation does support the earlier findings with the new variables incorporated. Promotion rate is a significant variable in the equation and its negative sign implies that it does influence the allocation of educational resources to those regions which have lower promotion rates. Therefore, it definitively supports hypothesis No. 1. In relation to hypothesis No.3, the evidence here still supports the earlier findings, (although with a weak t-test), that educational expenditures are influenced by the urbanization level of regions.

.....  
51. Need as it was measured here.

In sum, through the analysis of the regressions which have educational expenditures as a dependent variable, it is possible to conclude with the present evidence that there are grounds to acknowledge that the allocation of educational resources is favourable to those regions showing bad performance on the educational indicators (Hypothesis No.1 accepted). The findings also support, although with weaker evidence, that urban population is also an important predictor of educational expenditures (Hypothesis No. 3 accepted).

In addition to testing the original hypotheses we were interested in analysing the influence of educational expenditures and other educational indicators in relation to two educational performance indicators. This can be seen in table 6.20.

In equation Nos. 1 and 2 it is possible to note that, in the first place, the main predictor of promotion is urban population; this is more significant than other educational indicators included in the equation. In other words, marginal changes in urban population (URBN) will have a greater influence on the promotion rate than similar changes in the other explanatory variables included in these regressions. In the second place, coverage and drop-out rates also show high betas, meaning that they will influence in a significant way the promotion rate, but on a lower level than URBN. The negative sign of promotion is a rather obvious situation as more drop-outs will mean fewer students promoted from one year to another. In the case of coverage, it seems that there is an inverse relationship between promotion and coverage. A larger coverage means that more children not previously enrolled in education have joined the system. This probably induces a lower rate of promotion as the student population becomes more universal and less selective. Finally, it is interesting to note that educational expenditures will not influence promotion rate. (Literally, more expenditures mean lower promotion rates).

TABLE 6.20.

## REGRESSION ANALYSIS - EDUCATION INDICATORS

| No. DEPENDENT | VARIABLE | DROP   | MECV   | COVE   | BMED   | INCO  | URBN   | Adj. R Sq. |
|---------------|----------|--------|--------|--------|--------|-------|--------|------------|
| 1             | PROM     | -0.21  |        | -0.31  | 0.00   |       | 0.11   | 0.51       |
|               | t Ratios | (-1.6) |        | (-3.1) | (-3.1) |       | (5.8)  |            |
|               | Betas    | -0.19  |        | -0.39  | -0.39  |       | 0.68   |            |
| 2             | PROM     | -0.30  | -0.21  |        | 0.00   |       | 0.20   | 0.49       |
|               | t Ratios | (-2.2) | (-2.7) |        | (-2.5) |       | (4.7)  |            |
|               | Betas    | -0.26  | -0.77  |        | -0.39  |       | 1.22   |            |
| 3             | FAIL     |        |        | 0.27   | 0.00   | 0.00  | -0.11  | 0.72       |
|               | t Ratios |        |        | (3.8)  | (3.5)  | (0.3) | (-8.3) |            |
|               | Betas    |        |        | 0.42   | 0.32   | 0.03  | -0.86  |            |

DROP Drop-out rate in school education  
 MECV Median education coverage  
 COVE Total education coverage  
 INCO Regional average income  
 URBN % urban population  
 BMED Educational expenditures per capita

In equation No.3 failure rate was used as a dependent variable. The equation shows just the opposite of the earlier two equations, but in this case, with a much higher goodness of fit.

In sum it is interesting to find that urbanization exerts an important influence on the performance of educational indicators; this is in addition to educational expenditures. It is possible to envisage that this variable actually expresses the variability of some indicators not available, such as age, the institutionalization of the regional educational system, external influences on education and others.

#### 6.4.C. Section Summary and Conclusions : Equity and Decentralization in Education

This section was intended to discuss the regional allocation of educational expenditures and its relation to needs. To do this it was necessary to allocate the expenditures following the methodology defined in chapter 4. Overall, it was possible to obtain a good estimate of the regional allocations as 77% of the total regional expenditures were allocated according to criterion A, which corresponds to the more demanding definition for the regional allocation.

Once the regional estimates of expenditures were obtained they were processed using three alternative definitions: i) school education, which included only expenditures in schools and school meals; ii) school and ministerial expenditures, which included the earlier definition and the expenditures of the central ministerial bureaucracy; iii) school and ministerial expenditures and higher education expenditures, to this definition we added the state expenditures in higher education. In general all definitions showed similar patterns, although the first two were more closely related to educational indicators.

The analysis of regional expenditures and regional needs was constrained to the indicators available. It was possible to include indicators of educational performance, educational coverage, school attendance and others. All these indicators were analysed in relation to the three competing hypotheses defined in chapter 4.

The analysis of the data was approached, as in the health chapter in three stages: from simple data analysis, to correlation analysis and then regression analysis. In this last stage we found increasing difficulties in defining a model with no presence of multicollinearity. But as was mentioned this is a problem of degree not of kind; therefore we chose those regression equations estimated as having the minimum presence of this problem.

Overall, the findings support the hypothesis that educational expenditures proportionally favour those regions which simultaneously show a high level of unmet educational needs dissatisfaction (<sup>52</sup>) (Hypothesis No.1). The findings also gave grounds to accept that there is a considerable bias in educational resource allocation towards urban populations (Hypothesis No.3). However, the statistical evidence here was not as significant as in the previous case. In relation to Hypothesis No.2, which states a direct relation between social expenditures and regional well being, there was not sufficient statistical evidence to either accept or reject it.

It should be mentioned that the process for obtaining these findings was not as clear as in the health sector, where the patterns were clear from the very first steps of data analysis. In the case of education, it was necessary to test the occurrence of the same hypothesis in various forms in order to be more secure of the resulting findings.

.....  
52. High level of unmet educational needs as defined for the present section.

## CHAPTER SEVEN

### HOUSING

#### 7.1. BACKGROUND TO THE ORGANIZATION AND FINANCE OF HOUSING PROVISION IN CHILE

The first housing movements in Chile were registered at the beginning of the century with the Housing Councils for workers (Consejos Habitacionales para Obreros) (1906) (Haramoto, 1980). After this initiative a number of institutions were created with the specific purpose of providing housing for certain groups of the population, or the families affected by national calamities such as earthquakes, etc. In 1948 legislation was passed to promote private housing construction. The growing awareness of housing issues and the increasing deficit influenced the creation of the Corporation for Housing (Corporacion para la Vivienda CORVI) in 1953, from that year national plans for the housing sector were produced.

Later, in 1965 the Ministry of Housing was created to coordinate many public housing institutions under one head. Finally, in 1975 the Ministry was so that the surviving semi-autonomous housing institutions were suppressed and their activities taken over by the ministry as a whole; in this reorganization regional branches were created.

Each of the governments in the last thirty years has taken a different approach to housing. However it is possible to consider three broad styles, although there are some overlaps:

A) Subsidy to Supply: (1945 - 1960) <sup>(1)</sup>

This is the oldest type of state intervention in the housing market in Chile; it basically consists in a reduction or exemption of taxes to building companies or the owners of houses considered "economic or social". An example of this is the "Pereira Law" of 1948 or its new version the Law Decree No 2 of 1959; they both established tax allowances for houses not exceeding 140 square metres.

The amount of resources transferred in this form are unknown, but, according to Arellano (1982), the tax service estimated that for 1968 these tax allowances (expenditures) were equivalent to 11% of the public expenditure for housing and urbanisation. It is acknowledged by some housing specialists <sup>(2)</sup> that the house size is not the best mechanism to direct state subsidies to those in need.

Parallel to this general approach to housing there were special provisions for the poor, which consisted principally in the programme of slum eradication, a programme organized through CORVI and, the Housing Services Corporation (CORHABIT). It usually provided small houses in accordance to a point scheme per family, and sometimes promoted the self-construction of the houses.

B) Subsidy to Credit: (1960 - 1974)

This approach subsidized loans or mortgages and it was envisaged in two forms. Firstly, the state intervened in the loan market offering some opportunities to finance housing through the creation of the National Savings and Loan System (SINAP). The

.....  
1. The dates are only a guidance to understand the periods concerned.

2. See: J.P. Arellano op. cit. and T. Castaneda and R. Quiroz op. cit.

other possibility was to finance loans directly through CORVI, which from 1959 was allowed to use some provisional surpluses to build houses that were allocated to the people contributing to the public social security schemes.

The general policy for housing during the 1964 -70 period was that housing is a basic need to which every family should be entitled; houses should be paid for partially or totally by the new owner.

Although it was not a defined aim of SINAP, it began eventually to subsidize borrowers by not adjusting loans fully for inflation and offering interest rates lower than the market rate. The main problem of this approach lay in its regressivity: larger loans obtained larger subsidies, despite the fact that the rate of interest was higher for big loans, but still below the market cost (Arellano, 1982). This problem was exacerbated in the late 60's when the payments of debts were adjusted at a rate below the general price index.

During this period the Ministry of Housing was founded with an aim to coordinate the different housing institutions of the public sector. This included the Urban Improvements Corporation (CORMU), which was responsible for land purchase and general urban projects; the Housing Services Corporation (CORHABIT), incorporating the administrative and financial branch of housing and the Housing Corporation, which was the building unit.

Two other important initiatives were developed during this period. The "site operation" (Operacion Sitio), was oriented towards low income groups and provided a 160 square metres, semi-serviced plot, with the possibility of being fully serviced in a second stage. The site operation had its own application system, based on saving shares of which a minimum was required. The programme was severely criticized as an institutionalization of slums, since only the urbanized plot was provided, and the house was eventually built by the owner, or a temporary house was purchased. In response to this, some studies demonstrated that the most important desire of slum dwellers was the security of



having a plot to live on, rather than a definitive house. The "Site Operation" was the continuation of the programme for slum eradication.

The other important initiative was the programme of popular savings, which started as a programme to re-organize the different saving plans in existence at the time. It offered different saving alternatives according to income levels. This programme was organized by CORHABIT.

The organization of the housing sector is shown in Figure 7.1. It is possible to observe that the consumer had no direct link with the Ministry but through its operating agencies. The main housing provider was CORVI, which was organized on a national basis, but without a clear regional structure. For those aiming to obtain a house from the private sector the main alternative was to apply for a "soft" loan from one of the building societies (Asociaciones de Ahorros y Prestamos) participating in the National Savings and Loan System (SINAP) (3).

#### C) Subsidy to Demand: (1974 onwards)

Housing policies since 1974 have involved an important change relative to earlier periods. Two main policy objectives were defined for this period: i) To limit the public sector role in financing housing projects and liberalize the financial market. ii) To target government subsidies to people in most need by providing them with housing through a subsidy mechanism (similar to a voucher scheme).

According to Castaneda and Quiroz (1985) the immediate implications of these policies was the re-establishing of indexation according to the general price index of those paying mortgages to the public housing schemes. The liberalization of the financial market implied very strong competition with the

.....  
3. The present organization of the housing sector during the mid- 1980's is explained in the next section.

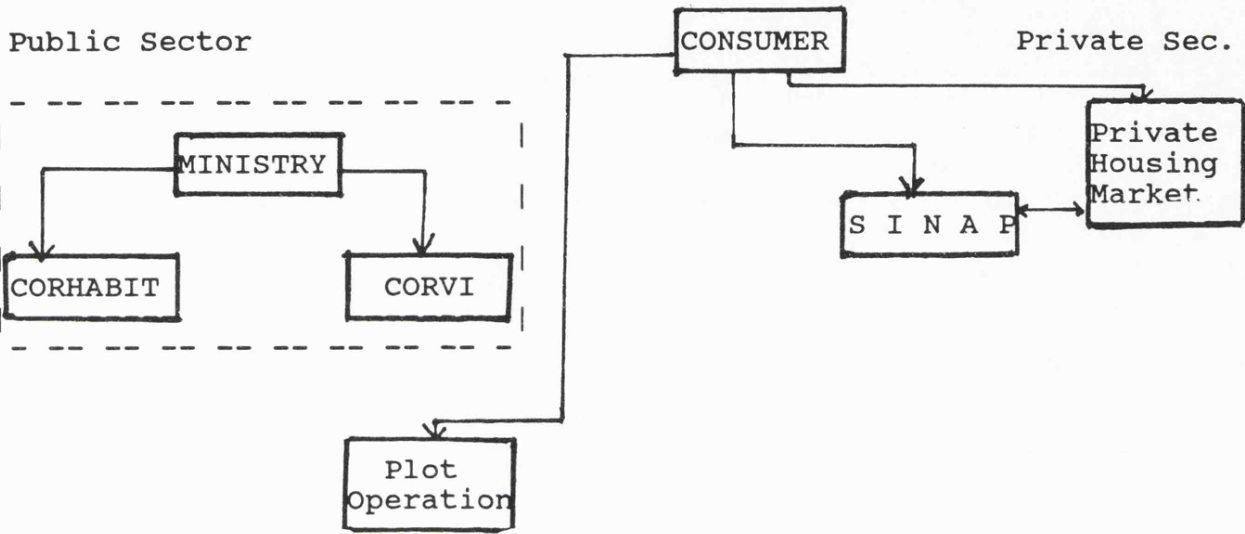
Building Societies, which were until that time almost in a monopolistic situation. These changes produced an end to the semi-public financial schemes, which were replaced by private banks.

The subsidy to demand system was primarily a lump sum given by the state to a prospective home buyer who fulfils certain requirements and succeeds in the application procedure. They operated as a voucher scheme. There were three different housing schemes operating under this approach: Urban Slums Programme, Housing Subsidy, and the Savings and Finance System. Each of them is explained in the next section.

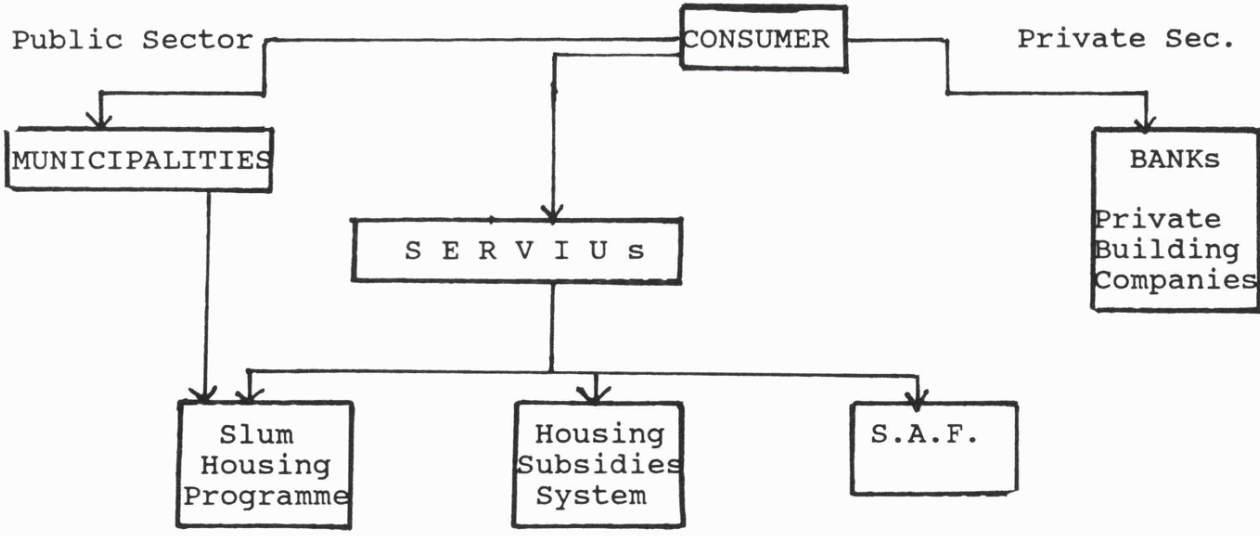
FIGURE 7.1.

MINISTRY OF HOUSING - ORGANIZATION

1970's



1985's



## 7.2. HOUSING FINANCE AND ORGANIZATION

### 7.2.A. Present Housing System

According to the new institutional structure a number of specific housing policies were enunciated. All of them stemmed from the principle of subsidiarity advocated by the Government during this period.

#### Policies

As mentioned earlier, one of the foundations of the social policies during the present government was the principle of subsidiarity, from it the policies were enunciated:

- Housing policies were aimed to transform the country into a country of housing owners. If necessary, low income families should be subsidized to achieve this aim.
- In this regard, the action of the state would occur only when the private sector was incapable of not interested in undertaking certain actions. This was especially important for housing of the poor and urban development.
- Because the role of the state was important in this area, there was a commitment to improve the system of contract and finance of housing demand.

From these postulates some lines of action were followed:

- The government would provide "integral" solutions to the housing problem, providing houses with all the mains services.

This is a clear reaction against earlier government programmes of slum clearance, which usually ended up not providing the basic services for a long period of time.

- The state would subsidize those families unable to obtain

a house by their own means, but at the same time it would stimulate family savings.

According to Foxley, Arellano and Aninat (1979) housing programmes had traditionally a very regressive distribution. Therefore, it is understandable that the government was trying to redress this trend.

- The Ministry made a compromise in relation to the decentralisation of the country, and took some measures to restructure the sector and provide better services in the field.

- The Ministry sought a reduction in the housing standards, which were making the costs of building excessively high (4).

- With regards to urban development, in 1984 the urban city limit was declared free, allowing the free expansion of the cities into agricultural or neighbouring areas.

## Organization

In 1976 the Ministry of Housing was re-structured, aggregating semi-autonomous housing corporations and services (such as CORVI, CORAHABIT, CORMU) under the sole management of the ministry. These changes were aimed to simplify the operation of the ministry, to avoid double activities and to accomplish the regionalization process in which the country was involved.

.....  
4. Arellano estimated for (1975 -1978) that the construction costs were for the U.K. only 69% of those of Chile; similar calculations were made for the U.S. and France, obtaining 66% and 88% respectively. However, there are other Latin American countries that have housing costs even higher than the Chileans. See Arellano 1982.

The new structure can be synthetised as follows <sup>(5)</sup>:

a) The Ministry of Housing kept its role of policy formulation and monitoring, and also took control of the technical housing standards. The Ministry was deconcentrated through the Regional Ministerial Secretariats (SEREMIs), which were direct representatives of the minister in the region and simultaneously in close association with the Regional Governor as advisors in housing policy matters.

b) The former housing corporations such as CORVI, were unified in the Regional Services for Housing and Urbanism (SERVIU) <sup>(6)</sup>. These institutions had the task of executing the policies, plans and programmes which the ministry had defined for them. Additional tasks were related to the process of allocating subsidies and the reorganization of public tenders to build houses with public resources.

In sum, the Ministry through the SEREMIs performed the normative function in relation to housing. At the same time SERVIUs performed the financial and administrative side of public housing. At a regional level, SERVIUs enjoyed a great degree of autonomy in defining the sites and the specific characteristics of the housing projects. But above all they were accountable to the SEREMIs which were the regional representatives of the minister.

At the central level, the Housing Policy Unit was responsible for planning the national ministerial activity in housing matters as well as the annual investment in the different programmes; it also monitored the activities of the regions including the construction work for other public services or public funds (Mandates). There was also the Urban Development Unit which planned the national and regional activities related to urban infrastructure and formulated the regulatory plans of

.....  
5. Ministry of Housing and Urbanism: Annual Report 1975 pp.12

6. In early stages the SERVIUs had a direct role in construction tasks, (purchasing land, planning and building). These activities are now mostly performed by private agencies.

cities. Finally there was the Study and Housing Promotion Unit which, apart from carrying out different studies, processed all the information related to the housing subsidy.

## Housing Programmes

Housing programmes passed during this period through long phases of experimentation with their general features and modes of operation. The main aim has been to make the programmes more redistributive and operable in a more flexible mode. In this description we will concentrate on the housing programmes in actual operation.

Until the early 1970's the Ministry of Housing was still the main provider and producer of houses fully connected to mains services for low income groups. Since 1976, the Ministry has changed its policy to a system which stressed competitive bidding to private builders. This system required that the builders find the land and design and finance the project. Building companies have now to compete for customers who have been are financed through the governmental subsidy programmes.

The selective aim of the programmes was mostly addressed by linking the selection procedures for the housing programmes to the national means test (Ficha C.A.S.). In this regard municipalities became an important institution for identifying housing needs and providing support to those applying to the housing programmes.

There are now three basic housing programmes operating in the country:

### Urban Slums Programme

The general objective of this programme is to allow families living in slums or families living in houses of relatives (concealed households) (allegados) to gain access to housing. The state subsidy consists of 190 UF <sup>(7)</sup> which can be

.....  
7. UF (Unidad de Fomento) is an accounting unit indexed with inflation. In December 1989 1UF=US\$ 21.6

credited against the cost of a house built by the private sector.

The state subsidy covers up to 75% of the cost of the house. The total value of the house cannot exceed 300 UF and the average size of the house must be around 36 Sq. Mts. <sup>(8)</sup> These constraints are to discourage middle income families from applying to this programme. The difference between the total cost of the house and the state subsidy can be covered by the family's savings or by a mortgage which can usually be arranged with SERVIUS <sup>(9)</sup> or with a private bank.

The selection procedure for this programme consists of each applicant completing a form containing questions about family structure, socio-economic variables and savings. The allocation formula includes the following aspects:

- Number of people in the household: Each person living in the household scores a number of points.
- Family savings: Per each UF presented as a credit one point is scored.
- Poverty level: Family score in the national means test.
- Additional savings: The property of a plot can also be presented as savings according to the fiscal valuation of land.
- Additional scoring factors will take account of:
  - Stability and persistence of family savings.
  - Total amount of subsidy applied for. In this case credit will be given to those asking for a relatively lower proportion of subsidies.

.....  
8. This house will include all mains services: water, electricity and sewerage.

9. SERVIUS's mortgages charge usually 8% annual interest over inflation (UF). They can be taken for a period of up to 20 years.



This programme has two main streams: Applicant System and Direct Subsidy. The first alternative operates via the individual family application (<sup>10</sup>) for a subsidy under the urban slum programme. The direct subsidy operates when a municipality decides to clear or upgrade a slum (Campamento) because of health or environmental risk or because of a necessity to use the land for other purposes. In this case, all the families selected benefit from the programme without participating in the national selection process. However, the other features of the urban slums programme still hold in this case.

Table 7.1. shows that this programme is building an average of 24,000 houses for poor families each year; although during the recessionary years, the programme suffered important financial constraints.

| TABLE 7.1.                               |        |
|--|--------|
| HOUSES BUILT UNDER URBAN SLUMS PROGRAMME |        |
| Year                                     | No.    |
| 1986                                     | 24,876 |
| 1987                                     | 26,985 |
| 1988                                     | 20,405 |

SOURCE: Informe Social ODEPLAN 1987-1989

#### Housing Subsidy System.

This subsidy aims to facilitate access to housing for those families who are unable to acquire a house through their own savings, but are not in an extreme condition of poverty.

The application to this subsidy follows the same score scheme as the slum programme, except it does not consider the family score in the national means test. The difference between the two programmes is that in this programme there are three subsidy brackets as shown in Table 7.2.

10. It is also possible to apply as organised groups. This is used by housing cooperatives.

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TABLE 7.2.

HOUSING SUBSIDY SYSTEM

Subsidy Brackets

| Total amount of subsidy | Maximum market price of the<br>house (11) |
|-------------------------|---|
| 200 UF                  | - 400 UF                                  |
| 170 UF                  | 400 to 580 UF                             |
| 150 UF                  | 580 to 850 UF                             |

-----

In contrast to the slums programme, in the housing subsidy system mortgages are mostly taken in the private market with higher interest rates, but with preferential borrowing rates partially subsidied by the state. As in the slum programme, the Ministry publishes in a national newspaper the list of successful applicants. Families obtaining the subsidy receive a subsidy voucher (Certificado de subsidio) which remains valid for 22 months. The beneficiary is able to buy a house in the private market and pay for it with the subsidy voucher and additional savings or bank loans. The validity period of the voucher is usually extended as many families are unwilling to take a credit indexed with inflation while their salaries were not. This situation was acute during the recessionary period. The delay in effectively using the vouchers was also influenced by the slow response of the construction industry and the hesitation of banks to grant small loans.

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11. In 1982 the government took as reference price of the house the market price and not its fiscal valuation. The aim was to restrain the possibility of people obtaining houses with lower fiscal valuation but higher market value. This practice worsened systematically the redistributive impact of the programme.

## Savings and Financing System for Housing (S.A.F.)

The savings and financing system for housing is aimed to encourage the saving habits of the population and facilitate the access to housing of middle income families.

To apply for subsidy a person must subscribe to a savings contract for housing in any financial institution. Through this contract the person commits himself to a minimum amount of savings during a defined period. The application procedure is very much the same as the other programmes with a national selection procedure based on the scores in areas such as previous savings, family size, persistence or permanence of savings and amount of credit required.

An additional difference in this case is that the maximum value of the house is set at 2,000 UF (about US\$ 43,000). There are two subsidy brackets under this programme. The total amount of subsidy that a family receives depends on the size of the loan applied for. In this way the system compensates those applying for smaller credits which use less indirect subsidy through the interest rate. This can be seen in Table 7.3.

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TABLE 7.3.

SAVINGS AND FINANCING SYSTEM FOR HOUSING (S.A.F.)  
Subsidy Brackets

| Total amount of subsidy | Amount of credit required |
|-------------------------|---------------------------|
| 0, 50, 90 or 130 UF     | - 500 UF                  |
| 0, 30, 70 or 110 UF     | 500 to 1000 UF            |

---

Table 7.4. shows the developments in the Housing Subsidies and the Savings and Financing Programmes simultaneously. It can be noted that the number of subsidies available for allocation in each annual round has more than tripled during the decade. The table also helps to depict the effort that the state has made for

each programme. Each year the state has allocated 20,000 to 25,000 subsidies to lower middle and upper middle socio-economic groups through the Housing Subsidies and S.A.F. (12); at the same time it has given a similar figure for low income families through the Urban Slums Programme. Table 7.4. shows the ratio between the subsidies allocated and paid. For example, it can be noted that in relation to those subsidies allocated during 1985, only 68% of them were paid, (actually used by the beneficiaries) two years later. This implies that the beneficiaries were still having difficulties using their entitlements.

Figure 7.1. shows a summary of the operation of the housing sector. The consumer (i.e. a person demanding a house) has three main alternatives which are provided through the ministerial operative regional branches: the SERVIUs. In addition to that for low income families, it is also possible to apply to the Urban Slums Programme through the municipalities. Some programmes, such as the Sanitary Infrastructure, are directed from the municipalities to the people. Therefore, these institutions seek to enroll the beneficiaries; for this reason the arrows are drawn in the opposite direction. Finally, the consumer has access to housing through the private market and private finance. On some occasions the consumer will receive the help of a government subsidy.

In addition to the housing programmes directly financed and controlled by the housing ministry, there are two additional programmes with important impact in this area: Sanitary Infrastructures and Main Services Programmes.

.....  
12. Around 10 to 15% of the total subsidies allocated annually to middle socio-economic groups are SAFs.

TABLE 7.4.

HOUSING SUBSIDIES (\*) ALLOCATED AND PAID  
UNTIL DECEMBER 1987

|       | No. Subs.<br>Allocated | No. Subs.<br>Paid | All./Paid % |
|-------|------------------------|-------------------|-------------|
| 1978  | 10,000                 | 8,373             | 83.7        |
| 1979  | 10,327                 | 9,152             | 88.6        |
| 1980  | 12,804                 | 10,606            | 82.8        |
| 1981  | 24,104                 | 8,495             | 35.2        |
| 1982  | 9,638                  | 9,022             | 93.6        |
| 1983  | 16,938                 | 16,005            | 94.5        |
| 1984  | 22,543                 | 20,354            | 90.3        |
| 1985  | 29,838                 | 20,360            | 68.2        |
| 1986  | 27,287                 | 8,808             | 32.3        |
| 1987  | 34,240                 | 1,801             | 5.3         |
| TOTAL | 197,719                | 112,976           | 57.1        |

SOURCE: Ministerio de la Vivienda  
Memoria Anual 1987

(\*) Includes subsidies allocated through  
the Savings and Financing System

### Sanitary Infrastructures

This programme was initiated in 1982 through municipal finance; in subsequent years it has received additional resources from the World Bank. A small proportion of this programme has been financed by the ministry. In some cases municipalities have transferred resources as a "mandate" to SERVIUs allowing them to organize and supervise the construction of sanitary infrastructures because they have the expertise. The programme is directed to those families living in slums or shanty towns with no possibility of access to other programmes.

The beneficiaries of this programme are entitled to a plot of 100 to 160 sq.mts., which includes a built-in sanitary infrastructure with an area of no less than 6 sq.mts. The sanitary infrastructure is connected to the housing mains services: electricity, drinking water and sewerage; it has a built-in bathroom (W.C. and shower) and a wash basin. The design of the infrastructure must allow for future constructions to be based upon it <sup>(13)</sup>.

.....  
13. Many municipalities and non-governmental organizations have implemented programmes to help families to upgrade their sanitary infrastructure starting from the initial housing facilities.

The cost of this infrastructure is about US\$ 2,400 (110 UF) including the plot and the construction. The subsidy finances 75% of the value of the infrastructure, the rest being met by the beneficiaries' savings or a SERVIU's loan.

The programme operates in a way similar to the direct subsidy. There are no applications. The municipality decides upon and plans for an area or slum to be cleared or upgraded. In 1987, 12,000 sanitary infrastructures were built in the country.

### Mains Services Programmes

In addition to the housing programmes, the ministry has a programme to regularize housing property and land tenure. In many instances this programme served as a first step towards a family house, as the site can be considered as savings. In 1987, the Ministry regularized over 23,000 property titles. As part of the ministerial functions there are other programmes related to urban pavements and footpaths, urban equipment and community centres.

The main services programme for drinking water, sewerage and electricity are run by the Ministry of Public Works. These programmes have had a significant redistributive impact in the last years as they have especially been concentrated in rural areas. However, as these programmes are financed by another ministry they are not considered here.

## 7.2.B. Total Public Expenditure on Housing

The developments in total public expenditures in housing can be observed in Table 7.5. The figures presented were obtained from Yanez (1983) and Yanez and Aguilo (1988) and the Comptroller. They all show a very similar trend as all of them were deflated by the National Institute of Statistics C.P.I. From the table it is possible to note that housing expenditures have suffered a tremendous decrease since 1974 when they accounted for 2.6% of the G.D.P.

In contrast to the social sectors previously considered, housing need not act as a flow of services. Housing is in reality a stock which offers a flow of services to those who are involved with it (<sup>14</sup>). This rather different approach to housing as a stock has an interesting implication from the public expenditure point of view: housing expenditures are public investments to be made once per life time for a family. In other words, after allocating the house to a family by subsidising around 75% of its cost, the state ceases its responsibilities in relation to that family (<sup>15</sup>). This alternative is not possible in other services as people have a "social right" or entitlement to continue education or continue receiving health care.

This issue was discussed with specialists in the Budget Office (Ministry of Finance). They did acknowledge this argument as one of the reasons why housing is one of the sectors most vulnerable to cuts. An additional explanation is related to the process of providing houses. The production of public housing in Chile is almost entirely in the hands of the private building companies, therefore, a reduction in housing expenditures will not affect state bureaucracy.

.....  
14. At the same time it should be considered that housing expenditures are a flow.

15. Besides recovering the housing loan if applicable.

| TABLE 7.5.                     |  |             |  |             |
|--------------------------------|--|-------------|--|-------------|
| PUBLIC EXPENDITURES ON HOUSING |  |             |  |             |
| YEAR                           | PUBLIC EXPENDITURES IN HOUSING<br>(Millions of 1989 pesos) |             | HOUSING EXPENDITURES<br>per CAPITA<br>(1989 pesos) |             |
|                                | YANEZ  | COMPTROLLER | YANEZ  | COMPTROLLER |
| 1970                           | 97724  |             | 10432  |             |
| 1973                           | 94596  |             | 9593   |             |
| 1974                           | 109341   |             | 10906  |             |
| 1975                           | 56318  |             | 5578   |             |
| 1976                           | 53598  |             | 5168   |             |
| 1977                           | 70554  |             | 6687   |             |
| 1978                           | 49319  | 49786       | 4560   | 4603        |
| 1979                           | 63762  | 67232       | 5810   | 6126        |
| 1980                           | 65590  | 65900       | 5885   | 5913        |
| 1981                           | 61874  | 61762       | 5462   | 5453        |
| 1982                           | 39445  | 43623       | 3424   | 3787        |
| 1983                           | 33703  | 34617       | 2877   | 2954        |
| 1984                           | 45679  | 46937       | 3833   | 3938        |
| 1985                           | 61903  | 62131       | 5107   | 5126        |
| 1986                           |  | 55527       |  | 4504        |
| 1987                           |  | 61987       |  | 4945        |

Source:

1. Yanez (1983) and Yanez y Aguilo (1988);
2. Contraloria General de la Republica  
Informes Gestion Financiera 1987

NOTE: Deflated by the National Institute of Statistics C.P.I.

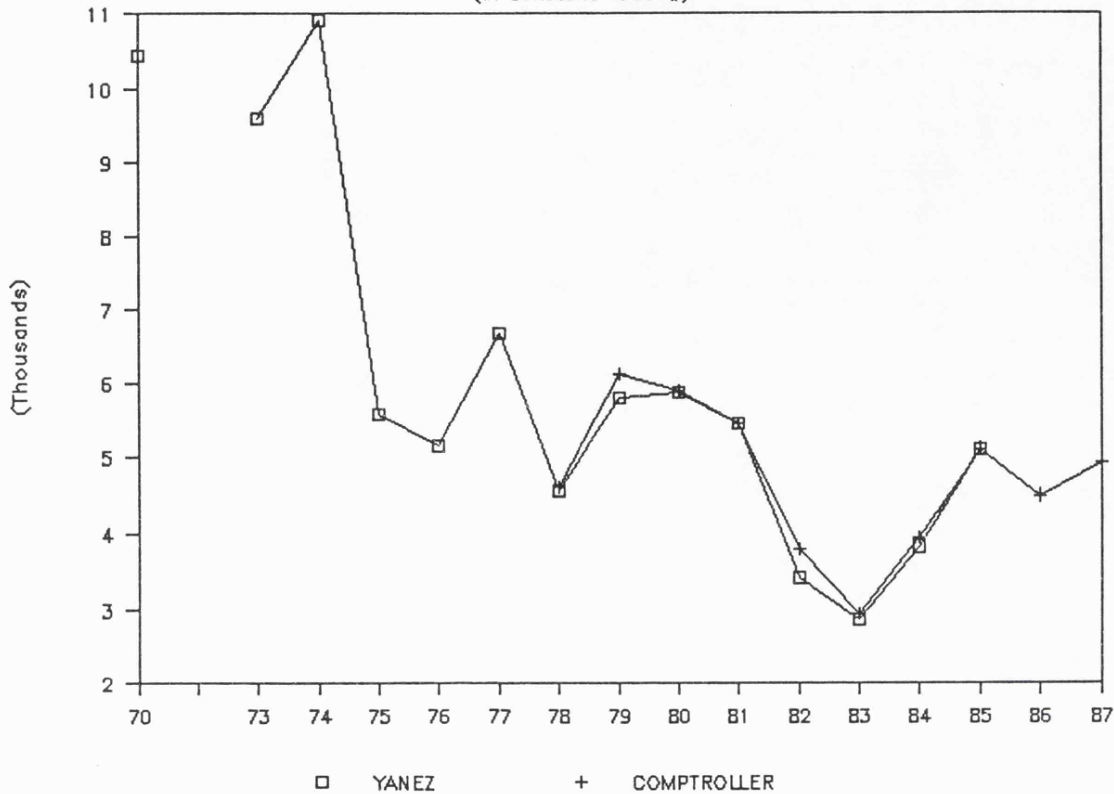
Figure 7.2. depicts the developments of housing expenditures per capita. The figure shows a peak during the early seventies with a great fall by 1975. Another fall is also seen in 1982-83 during the recessionary period. Overall, it is possible to summarize thus, that housing has followed a pro-cyclical pattern during the last fifteen years. In other words, housing has been severely constrained during the recessionary years. Our analysis suggests that this sector might have been chosen specifically to counter-balance the fiscal restrictions on public expenditures during the recessionary years.



FIGURE 6. 2.

## HOUSING EXPENDITURES PER CAPITA

(in constant 1989 \$)



### 7.2.C. Expenditure Structure

This section was approached as in previous chapters following the methodology described earlier. In this case, the process of transfer elimination proved to be a very important step as transfers accounted for originally around 50% of the ministerial expenditures.

#### Economic Expenditure Structure

Personnel: As can be seen in Table 7.6., personnel was concentrated mostly in the undersecretariat which recruits and pays almost all the staff of the Housing Ministry, both at the national and regional levels. As most of the building tasks were left to the private sector, personnel accounts for only a small proportion of ministerial expenditures.

Goods and Services for Consumption: This item was related to office expenditure on stationery and related materials. It accounted for only 2% of ministerial expenditures.

Transfers: This area originally included important transfers from the undersecretariat to the SERVIUS. These have been consolidated to avoid double counting. The remaining transfers were payments to the private sector for services rendered to the ministry.

Capital Investment: This item was the bulk of the ministerial expenditures accounting for 70 to 80% of the budget.

Financial Investment: In this area it was necessary to consolidate (eliminate) the loans that the ministry granted to most of the beneficiaries of its housing programmes. In this case, we departed from other public expenditure studies in Chile which treated financial investment as expenditures despite the fact that this money would be recuperated.

Capital Transfers: Capital transfers were another form of capital investment which for accounting reasons were included in this item.

Other: Two expenditure items were included here: the payment of public debt and the payments related to the difference in interest rates of the subsidized loans.

TABLE 7.6.

## THE STRUCTURE OF PUBLIC EXPENDITURES ON HOUSING

| EXPENDITURE  | PUBLIC EXPENDITURES IN HOUSING<br>(Millions of 1987 pesos) |          |       |                  | EXPENDITURE STRUCTURE<br>(%) |       |      |       |
|--------------|--|----------|-------|------------------|------------------------------|-------|------|-------|
|              | 1985   |          |       |                  | 1985                         |       |      |       |
|              | Undersec. SERVIUs  | Met.Park | TOTAL | Undersec.SERVIUs | Met.Park                     | TOTAL |      |       |
| Personnel    | 2950.3   | 16.9     | 203.1 | 3170.3           | 38.6                         | 0.0   | 60.4 | 7.1   |
| G.& S. cons. | 292.7  | 487.1    | 117.6 | 897.4            | 3.8                          | 1.3   | 35.0 | 2.0   |
| Transfers    | 8.1  | 699.7    | 0.0   | 707.8            | 0.1                          | 1.9   | 0.0  | 1.6   |
| Cap.Inv.     | 656.7  | 34971.6  | 8.9   | 35637.1          | 8.6                          | 95.6  | 2.6  | 80.0  |
| Finan.Inv.   | 0.0  | 2.8      | 0.0   | 2.8              | 0.0                          | 0.0   | 0.0  | 0.0   |
| Cap.Transf.  | 87.4   | 170.6    | 0.0   | 258.0            | 1.1                          | 0.5   | 0.0  | 0.6   |
| Other        | 3655.7   | 214.6    | 6.5   | 3876.8           | 47.8                         | 0.6   | 1.9  | 8.7   |
| Total        | 7650.9   | 36563.3  | 336.1 | 44550.2          | 17.2                         | 82.1  | 0.8  | 100.0 |
|              | 1986   |          |       |                  | 1986                         |       |      |       |
| EXPENDITURE  | Undersec. SERVIUs  | Met.Park | TOTAL | Undersec.SERVIUs | Met.Park                     | TOTAL |      |       |
| Personnel    | 2979.7   | 14.9     | 212.3 | 3206.9           | 33.5                         | 0.0   | 50.4 | 7.5   |
| G.& S. cons. | 344.9  | 374.9    | 118.0 | 837.7            | 3.9                          | 1.1   | 28.0 | 2.0   |
| Transfers    | 12.7   | 431.3    | 0.0   | 444.0            | 0.1                          | 1.3   | 0.0  | 1.0   |
| Cap.Inv.     | 991.6  | 32093.9  | 86.2  | 33171.8          | 11.2                         | 95.9  | 20.5 | 77.6  |
| Finan.Inv.   | 0.0  | 202.7    | 0.0   | 202.7            | 0.0                          | 0.6   | 0.0  | 0.5   |
| Cap.Transf.  | 0.0  | 119.7    | 0.0   | 119.7            | 0.0                          | 0.4   | 0.0  | 0.3   |
| Other        | 4559.1   | 211.3    | 4.4   | 4774.8           | 51.3                         | 0.6   | 1.1  | 11.2  |
| Total        | 8888.1   | 33448.7  | 420.9 | 42757.7          | 20.8                         | 78.2  | 1.0  | 100.0 |
|              | 1987   |          |       |                  | 1987                         |       |      |       |
| EXPENDITURE  | Undersec. SERVIUs  | Met.Park | TOTAL | Undersec.SERVIUs | Met.Park                     | TOTAL |      |       |
| Personnel    | 2874.9   | 18.1     | 209.7 | 3102.7           | 20.6                         | 0.1   | 54.5 | 6.5   |
| G.& S. cons. | 349.3  | 359.9    | 129.8 | 839.0            | 2.5                          | 1.1   | 33.7 | 1.7   |
| Transfers    | 175.6  | 354.2    | 0.0   | 529.8            | 1.3                          | 1.1   | 0.0  | 1.1   |
| Cap.Inv.     | 883.9  | 32681.0  | 37.3  | 33602.1          | 6.3                          | 97.3  | 9.7  | 70.1  |
| Finan.Inv.   | 573.1  | 0.0      | 0.0   | 573.1            | 4.1                          | 0.0   | 0.0  | 1.2   |
| Cap.Transf.  | 984.5  | 177.0    | 0.0   | 1161.5           | 7.0                          | 0.5   | 0.0  | 2.4   |
| Other        | 8125.9   | 6.0      | 8.1   | 8140.0           | 58.2                         | 0.0   | 2.1  | 17.0  |
| Total        | 13967.2  | 33596.2  | 384.9 | 47948.2          | 29.1                         | 70.1  | 0.8  | 100.0 |

Author calculations based on:

Estados Ejecucion Presupuestaria del Sector Publico

Contraloria General de la Republica

1985-86-87

## Institutional Expenditure Structure

**Undersecretariat:** This area gathered almost all the ministerial bureaucracy financing personnel and the activities of most ministerial departments. It also integrated the expenditures on the payments related to subsidized loans.

**SERVIUS:** SERVIUS are the operative branches of the ministry. Around 85% of SERVIUS expenditures in capital investment were devoted to housing programmes. The remaining 15% was spent in smaller urbanization programmes such as street pavements and others.

**Metropolitan Park:** The metropolitan park is the main park of Santiago. It is under the Ministry of Housing management <sup>(16)</sup>.

### 7.2.D. Budget and Planning

In this chapter we will concentrate on the description and analysis of the specific budgeting and planning aspects particular to housing, without explaining those aspects with common features to the previous areas.

#### Formulation

The Ministry of Housing has an important part of its expenditures financed through its own resources. Around 40% of the housing activities are financed through loan recuperation, sale of assets and others. Therefore, revenue estimation is an important stage. In this case the Budget Office has little information itself and must rely on the ministerial sources. The ministerial Financial Division consolidates the regional estimates of loan recuperation. These figures are sent later to the Budget Office. It is in relation to these estimates that the Budget Office determines its final allocations.

.....  
16. Metropolitan park was included in this sector because it is part of the Ministry administrative organization, despite that it is not related to housing itself.

In relation to the expenditure formulation of the budget, the Financial Division prepares a financial basis which is given to all the ministerial departments. This document applies mostly to non-investment expenditures. In this area the budget follows the incrementalist approach described earlier. In relation to capital investment we need to explain this area more fully as it has some consequences for the ministerial organization.

On the one hand, paving, sanitary infrastructures, urban property titling and other smaller programmes follow the procedure of national investment projects. The SEREMIs identify and evaluate the projects and present them for approval at the central level. The ministry in conjunction with ODEPLAN approves a certain number of projects independent of the resources available (<sup>17</sup>). Each region later receives a precise amount of resources which allows it to finance a proportion of the approved projects. The total amount of resources available for this type of programme depends strongly on the allocation of the Budget Office and therefore, on the financial situation of the country. In this respect, we consider this area of expenditures to follow a rational approach to decision making, as means are contrasted to ends, and alternative approaches are also considered. This area accounts for approximately 10% of the ministerial expenditures.

On the other hand, in relation to the housing programmes (subsidies) the Budget Office determines the total amount of resources available for each of the housing subsidies. This quantity is defined considering the ministerial goals (for example: to provide at least 10,000 annual subsidies in the housing system), special circumstances arising that may press for additional expenditures (earthquakes, floods, others), and principally the state of the national public finances. Therefore, in this area the ministry does not need to spend much time in the budget formulation as its expenditure ceilings are defined by the Ministry of Finance.

.....  
17. This is according to the Basic Statistical System for Investment described in Chapter 2.

## Authorization

The formal authorization of the national budget implies the approval of the ministerial budget.

## Implementation

In the case of non-housing expenditures, they are subject to a cash flow agreed upon with the budget office, after which further negotiations are possible.

The resources for capital investments are also given to the ministry in accordance with a cash flow agreed upon with the Budget Office. Since part of these expenditures are approved on a project basis and there is a clear expenditure ceiling for the rest, there are usually no financial uncertainties in this area (18).

## Evaluation

There is no official budget evaluation phase. However, the Ministerial Annual Reports assesses the number of houses built in relation to the proposed goals.

Before discussing the links between planning and budgeting it is necessary to introduce briefly the financial implications of the allocation process of the housing subsidies programmes.

In the Urban Slums Programme each must complete a form with all the required information. After this, an official calculates the score of the applicant. All this information introduced into the Regional Applicants' Register. This register holds the information of all those applying for an urban slums programme. Depending on the population sizes the registers cover regions, municipalities or an aggregation of municipalities.

.....  
18. The Budget Office withholds a certain proportion of the funds related to the delay of the subsidies actually being paid.

The ministry of housing allocates a fixed proportion of resources to each applicants' register. However, this approach means that areas (<sup>19</sup>) with lower demands for housing, and therefore smaller applicants' registers, that benefit proportionally more than the areas with higher demands for housing.

In relation to the Housing Subsidy System and the S.A.F., the allocation procedure contains a slight difference. There are no areal application registers as all applicants are introduced on to the same national list, allowing them to compete against each other in relation to their application scores regardless of their place of residence. Through this procedure the ministry aims to achieve territorial equity (<sup>20</sup>). The consideration of family savings and the size of the loan required as a score components, regardless of other socio-economic indicators, contributes to the fact that families successful in their applications are usually better-off than their counterparts.

In financial terms, this procedure implies that the Financial Division transfers resources to the regions in relation to the subsidies to be paid into each of them according to the national rules of application. Therefore, the regional discretion is related to the management of loans portfolio and the timetable of the actual subsidies payment, despite the fact that the subsidies resources appear within each SERVIU budget.

.....  
19. Areas are Regions, aggregation of municipalities, and municipalities.

20. The ministry has not acknowledged the concept of territorial equity but it has made clear a desire to provide equal standards of provision for people in similar needs.

## Planning

In contrast to other social sectors, due to the very nature of housing activities there is constant feedback between planning and budgeting. It is almost compulsory in this sector to have a tight follow-up of the progress made in the building contracts arranged and the payments related to them <sup>(21)</sup>. In the areas where most building responsibilities rely on the private sector it is also possible to have a precise follow-up on the relation between planned and actual expenditures.

However, in other areas not related to building functions the links between planning and budgeting are weaker. The Housing Policy Division has a longer time horizon than the annual budget rounds. Therefore, despite the fact that its studies will influence the budget allocations in one way or another, in the long run it is not usually concerned with budgetary discussions, policy proposals and goal achievement each year. It does have the strategy of "ministerial tasks", which means defining a precise problem or aspect to be reviewed and studied for a period of time; once the study is finished, the task becomes to decide how to implement it and, at this stage the links with the Finance Division are needed.

In conclusion, housing appears to have characteristics of a mixed sector. It shares some of the features of other ministries, such as an incremental approach some of the budgeting procedures. At the same time, few links between policy formulation and budgeting are observed. Within the ministerial departments, the bureaucrats tend to seek these links at the last minute, just before the desired policy is to be implemented.

.....  
21. Service programmes and sanitary infrastructures.



From the other side, due to the nature of housing activities involving precise outcomes and costs, it is easier and more necessary to have a permanent link between finances and planning. Simultaneously, the decision making process also follows a rational pattern as an important proportion of the expenditures in this area are subject to Cost Benefit Analysis.

However, this "rational" style also constrains other valuable approaches to planning. In this regard serious complaints have been made by the beneficiaries of the housing programmes against the house layout, size and organization. Minimum cost solutions are usually far from a transactive model of planning.

Finally, in relation to the procedure for allocating housing subsidies it is necessary to emphasize that it is a transparent and known system for most applicants. However, the actual individual allocation of subsidies, although it includes poverty and other socio-economic indicators, is according to a national criterion which constrains local autonomy and can produce some regressive regional patterns in the final allocation of resources. This issue will be discussed in section 7.4.

## 7.2.E. Discretionary Powers Over Public Resources and Decisions

In this section we analyse the regional discretionary powers in the management of public resources following the methodological approach defined in section 4.4. As in the previous section, in this section we will emphasize only those aspects which appear for the first time, avoiding the repetition of earlier explanations for the same type of phenomena. The discussion is summarised in Table 7.7.

### E.1. Regulation

The definition of the institutional tasks is undertaken at a central level, as has been the case for most of the institutions analysed so far. Regarding the source of authority and the control of functions, the undersecretariat and SERVIUS have a shared responsibility in this area. This means that these institutions are the regional representatives of the central ministry and accountable to both the central level and to the regional authorities.

The case of the Metropolitan Park of Santiago is an exceptional case of a delegated institution accountable to the central ministry but with a large degree of discretionary power.

### E.2. Finance

Centrally managed finance are the funds over which the regions have almost no discretion. In this case, this type of funding represents 21% of the ministerial budget and is concentrated principally in the ministerial bureaucracy.

Specific purpose funds, which account for 70% of the ministerial budget are funds transferred to the regions with a single objective, the eligibility criteria being defined centrally. This is the case with most housing subsidies as they are allocated centrally according to a national allocation selection process. The regions have the financial discretion to manage only the loans allocated to the subsidies, but not the subsidies' levels or quantities themselves.

TABLE 7.7.

DISCRETIONARY POWERS OVER RESOURCES AND DECISIONS ON HOUSING

| Govt. Intervention Forms | Undersecret. | SERVIUs | Metropolitan Park | TOTAL   |
|--------------------------|--------------|---------|-------------------|---------|
| <b>REGULATION</b>        |              |         |                   |         |
| Who Defines Tasks        | Centre       | Centre  | Centre            | Centre  |
| Source of Authority      | Shared       | Shared  | Delegated         | Shared  |
| Control                  | Shared       | Shared  | Delegated         | Shared  |
| <b>FINANCE</b>           |              |         |                   |         |
|                          | CMF 91%      | SPF 85% | SPF 100%          | CMF 21% |
|                          | BF 9%        | BF 15%  |                   | SPF 70% |
|                          |              |         |                   | BF 9%   |
| <b>PRODUCTION</b>        |              |         |                   |         |
| Personnel                | Centre       | Shared  | Centre            | Centre  |
| Field Administration     | 2            | 2       | N/A               | 2       |
| Levels                   |              |         |                   |         |

NOTE: See text for explanations

FINANCE: CMF Centrally Managed Finance  
 SPF Specific Purpose Fund  
 BF Block Fund

PRODUCTION: Levels of Field Administration  
 1 Central  
 2 Regional

Block fund is the case of funds which can be used within a broader area; 9% of the ministerial expenditures fall into this category. These funds are related to small programmes of paving, legal registration and others. In this situation the regions have the discretion to decide the allocation of the resources between these smaller programmes.

Overall, we found that the ministry of housing has a fair amount of discretion in financial aspects as more than two thirds of its budget is managed in a more decentralized manner.

### E.3. Production

As can be seen in Table 7.7., personnel follows the pattern of the other sectors. Recruitment needs to be approved at a central level in most cases. The SERVIUs enjoy a limited discretion in selecting the right person at a regional level, but the rules and salaries are determined by the centre.

The Ministry of Housing is organized on only two levels of field administration: national and regional. However, it should be pointed out that municipalities are becoming involved in the process of housing subsidies' applications by advising people at this stage. But, they act only as a "mail box" for the SERVIUs.

In sum, the Ministry of Housing enjoys important levels of discretion in administrative and managerial terms. However, most of these discretionary powers are regulated by national instructions, mechanisms or procedures. Therefore, we consider that the ministry follows overall a deconcentrated model.

## 7.2.F. Summary and Conclusions: Organization and Finance in Housing

In relation to the finance and organization of the housing sector, there are four relevant aspects that about which conclusions can be drawn upon the discussion presented in this section.

Firstly, it is important to consider the administrative re-organization of the sector. Before the foundation of the Housing Ministry, one of the main sectoral problems was the lack of coordination between a variety of housing agencies. After the foundation of the ministry, most agencies were suppressed leaving most of their functions to the new ministry. Nevertheless, transformations were not complete. An important change was made when the Ministry left its role as housing provider to low income families to the private sector. The central ministry now took charge of the normative role while the SERVIUs or regional ministerial agencies became the operative regional unit. These units supervised and controlled the housing projects assigned to private companies. However, the ministry remained still the main financier of housing for low income families through a number of special subsidies.

Secondly, the allocation procedures for the housing programmes have mixed criteria which produce contradictory results. The housing programmes are presently allocated according to a national scoring system which integrates variables such as family size, family savings, poverty levels and others. In most cases the score system applies nationally, so that people from different regions compete for a subsidy irrespective of their places of residence. The scoring system is designed in a way to give more chances to poor families.

The allocation procedure for housing subsidies does not have a clear aim. On the one hand, it tries to make the distribution of housing expenditures more progressive by including components such as family size and poverty levels. However, other components such as family savings, permanence of savings and a score reward for those requiring for smaller loans may produce exactly the opposite effect. This issue will be analysed in the next section.

On the other hand, there is no clear regional criterion and local autonomy is not encouraged. In the urban slums programme there are fixed area quotas per applicant registers. In the housing subsidy system and S.A.F. applicants compete nationally. We estimate that overall both alternatives favour rich regions. In the first case it is an error of omission, in that rich areas people will benefit in a higher proportion; in the latter case it is because of the criteria and scores for selection. An alternative procedure would be to define a specific purpose fund in which its regional allocation is related to a relevant indicator of housing needs. Once regionally allocated, the regions would be able to define the relevant procedures for selecting individual beneficiaries following some general central guidelines, for example, progressiveness.

Thirdly, the sector has experienced considerable decreases in its public expenditures per capita since the early 1970's. In addition to this, the sectoral expenditures have been more severely curtailed during the latest recessionary periods. Therefore, the sectoral expenditures have followed a pro-cyclical pattern contrary to the ones observed in health and education.

Fourthly, in relation to the budget and planning procedures of the Housing Ministry, we found that its expenditure estimations are not very important as most expenditure levels are determined by the Budget Office. The Budget Office (Ministry of Finance) defines the expenditure ceilings of all ministerial programmes. This implies that the ministry has no need to justify its programmes and budget formulation is a simple problem. In addition to this, the Budget Office imposes no additional restrictions on the ministry, therefore there is no case for

repetitive budgeting here (22).

At the same time, it is also possible to find here most of the incremental and "transparent" features found elsewhere. However, due to the characteristics of the housing activities, which include known costs, time periods of building and others, it is possible to use a much more systematic and rational approach to budgeting and planning.

Finally, in relation to the discretionary powers for the management of resources and decisions, we concluded that the ministry enjoys an important degree of discretion in administrative terms. This fact may appear as contradictory to the previous aspect. However, as the Ministry of Finance has defined clear expenditure levels for the sector, it is left with more independence defining the sectoral interregional allocation. Thus we were led us to categorise housing as a deconcentrated model.

.....  
22. This is basically because the Budget Office has defined a clear expenditure ceiling for the ministry and, because of this, it does not need to control tightly its cash flow.

### 7.3. REDISTRIBUTIVE EFFECTS OF HOUSING POLICIES

This section reviews the redistributive effects of housing policies. As was mentioned earlier one of the most recurrent criticisms of housing policies in the last decades has been its lack of progressiveness in that <sup>they</sup> had favoured the middle and upper middle socio-economic groups.

Despite this fact the government has defined only two housing programmes as poverty-targeted ones: Urban Slum Programmes and Sanitary Infrastructure. In these cases the main requirement for qualifying as an applicant to the programme is to have a low score in the national means test (Ficha C.A.S.) (i.e. to be poor). In the rest of the programmes, a degree of progressiveness is expected to be reached through the score system, which takes into account the relative economic capacity of the families.

The methodological approach to evaluate these housing subsidies is the following:

#### Urban Slums Programme:

The public subsidy on this programme was estimated by dividing the total cost of the houses built under this scheme during a year by the number of beneficiaries during the same year. From this estimated unitary cost of a house built under the Urban Slums Programme it was necessary to subtract 25% of its costs. This was done because the programme financed only 75% of the total cost of the house. The resulting figure was transformed into a monthly flow of income by applying an annual rate of 11% which represented the rent or the flow of services of the house <sup>(23)</sup>.

There was no information about the proportion of non-paid subsidised loans. So it was impossible to estimate this additional cost for the public purse.

.....  
23. This rate is used in the Chilean National Accounts for estimating the imputed rent or the annual service of a house.



### Housing Subsidy System and S.A.F.:

In these programmes the estimation of the subsidy related to the cost of a house (direct subsidy) was calculated as in the case of the Urban Slums Programme.

The indirect subsidy, or the difference between the market interest rate and the subsidised rate was estimated in a similar way as the direct subsidy. From ministerial sources it was possible to obtain the total expenditures on this item during a year. This figure was divided by the number of beneficiaries during the same year. The resulting figure was also transformed to a monthly flow of income following the procedure described above.

| TABLE 7.8.  |        |        |
|---|--------|--------|
| ESTIMATES OF DIRECT SOCIAL EXPENDITURES AS A PROPORTION OF<br>TOTAL PUBLIC EXPENDITURES IN HOUSING<br>(Millions of 1987 \$) |        |        |
|   | 1985   | 1987   |
| a) Total public expenditure in Housing  | 44,550 | 47,948 |
| - Loan recuperation   | 13,151 | 13,171 |
| b) Fiscal social expenditures in Housing  | 31,399 | 34,777 |
| - Administration costs  | 7,913  | 4,987  |
| c) Direct social expenditures in Housing  | 23,486 | 29,790 |
| c) / a) %   | 52.7   | 62.1   |

Author calculations based on:

Table 7.6.

Ley de Presupuestos del Sector Publico 1985 -1987

Haindl & Weber 1986

Haindl, Budinich and Irarrazaval 1989

In order to estimate the redistributive effects of housing policies it was necessary to have an estimate first of the direct social expenditures as a proportion of total public expenditures. These estimates appear in Table 7.8. In contrast to other social sectors, housing has an important proportion of its expenditures financed from its own resources, i.e. not budget allocations or

fiscal free contribution. In this case, these resources are related to the recovering of loans offered from the ministry to the beneficiaries of its programmes. The table shows that direct social expenditures capture 53 and 62% of total public expenditures. These results indicate that our findings about the redistributive impact of housing expenditures representative of more than half of total expenditures on the sector.

Table 7.9. shows the redistributive effects for the total Ministry of Housing (<sup>24</sup>). The results indicate that housing programmes are slightly progressive since they fall into the category within which the bottom 30% of the population receives between 30 to 50% of the sectoral expenditures. It is possible to observe at the same time that between 1985 and 1987 there was a slight increase in progressiveness due to the redefinition of the selection procedures.

|      |       | Total<br>Direct Exps. | Share of<br>Bottom 30% | %    | TYPE OF PROGRAMME    |
|------|-------|-----------------------|------------------------|------|----------------------|
| 1985 | TOTAL | 23,486                | 8,220                  | 35.0 | Slightly Progressive |
| 1987 | TOTAL | 29,790                | 10,776                 | 36.2 | Slightly Progressive |

Author calculations based on:

Table 7.6.

Haindl & Weber 1986

Haindl, Budinich and Irarrazaval 1989

Overall, it can be concluded that despite considerable governmental rhetoric about making housing more progressive there is still a long way to go regarding this issue. This is endorsed by the fact the the bottom 30% will only receive a bit more than a proportional share of the housing expenditures.

24. Due to informstion constraints it was not possible to estimate the redistributive effects of housing expenditures per programme.

## 7.4. REGIONAL ALLOCATION OF HOUSING EXPENDITURES

### 7.4.A. Data Constraints and Methodology

In order to test the competing hypotheses defined in Chapter 3 it is necessary to produce a regional estimate of housing expenditures and compare these figures with indicators of sectoral needs and other socio-economic indicators. The procedure for estimating the regional allocation of housing expenditures follows the same approach described in earlier chapters (See Table 7.10.).

Criteria for Regional Allocation of Housing Expenditures by Institutions <sup>(25)</sup>.

**Undersecretariat:** The Undersecretariat centralizes most of the bureaucratic activities of the ministry, both at national and regional levels. Almost all personnel is paid through the Undersecretariat. There is no statistical information that may help to allocate these expenditures on a direct basis. Therefore, it was necessary to define a sectoral related indicator. The indicator used was the distribution of SERVIUs expenditures as the Undersecretariat provides all the administrative support for these operative agencies at a regional level. (Criterion C).

**SERVIUs:** The regional housing services are the operative branches of the SEREMIs or regional ministerial offices. There is a very accurate basis for the regional allocation of SERVIUs expenditures as each of them has its own budget. Therefore, to estimate the regional allocation of SERVIUs expenditures it was only necessary to eliminate the transfers between SERVIUs and the Undersecretariat. The estimates obtained for this institution are according to criterion A.

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25. As the Metropolitan Park is located in Santiago, all its expenditures can be easily assumed to reach the population of the Metropolitan Region.

| TABLE 7.10.   |           |         |          |       |
|---|-----------|---------|----------|-------|
| CRITERIA OF REGIONAL ALLOCATION OF HOUSING EXPENDITURES |           |         |          |       |
| 1985  | Undersec. | SERVIUs | Met.Park | TOTAL |
| Crit. A   |           | 100     | 100      | 83    |
| Crit. B   |           |         |          |       |
| Crit. C   | 100       |         |          | 17    |
| Crit. D   |           |         |          |       |
| TOTAL   | 100       | 100     | 100      | 100   |
| % Min. Budget   | 17        | 82      | 1        | 100   |
| 1986  | Undersec. | SERVIUs | Met.Park | TOTAL |
| Crit. A   |           | 100     | 100      | 79    |
| Crit. B   |           |         |          |       |
| Crit. C   | 100       |         |          | 21    |
| Crit. D   |           |         |          |       |
| TOTAL   | 100       | 100     | 100      | 100   |
| % Min. Budget   | 21        | 78      | 1        | 100   |
| 1987  | Undersec. | SERVIUs | Met.Park | TOTAL |
| Crit. A   |           | 100     | 100      | 70    |
| Crit. B   |           |         |          |       |
| Crit. C   | 100       |         |          | 30    |
| Crit. D   |           |         |          |       |
| TOTAL   | 100       | 100     | 100      | 100   |
| % Min. Budget   | 29        | 70      | 1        | 100   |

NOTE: See text for explanations

#### 7.4.B. Regional Expenditures and Regional Needs

In this section we discuss the link between the estimated regional expenditures on housing and sectoral needs. To approach this task it is necessary to consider the indicators of need in this area. The indicators to be used should be available on a regional basis and for the three years under analysis. Unfortunately, these rather simple requirements constrained dramatically the number of indicators available.

The indicators used in this sector are the following:

**Sewerage:** This indicator was calculated as the proportion of the population covered by sewerage services in relation to total population. The information was provided by the statistical division of the Ministry of Public Works.

**Water:** This indicator measures the proportion of the population with access to drinking water in relation to total population. This indicator was estimated from the data supplied by the Ministry of Public Works.

In addition to the housing needs' indicators the group of socio-economic indicators was also included to provide information for the testing of the hypotheses.

**GDP:** Regional GDP per capita

**INCO:** Regional average income

**URBN:** % Urban population

**URBZ:** % Population living in cities of above 20,000 habitants.

The final group of indicators include the regional expenditure information. As in previous chapters we defined alternative measures of the sectoral regional expenditures.

**SERVIU:** Includes the expenditures in the regional housing services which finance most housing programmes.

**MINVU:** Includes the expenditures of SERVIUs and the rest of the ministerial bureaucracy.

As can be observed, we have been unable to find enough sectoral needs' indicators to show the real dimension or requirements for housing. The closest possible were sewerage and water which might have indicated the need for housing mains services but not necessarily for housing as such. In fact, under the present organization these services are run by the Ministry

of Public Works and not by Housing. This information constraint will limit our analysis to two of the three hypotheses previously defined, leaving aside hypothesis No. 1, (which states that the government will channel a higher proportion of its resources to regions with higher levels of unmet need).

A good indicator of housing needs would have been to obtain a regional estimate of the housing deficit. Unfortunately, after a long analysis of the features and information requirements for this indicator we concluded that it was not possible to obtain a regional estimate of it <sup>(26)</sup>. In 1983, the Ministry estimated a housing deficit of 750,000 dwellings <sup>(27)</sup>. To reach this figure, the Ministry had first to estimate the housing stock at that date; this was done by adding to the actual housing stock (Census 1982) the number of houses initiated to be built after the census and until June 1983. It also added an estimation of the houses built during the same period which were not officially registered in the municipal registers. From the resulting figure it was necessary to subtract an estimate of the number of obsolete or extinct houses at that time. The final estimated housing stock is then contrasted to the estimated number of households. However, as can be noticed these three last steps are highly controversial. There are a number of claims that the unofficial building rate and the obsolescence rate are both under or over estimated, depending on the arguments being put forward.

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26. A measure of overcrowding was also not available at a regional level.

27. The estimated number of households for that year was 2,5 millions.

TABLE 7.11.  
HOUSING INDICATORS - 1985 (Index TOTAL=100)

|                           | SEWE  | WATER | GDP   | INCO  | URBN  | URBZ  | SERVIU | MINVU  |
|---------------------------|-------|-------|-------|-------|-------|-------|--------|--------|
| Tarapaca                  | 134.1 | 122.6 | 136.5 | 85.7  | 113.3 | 127.3 | 88.0   | 87.3   |
| Antofagasta               | 90.8  | 110.3 | 200.3 | 83.2  | 118.5 | 119.9 | 59.8   | 59.3   |
| Atacama                   | 70.5  | 107.3 | 148.7 | 82.8  | 110.3 | 83.9  | 89.8   | 89.1   |
| Coquimbo                  | 66.7  | 76.0  | 61.1  | 69.0  | 90.2  | 63.7  | 82.1   | 81.5   |
| Valparaiso                | 106.6 | 103.9 | 99.4  | 90.8  | 109.3 | 101.4 | 108.2  | 107.4  |
| O'higgins                 | 57.8  | 68.6  | 122.9 | 79.4  | 78.9  | 43.1  | 97.3   | 96.6   |
| Maule                     | 52.9  | 63.9  | 65.7  | 83.3  | 68.8  | 57.4  | 71.9   | 71.4   |
| BioBio                    | 70.0  | 86.6  | 79.9  | 88.6  | 92.5  | 81.6  | 73.3   | 72.7   |
| Araucania                 | 47.8  | 66.2  | 55.6  | 94.3  | 69.6  | 41.3  | 83.2   | 82.6   |
| Los Lagos                 | 48.9  | 68.8  | 66.9  | 98.2  | 71.5  | 46.0  | 36.8   | 36.5   |
| Aysen                     | 50.4  | 88.0  | 81.5  | 93.8  | 95.8  | 63.8  | 152.8  | 151.7  |
| Magallanes                | 136.3 | 120.0 | 260.1 | 117.5 | 110.8 | 105.8 | 143.6  | 142.5  |
| Metropol.                 | 141.9 | 124.1 | 110.0 | 117.0 | 116.0 | 135.5 | 130.3  | 131.2  |
| INDEX                     | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0  | 100.0  |
| COUNTRY TOTAL             | 59.9  | 75.9  | 29406 | 42788 | 83.3  | 71.4  | 3016   | 3675   |
| AVG                       | 82.7  | 92.8  | 114.5 | 91.0  | 95.8  | 82.4  | 93.6   | 93.1   |
| STD                       | 34.1  | 22.0  | 58.0  | 13.3  | 17.9  | 31.7  | 31.8   | 31.7   |
| COEF.VAR.                 | 41.3  | 23.7  | 50.7  | 14.6  | 18.7  | 38.5  | 33.9   | 34.1   |
| HOUSING INDICATORS - 1986 |       |       |       |       |       |       |        |        |
| Tarapaca                  | 129.9 | 120.4 | 133.7 | 83.8  | 113.0 | 126.9 | 100.7  | 99.7   |
| Antofagasta               | 89.8  | 107.6 | 190.5 | 78.2  | 118.1 | 120.2 | 84.0   | 83.1   |
| Atacama                   | 79.2  | 105.2 | 142.0 | 78.9  | 110.3 | 84.0  | 86.7   | 85.9   |
| Coquimbo                  | 67.6  | 75.1  | 61.3  | 68.5  | 90.1  | 63.9  | 91.7   | 90.8   |
| Valparaiso                | 105.1 | 101.1 | 100.5 | 92.1  | 109.2 | 100.9 | 118.1  | 116.9  |
| O'higgins                 | 58.3  | 68.2  | 122.1 | 78.2  | 79.2  | 43.3  | 130.1  | 128.8  |
| Maule                     | 57.7  | 62.7  | 65.8  | 83.4  | 69.3  | 57.4  | 75.2   | 74.5   |
| BioBio                    | 70.7  | 85.6  | 77.6  | 85.3  | 92.5  | 81.7  | 73.4   | 72.6   |
| Araucania                 | 47.5  | 64.8  | 55.2  | 92.4  | 69.3  | 41.5  | 67.8   | 67.1   |
| Los Lagos                 | 47.9  | 66.9  | 68.1  | 99.2  | 71.9  | 46.1  | 63.9   | 63.3   |
| Aysen                     | 49.9  | 85.0  | 81.1  | 92.6  | 96.1  | 64.0  | 268.2  | 265.6  |
| Magallanes                | 138.7 | 118.9 | 252.7 | 113.8 | 110.6 | 105.8 | 268.4  | 265.8  |
| Metropol.                 | 140.8 | 124.7 | 111.7 | 119.1 | 115.8 | 136.5 | 110.9  | 112.3  |
| INDEX                     | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0  | 100.0  |
| COUNTRY TOTAL             | 62.6  | 79.1  | 30553 | 45227 | 83.6  | 70.9  | 2713.4 | 3468.6 |
| AVG                       | 83.3  | 91.2  | 112.5 | 89.6  | 95.8  | 82.5  | 118.4  | 117.4  |
| STD                       | 33.3  | 22.0  | 55.2  | 13.8  | 17.8  | 31.7  | 66.7   | 66.0   |
| COEF.VAR.                 | 40.0  | 24.1  | 49.0  | 15.4  | 18.5  | 38.4  | 56.3   | 56.2   |
| HOUSING INDICATORS - 1987 |       |       |       |       |       |       |        |        |
| Tarapaca                  | 127.7 | 119.2 | 132.0 | 104.0 | 112.9 | 126.8 | 122.4  | 121.4  |
| Antofagasta               | 91.5  | 113.8 | 191.6 | 96.6  | 117.8 | 120.7 | 75.7   | 75.1   |
| Atacama                   | 84.9  | 97.9  | 143.4 | 98.8  | 110.2 | 83.9  | 113.6  | 112.7  |
| Coquimbo                  | 76.2  | 81.1  | 61.4  | 75.3  | 90.3  | 64.3  | 82.5   | 81.9   |
| Valparaiso                | 105.4 | 103.1 | 100.5 | 95.1  | 109.0 | 100.5 | 98.8   | 98.0   |
| O'higgins                 | 59.6  | 70.2  | 123.0 | 79.8  | 79.4  | 43.7  | 109.8  | 109.0  |
| Maule                     | 63.9  | 63.3  | 65.9  | 90.9  | 69.4  | 57.3  | 90.0   | 89.3   |
| BioBio                    | 62.8  | 85.1  | 78.2  | 81.6  | 92.6  | 81.9  | 79.6   | 79.0   |
| Araucania                 | 53.6  | 66.6  | 55.4  | 89.9  | 69.4  | 41.9  | 71.4   | 70.8   |
| Los Lagos                 | 46.3  | 66.2  | 68.7  | 76.3  | 72.0  | 46.2  | 52.7   | 52.3   |
| Aysen                     | 42.0  | 85.5  | 80.8  | 127.8 | 96.6  | 64.6  | 141.9  | 140.7  |
| Magallanes                | 121.0 | 115.4 | 250.2 | 116.6 | 110.5 | 106.0 | 94.4   | 93.7   |
| Metropol.                 | 140.9 | 124.7 | 111.1 | 118.0 | 115.6 | 140.0 | 121.5  | 122.6  |
| INDEX                     | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0  | 100.0  |
| COUNTRY TOTAL             | 64.8  | 79.1  | 31766 | 47803 | 83.8  | 70.4  | 2680   | 3825   |
| AVG                       | 71.7  | 79.5  | 97.5  | 83.4  | 83.1  | 71.9  | 83.6   | 83.1   |
| STD                       | 40.4  | 36.9  | 63.7  | 35.9  | 36.5  | 41.1  | 39.6   | 39.4   |
| COEF.VAR.                 | 56.4  | 46.4  | 65.4  | 43.1  | 43.9  | 57.1  | 47.3   | 47.4   |

SEWE % Population covered sewerage  
WATER % Population covered Pot.Water  
GDP GDP per capita in 1977\$  
INCO Regional average income  
URBN % Urban population  
URBZ % Population living cities  
above 20,000  
SERVIUSERVIUs expenditures per capita  
MINVU Housing expenditures per capita

Moreover, in 1985 the Ministry of Housing provided a new estimate of the housing deficit equivalent to 380,000 dwellings. This considerable decrease in the deficit was produced not only through building more houses during the period but through a change to the definition of deficit. It passed from a normative definition to an "expressed" definition (<sup>28</sup>), which took into account only those households included in the housing subsidies application registers. The same year, MacDonald (1987) following the traditional normative definition estimated a housing deficit of 750,000 dwellings.

### B.1. Preliminary Data Analysis

In this and the following sub-section, we will concentrate on testing two of the hypotheses defined in Chapter 3: No. 2, that rich regions will obtain higher shares of social expenditures and No.3, related to the urban bias in the allocation of social expenditures.

In the initial analysis of the patterns of housing indicators from Table 7.11., it is possible to notice that both measures of housing expenditures are closely associated with more urbanized regions such as Tarapaca, Valparaiso, Magallanes and Metropolitan. In addition to these, Aysen (intermediate region) also shows above average levels of expenditures. In contrast, rural regions such as Araucania and Los Lagos had lower levels of housing expenditures per capita during the period under analysis.

Therefore, there are grounds to suggest that hypothesis No.3 of an urban bias in the allocation of expenditures is to be accepted. This can be explained by the fact that because of the present Ministerial organization it is easier to apply and to find advice in relation to housing subsidies in urban areas. An additional explanation is related to the difficulties in

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28. For a more detailed explanation of these concepts, see:  
Bradshaw, J. "The concept of social need"  
(New Society 30, March 1972).



organizing a housing market and building companies in smaller less densely populated regions. Raczynski (1986) provides some evidence supporting this case.

In regard to the associations between housing expenditures and regional well being, it can be observed that there is also a relation between these variables. Higher GDP per capita tends to coincide with regions having higher housing expenditures per capita. The exception is the case of O'Higgins; this is due to a constraint on the regional GDP definition which includes most copper surpluses in O'Higgins, which contains one of the main copper mines. In the case of average income, moreover, the pattern is less clear but it does coincide with two of the richest regions according to this indicator: Magallanes and Metropolitan. Therefore, the evidence again supports the existence of a positive relation between higher levels of well being and higher expenditures on housing. As explained in previous sections, this fact may originate in the scoring system for allocating housing expenditures, which weights family savings and the savings capacity of the family. In fact, this outcome is not unexpected, as section 7.3. showed housing expenditures are only slightly progressive.

Regarding the interregional disparities, Table 7.11. shows that housing expenditures have very high coefficients of variation. In fact the coefficients estimated are the highest obtained so far. This can be observed in Table 7.11. where the index shows Magallanes and Aysen obtaining more than double the national average of housing expenditures per capita. For example in 1986, housing expenditures per capita were more than four times higher in Magallanes than Araucania, which is the region showing lowest coverage for sewerage.

In summary, the evidence of the preliminary data analysis has suggested that two of the competing hypotheses can be accepted, as resources are allocated according to the urban-high well being regional pattern.

In addition to our findings, it interesting to quote some

estimations by Raczynski (1986) about the housing deficit. According to her estimations, the housing deficit was affecting 27% of all Chilean families. The regions with higher housing deficits were Coquimbo, Maule, Bio-Bio and Araucania. These findings allow us to consider that housing expenditures are not being allocated to those regions with higher proportions of unmet basic needs (Hypothesis No. 1), that is, Hypothesis No. 1 seems to be rejected. However, as this reference is for a single year and not within our period of analysis, we cannot develop further conclusions from here (29).

B.2. Associations between Housing Variables

In this sub-section we attempt to test further the hypotheses. As has been done in previous chapters, we start by analysing the correlation coefficients of the indicators related to the hypotheses to be tested; these are: urban indicators and well being indicators (GDP and INCO).

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 TABLE 7.12.  
 CORRELATION MATRIX - HOUSING INDICATORS  
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|        | SEWE    | WATER   | GDP     | INCO | URBN    | URBZ | SERVIU  | MINVU |
|--------|---------|---------|---------|------|---------|------|---------|-------|
| SEWE   | 1.00    |         |         |      |         |      |         |       |
| WATER  | 0.90 ** | 1.00    |         |      |         |      |         |       |
| GDP    | 0.62 ** | 0.69 ** | 1.00    |      |         |      |         |       |
| INCO   | 0.48 *  | 0.47 *  | 0.35    | 1.00 |         |      |         |       |
| URBN   | 0.79 ** | 0.95 ** | 0.67 ** | 0.34 | 1.00    |      |         |       |
| URBZ   | 0.90 ** | 0.95 ** | 0.57 ** | 0.39 | 0.91 ** | 1.00 |         |       |
| SERVIU | 0.28    | 0.33    | 0.32    | 0.34 | 0.32    | 0.19 | 1.00    |       |
| MINVU  | 0.30    | 0.35    | 0.33    | 0.42 | 0.33    | 0.20 | 0.99 ** | 1.00  |

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2 TAILED SIGNIFICANCE: \* 0.01 \*\* 0.001

SEWE % Pop. Covered Sewerage      URBN % Urban population  
 WATER % Pop. Covered Water      URBZ % Pop. living cities above 20,000  
 GDP GDP per capita      SERVIU SERVIUs expenditures per capita  
 INCO Regional average income      MINVU Housing expenditures per capita

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 29. Raczynski's estimations are based on other authors' previous calculations of the housing deficit for 1976. It is very probable that the patterns obtained in those estimates are still being maintained.

As can be seen on Table 7.12., the only significant correlation within this set of variables is a positive correlation between total housing expenditures and average income. This outcome endorses previous findings that housing expenditures are allocated in a form that benefits proportionally more those regions with higher well being levels (hypothesis No.2). It is interesting to note that the significant correlation is to average income and not GDP. As mentioned earlier, average income closely represents the average disposable income of families, (the amount of money they have to spend), whereas GDP is more related to the regional productivity or contribution to the national output. This means that it is a more abstract variable which does not necessarily indicate money resources directly appropriable by the families.

In sum, this association between average income and housing expenditures appears as a result of the scoring system of the selection process that weights in a significant manner the family savings.

In relation to the needs indicators used (sewerage and water), they show significant correlations with regional well being and especially urbanization. This is a somewhat expected outcome as sewerage collectors and drinking water pipes are usually designed to cover urban areas and are being extended to the countryside only when good urban coverage has been achieved. The correlation matrix shows no significant linear association between housing expenditures and sewerage and water. This is again an expected outcome as sewerage and water are financed by the Ministry of Public Works. Therefore, as stated in the previous sub-section, we cannot draw any conclusion about the truth of hypothesis No.1, which relates higher sectoral expenditures to needs.

Summarizing this section, it is possible to conclude that our findings suggest with clear evidence that the richest regions obtain higher levels of social expenditures in housing (hypothesis No.2). We reached this conclusion through two alternative procedures.

At the same time, we also conclude that higher housing expenditures are also found in urban regions (hypothesis No.3). However, the evidence in this case was weaker than above.

#### 7.4.C. Section Summary and Conclusions: Resource Allocation and its Regional Impact

In section 7.4. we have proceeded to estimate the regional allocation of housing expenditures. This was done following the methodological steps described in earlier chapters. Overall, more than 75% of the expenditures were allocated according to Criterion A, which represents the higher accuracy level.

In order to test the hypotheses introduced in Chapter 4, three sets of sectoral indicators were defined: sectoral needs indicators, socio-economic indicators and housing expenditure indicators. Regarding the first group, due to an information constraint, it was not possible to compute the most relevant sectoral need indicators, such as housing deficit. For this reason, the analysis was constrained to testing only two of the hypotheses defined earlier.

At the same time, due to the information constraints, the statistical analysis was performed in the two first stages. This means that the hypotheses were tested through the preliminary data analysis noting the regional patterns of the indicators and, through correlations looking at the associations between variables. No regression analysis was performed as the few needs indicators available were highly correlated with socio-economic indicators.

The statistical analysis gave grounds to accept two hypotheses: No.2, that richest regions obtain higher levels of housing expenditures per capita and, No. 3, that housing expenditure is concentrated in urban regions.

Overall, it is possible to summarize that these latest statistical conclusions are not isolated facts as they are endorsed by our previous findings in sections 7.2. and 7.3. In this sense, it is not surprising to find a positive statistical association between housing expenditures and average income as the application process <sup>(30)</sup> helps to select families with higher savings. This is also supported by the fact that ministerial expenditures are only slightly progressive, as the bottom 30% of the population receives 35 to 36% of the housing expenditures.

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30. This process serves as a basis for the later regional budget allocations.

## CHAPTER EIGHT

### SOCIAL SECURITY AND SOCIAL ASSISTANCE PROGRAMMES

#### 8.1. BACKGROUND TO THE ORGANIZATION AND FINANCE OF SOCIAL SECURITY IN CHILE

This section attempts to summarize the most interesting features of the developments of the Chilean social security system during the last 100 years. It firstly describes the early developments of the system. Then it discusses the structure of the system, its benefits and organizational settings in the sixties, when the system had achieved a high level of coverage and stability. The section concludes by remarking on the system's weaknesses and the manner in which these weaknesses were dealt with in the early 1970's.

##### Early Developments

As a result of the early development of the industrial sector (mining and related activities), Chile fostered a well developed social security system which is one of the oldest of Latin America. Early social security legislation can be traced back to the 1820's with the introduction of retirement schemes for the military forces. In 1858 legislation was introduced initiating the first steps to organize a civil servant pension scheme. Later, in 1911 a powerful pressure group, the railroad workers, won retirement pensions. However, a more general and comprehensive social security legislation was passed in 1924. These regulations served as a basis for the social security system of the country. They included compulsory social insurance, employers responsibility for occupational accidents and a compulsory savings programme to pay retirement pensions and life insurance for white collar workers (1).

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1. A good account of the Chilean development in social security until the early seventies can be found in:  
Mesa-lago, C. (1978) Social Security in Latin America  
University of Pittsburg Press.

According to Midgley (1984), Chile was one of the first countries of the third world to have social insurance schemes catering to a significant number of workers. These types of schemes were altogether uncommon before the second world war in third world countries.

#### The Social Security System in the 1960's

Until the late 1970's the Chilean social security system was a pay-as-you-go scheme in which contributions paid by the active workers and their employers financed the passive or retired workers. The system was organised in thirty-five pension funds (Cajas de Prevision) covering different groups of workers or areas of economic activity. Three pension funds concentrated about 90% of total affiliations; these were: Social Insurance Service (Servicio de Seguro social (SSS)), Private Employees Pension Fund (EMPART) and Public Sector Employees Pension Fund (CANAEMPU).

Following Mesa-lago's (1978) study the Chilean social security system can be divided into five occupational groups which were closely related to the pressure groups that pushed for the creation of those schemes:

- Armed forces: Covered by a special pension fund for them. The police also had its own pension fund.
- Civil Servants: Covered through CANAEMPU and some other ad-hoc funds, (municipal employees, railroads, and others).
- White collar workers: Covered by private employees pension fund (EMPART) and some other ad-hoc funds ( Nitrate industry workers, Gas company, Merchant marine and others)
- Blue collar workers: Covered by the Social Insurance Service.
- Self employed: Covered by a small ad-hoc pension fund.

## The System's Benefits

The benefits and the conditions for receiving them varied widely between blue and white collar workers (obreros and empleados) and the area of economic activity (public employees, banks, armed forces, municipal workers, etc.). The levels of provision and the coverage were also related to the political influence of each of the pressure groups. In the case of old age pensions, there were more than thirty different pension schemes with different eligibility criteria. For example, the minimum age for retirement was 65 years in the case of men affiliated to EMPART and SSS, but in other cases retirement was related to the years of service which in some cases were as few as fifteen. The benefit levels were also different, in the SSS the maximum pension was 75% of the base salary whereas in EMPART the level was 100%. Inflation adjustments were also uneven. Private sector employees received periodic adjustments but this was true only for public sector higher ranks employees. Finally, payroll contributions also differed greatly according to the different occupational groups.

In addition to the benefits discussed the system also included family allowances (asignacion familiar) which consisted of an income transfer paid to each affiliated person (active or retired) in relation to the number of dependent family members. This transfer was financed through specific payroll contributions and distributed through each of the social security pension funds. As in the case of old age pensions, the level of family allowances varied considerably. To the extent that some occupational groups were not even entitled to them (blue collar workers in the SSS). The system was also organized to provide an unemployment subsidy (subsidio de cesantia) in the form of periodic monthly payments for a length of time. This subsidy was financed by payroll contributions from the employer and the worker. As in the previous cases the level of benefits provided varied considerably. Finally, the system also provided health and maternity benefits through the S.N.S. and SERMENA.

One of the major achievements of the Chilean social security system was its widespread coverage of the working population,



which reached 70% in 1970. The system also provided an ample coverage of the different areas of social security including not only old age pensions, but invalidity pensions, sickness benefits, injuries compensation, maternity leave, family allowance, and unemployment subsidies.

### Organizational Setting

The institutional and organizational setting of the Chilean social security scheme in the early 1970's was a complicated one. There was no single state agency supervising the planning and coordination of the social security system as a whole. Most of the public and quasi-public pension funds were under the supervision and control of the Superintendency of Social Security, created in 1965. The Armed Forces pension funds were coordinated by the Ministry of Defence. At the same time the Ministry of Health supervised the payments related to maternity leave and sickness benefits. The President of the Republic had the power to nominate the director of each public pension fund, but the governing body was composed of various delegates from the beneficiaries (labour force), employers and the Ministry.

In addition to the pension funds other institutions played a role in providing some complementary benefits. Compensation Funds (Cajas de Compensacion) are private welfare organizations which were in charge of paying family allowances financed by employers contributions. These institutions administered the resources of family allowances of various pension funds affiliated to them and offered additional benefits such as loans for housing and education. The supervision of these compensation funds was carried out through a Special Commission. Other such agencies were the Occupational Risk Institutions (Mutuales de Seguridad). These institutions were created by the private sector to provide insurance coverage for accident rehabilitation and related services to workers.

Figure 8.1. shows a summary of the organization of social security in the early 1970's. Most social security programmes were provided through public, semi-public and private pension funds which received contributions from workers and employers and

from the state. Pension funds also transferred resources to private compensation funds and occupational risk institutions to provide them with special benefits related to family allowances and working injuries compensations. The Ministry of Labour and Social Security supervised the functioning of the pension funds through a specially created institution, the Superintendency of Social Security. Finally, the figure also shows the transfers from the Treasury to the pension funds to finance their operational deficit.

### The Finance of Social Security and its Major Constraints

In relation to the finance of social security, it can be said that the system was financed through three alternative sources: i) payroll contributions from employers and workers, ii) state contributions which involved some earmarked taxes as well as direct subsidies to cover deficits and, iii) investment revenues. These financial sources represented 70%, 25% and 5% respectively of the system's total revenues.

Government contributions went mostly to the following pension funds: S.S.S., railroad workers' and armed forces' funds. They also contributed to finance the family allowances.

As mentioned earlier because of the increasing benefits distributed through the pension funds the payroll contributions rose dramatically between the 1920's and the 1970's <sup>(2)</sup>.

Various reasons have commonly been given to explain the poor economic performance of the pension funds <sup>(3)</sup>:

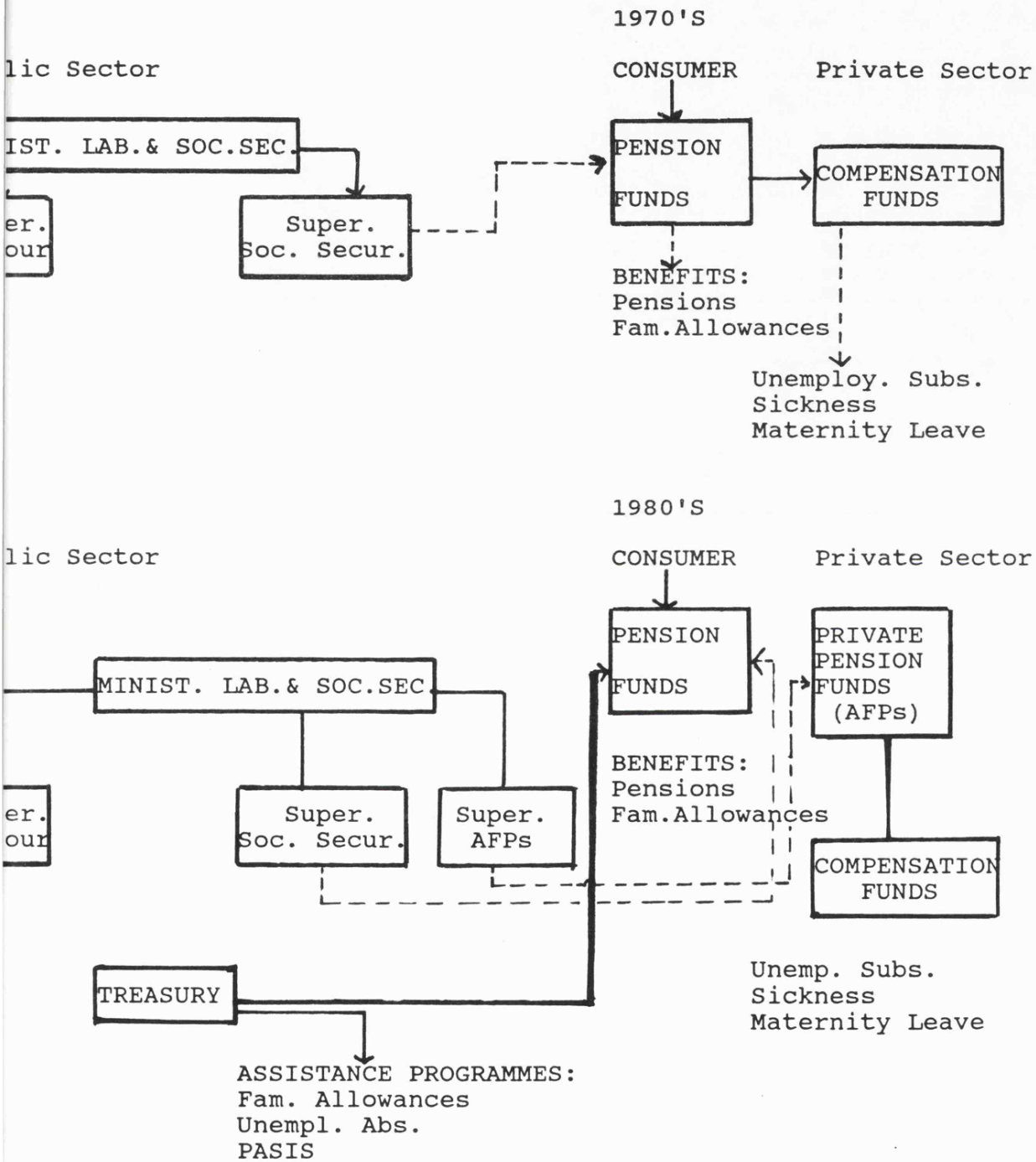
As concerns revenue:

.....  
2. For example: in the S.S.S. payroll contributions were 5% of the base salary in 1925-37 but rose to 51.4% in 1975. In the banking pension funds payroll contributions increased from 28% to 54% during approximately the same period.

3. Some of these explanations are also found in Mesa-Lago (1978).

URE 8.1.

ANIZATION OF SOCIAL SECURITY AND ASSITANCE PROGRAMMES



- 1.- Evasion: Evasion resulted from employers paying lower contributions in relation to the actual salary of the workers (4).
- 2.- Low return from investments: Pension funds used to invest their funds on buildings that were let at subsidised rents to the beneficiaries of the funds.

As concerns expenditure:

- 3.- Increased expenditures due to early retirements
- 4.- Duplication of pensions

According to Mesa-Lago (1978) because the system was created as a response to the different pressures of workers for a social security scheme instead of resulting from a governmental global initiative, the system was featured by considerable inequities within it. As a result of this bleak diagnosis and the considerable financial hardship that it imposed to the state, the Alessandri government (1958-64) established at the end of his period a commission to study the social security system. The study compared the benefits of the system with other schemes finding that the Chilean social security system was one of the most discriminatory and regressive in the world. It found that contributions as a whole were channeled to the highest income groups through privileged funds separated from the common general funds (Mesa-Lago, 1978). The study recommended a reform of the direction of universal benefits and move away from the cumbersome system of social privileges for specific groups. Some of these suggestions were headed by subsequent governments attempting to unify the social security system and reduce its inequalities, however, for the most part political opposition made these reforms impossible.

.....  
4. Most pensions were based on the average salary of the last five years before retirement. The level of contributions during the period of employment for most people were usually "arranged" between the employer and the worker. The arrangement consisted in the employer contributing according to a lower salary, and the worker receiving a higher salary because of the unpaid contributions.

## Initial Reforms in the Late 1970's

The Chilean social security system was derived from a two phase reform. The first took place between 1974 and 1980 and was aimed to unify most of the benefits related to social security payments. The second reform took place in 1981, comprising the introduction of a new social security system for the country, this later phase is described in the next section.

In the first phase of reforms one of the most important changes was the unification of family allowances. This was accomplished by changing the finance of these payments from private contributions to a sole fund financed by the Treasury. A uniform level of payment was then defined for all workers, which implied a reduction of the benefits for white collar workers and a consequent increase for blue collar workers. This benefit was also extended to non-insured poor families through the Assistance programmes.

The Unemployment Subsidy was also unified for all occupational groups. The finance of this subsidy was also transferred to the Treasury.

Finally, in 1979 the government unified the adjustment criteria of pensions and the retirement ages for all occupational groups and pension funds. This unification implied the elimination of the exclusive system of inflation adjustment for high ranking public employees. At the same time it reduced considerably the dispersion of payroll contribution rates, which were on average fixed at 35%. The contribution rates were further reduced in 1981 to a flat 20% rate for all pension funds.

## 8.2 FINANCE AND ORGANIZATION

### 8.2.A. Present Organization

In this section we describe the organization of social security and assistance programmes in Chile. For practical reasons both areas are presented separately in order to give a clear picture of each.

#### A.1. Social Security

This section details the developments of the Chilean social security system since 1980. Firstly, we describe the most important features of the new private pension schemes. Secondly, we discuss the costs for the public budget that this transformation has meant. Lastly, we summarize the organizational settings.

#### The New Private Pension Funds

The most important change in the social security system involved the creation of private for profit Pension Funds Administration Institutions (Administradoras de Fondos de Pensiones, AFP) <sup>(5)</sup>. This represented a change from the pay-as-you-go pension system to one of individual capitalization of funds.

AFPs managed the individual pension fund accounts of each of the workers affiliated with it. There were a number of strict regulations in relation to the investment of the funds and the information provided periodically to each of the affiliated workers. Each of these regulations was supervised by the newly created Superintendency of AFPs. In addition to the official regulations, the State guaranteed a minimum return from the funds deposited in AFPs. If they did not reach a required minimum level they had to dissolve. The system also involved a guaranteed minimum pension for those contributors whose accumulated funds were insufficient for that minimum <sup>(6)</sup>.

.....  
5. Law Decree No. 3,500.

Under this scheme mandatory payroll contributions for old age pensions were set at a flat 10% rate. An additional 3.4% was also defined as an insurance premium covering disability and survivor pensions (7). The new pensions were to be equal to 70% of the average salary for the last 10 years adjusted by inflation. The retirement ages were also fixed for all occupational groups to 65 years for men and 60 for women.

AFPs are permitted to collect from their affiliates a fixed monthly charge related to the administrative cost of managing the individual account. There was also a proportional charge in relation to the total amount of resources managed in each individual account and a fixed charge related to those who were transferring from one institution into another.

One interesting achievement of the AFPs has been the real returns obtained; they averaged 14% per annum between 1981 and 1988, about three percentage points higher than those from the financial system. However, as a result of the commission structure, which includes a fixed commission, the returns have varied by levels of taxable income. Higher income levels have received higher returns, and contributions from low income workers have been eroded by these fixed charges, producing the effect that an important proportion of low income workers have been forced to rely on the guaranteed minimum pension. This feature has attracted criticism but as the total funds accumulated by each AFP has grown considerably, so have the revenues obtained through the percentual commissions, thus helping to lower the fixed commissions as more revenues have been collected by each AFP.

.....  
6. The amount of the minimum pension was 85% of the minimum wage.

7. These mandatory contributions made the new system very attractive as workers changing from the old to the new system experienced an average increase of 10% in their disposable income. The total number affiliated to the new system rose from 480 thousands in May 1981 to 2.3 million in December 1985.

## The Public Costs of the Reform

The reform of the social security system has imposed large fiscal costs on the public budget. These costs can be presented in three areas:

1.- Public transfers to finance the pension funds' deficits: These deficits arose mainly from the poor economic performance of pension funds. However, they were largely increased as a result of the rapid transferences of active workers from the old system to the new one. The pension funds were unable to finance the pensions of the workers who had already retired because the contributing base was systematically decreasing. Therefore, the state had to cover this difference until the old system was extinguished by demographic factors.

2.- Payment of the "recognition bonds":

The recognition bonds were an estimation of the amount of accumulated funds to be paid upon retirement of beneficiaries who had contributed to the (old) pension funds and had decided to transfer to the AFPs. These recognition funds earned a 4% inflation adjusted annual return until they had been paid. In other words, this bond was a "recognition" of the contributions made to the old system and transferred to the new one (<sup>8</sup>).

.....  
8. Estimates by ODEPLAN (1986) reckoned that the peak of expenditures on recognition bonds will be reached by the year 2000. Whereas, public expenditures to finance operational deficits of pension funds will reach its peak in the late 1990s. In 1987, these later expenditures were 3.4% of GDP.



### 3.- Public supplements to meet the minimum pension:

These public transfers were applicable in relation to those workers with insufficient accumulated funds to cover the minimum pension (9).

As a result of the Executive decision, the armed forces were not affected by the new organization of the social security system. This meant that the Treasury would continue to finance the operational deficits of these pension funds even after the demographic extinction of the rest of the "old" pension funds. At the same time this important area of the social security system would continue to function with the prevailing inequalities.

### Organizational Settings

Figure 8.1. shows a summary of the developments in the organization of social security by the mid 1980's. The basic structure of the 1970's was maintained. However, the creation of the pension funds administration institutions (AFPs) proposed a new alternative to the consumer. Compensation funds still played an important role in providing some complementary benefits (family allowances) to those beneficiaries affiliated to them through a pension fund or AFP.

However, an important *difference* regarding the structure of the 1970's was related to the fact that unemployment subsidies and family allowances were now Treasury financed (non contributory) instead of financed by pension funds. Therefore, pension and compensation funds received these resources directly from the Treasury to provide the benefits. A further difference was related to the creation of Assistance Programmes which were Treasury financed programmes provided through municipalities under the regulations of the Superintendency of Social Security.

.....  
9. Some estimates elaborated by Yanez (1985) indicated that in the next century an important proportion of the retired population will be relying on the state guaranteed minimum pensions. According to his estimates, the state will be paying 430 thousand pensions by 2030. However, these estimates are very sensitive to the changes in the commission rates and the returns of the funds.

## A.2. Assistance Programmes

Assistance programmes were created to eliminate some of the inequities of a social security system which provided benefits to selected occupational groups. They were aimed to cover especially vast groups of low income workers who were usually uninsured. There were three programmes in this area:

### Assistance Pensions (PASIS) <sup>(10)</sup>:

The assistance pensions were created in 1975. This programme benefited people over 65 years old and the disabled of 18 years or older. This benefit was poverty-targeted and its beneficiaries were selected through the national means test considering the regional maximum quota fixed by central government. PASIS were non-contributory pensions financed directly from Treasury funds and paid through municipalities. In 1985 over 320 thousand PASIS were paid.

### Family allowances for low income families:

Family allowances for low income families were created in 1981 <sup>(11)</sup> with the aim of covering children of poor households which were not receiving a contributory family allowance. It consisted of a fixed monthly payment given to the parents or the curators of each child no older than 15 years, including any expected babies. For smaller children, this benefit was tied to school attendance and health controls. Family allowances were poverty-targeted subsidies entirely financed by Treasury allocations and paid through municipalities. In 1985, almost one million family allowances for low income families were paid.

### Special Employment Programmes:

Special employment programmes were created in 1975 to help to redress the growing trends in unemployment. In 1982-1983 during the peak of the economic recession the programme benefitted 450 thousand people. The programme was designed to assist any persons

.....  
10. Law Decree No. 869 1975.

11. Law 18,020.

from 18 to 65 years old who were unemployed or seeking employment. In exchange for a weekly payment the beneficiaries had to accept a ~~day's work~~ of 35 hours per week. The works were organized through municipalities and they usually comprised road and park maintenance. In some cases they were also related to various municipal administrative tasks. There were two alternative programmes: the Minimum Employment Programme (PEM) and the Occupational Programme for Householders (POJH) <sup>(12)</sup>. PEM offered a lower level of payment and benefited mostly, younger people and women working through "local mothers groups" (Centros de madres). POJH was restricted to householders and provided higher levels of payments. By 1985, due to the improved economic situation, the employment programmes were benefiting 350 thousand people.

Assistance programmes all shared the common feature of being entirely financed through Treasury allocations and distributed through municipalities. This fact can be observed in figure 8.1.

.....  
12. In addition to these two employment programmes there were other smaller programmes organised on a project basis.

## 8.2.B. Total Public Expenditure

The growth of public expenditures on labour and social security can be observed in Table 8.1. The figures in the table include only the ministerial expenditures on its general services and social security. Unfortunately, there were no time series on assistance programmes as some of them were only recently created. The figures presented in the table were all deflated by the National Institute of Statistics C.P.I.

The expenditure trend in social security can be better observed in Table 8.2. It is noted that after a considerable fall from the level of 1970 expenditures there are two peaks: 1974-1975 and 1981-1983, when total social security accounted for 10.8% of GDP. These peaks coincide with the worst parts of the recessionary periods. Therefore it can be concluded that social security expenditures show a counter cyclical effect.

| YEAR | PUBLIC EXPENDITURES IN LABOUR AND SOC. SECURITY<br>(Millions of 1989 pesos) |             | LABOUR and SOC. SECURITY EXPENDITURES per CAPITA<br>(1989 pesos) |             |
|------|---|-------------|--|-------------|
|      | YANEZ   | COMPTROLLER | YANEZ  | COMPTROLLER |
| 1970 | 401,420   |             | 42,852   |             |
| 1973 | 225,896   |             | 22,909   |             |
| 1974 | 285,091   |             | 28,435   |             |
| 1975 | 315,677   |             | 31,266   |             |
| 1976 | 261,216   |             | 25,185   |             |
| 1977 | 284,545   |             | 26,969   |             |
| 1978 | 310,535   | 445,728     | 28,710   | 41,209      |
| 1979 | 368,718   | 411,692     | 33,596   | 37,512      |
| 1980 | 391,970   | 459,862     | 35,171   | 41,263      |
| 1981 | 479,339   | 490,942     | 42,317   | 43,342      |
| 1982 | 530,736   | 573,936     | 46,076   | 49,826      |
| 1983 | 483,639   | 458,494     | 41,277   | 39,131      |
| 1984 | 495,725   | 462,549     | 41,593   | 38,809      |
| 1985 | 473,449   | 449,489     | 39,058   | 37,081      |
| 1986 |   | 447,736     |  | 36,321      |
| 1987 |   | 446,835     |  | 35,643      |

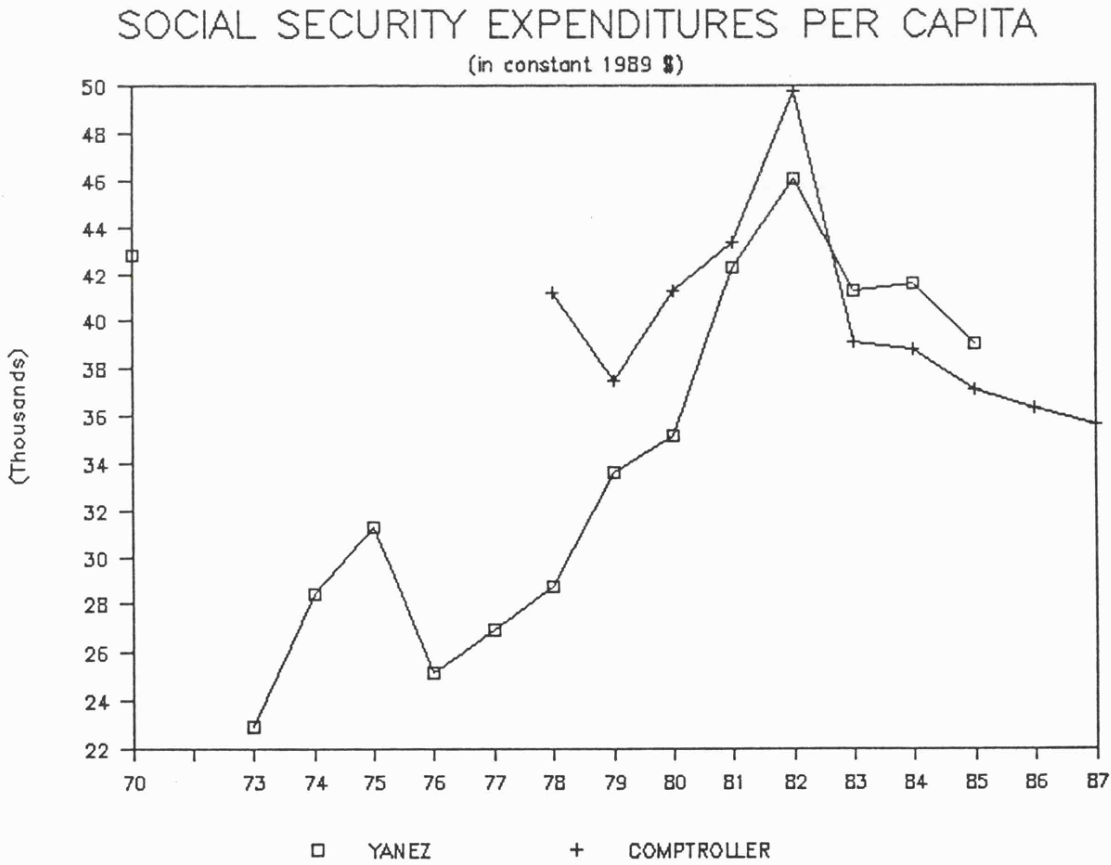
Source:

1. Yanez (1983) and Yanez y Aguilo (1988);
2. Contraloria General de la Republica  
Informes Gestion Financiera 1987

NOTE: Deflated by the National Institute of Statistics C.P.I.

The increases in the social security expenditures after 1980 can be explained as basically due to the implementation of the new social security system which comprised additional expenditures to finance the pension funds deficit stemming from the transfers of active workers to the new AFPs. However, at the same time, after the recessionary period, the pension payment levels were frozen (in nominal terms) in most public sector pension funds producing a smooth but systematic decrease in the sectoral expenditures specifically after 1983.

FIGURE 8.2.



### 8.2.C. Expenditure Structure

The social security and assistance programmes expenditure structures are shown in Table 8.2. In producing this table it was necessary to consolidate important areas of transfers between pension funds and other public institutions. As usual, we follow the methodological approach defined in Chapter 4. The figures obtained from the process of transfer elimination were all deflated using the Yanez special public sector price index.

#### Economic Expenditure Structure:

**Personnel:** Due to the nature of the social security area, which comprised mostly cash transfers to people, personnel was not a relevant area of expenditure and it was concentrated mostly in the administrative area.

**Goods and services for consumption:** This area of expenditure was related to office equipment and stationery, accounting for only 1% of total expenditures.

**Social Welfare Provisions:** Social welfare provisions consisted of all the social security payments made by the pension funds to their affiliates. These included old age pensions, disability and survivor pensions and other related benefits such as family allowances and sickness benefits. This area of expenditure was the most important area and accounted for 70 to 80% of total sectorial expenditures. These provisions have been increasing their share of the total budget as a result of the debts related to the new social security system.

**Transfers:** This area originally included the transfers made by each of the 31 pension funds to the National Fund of Health (FONASA) and to other small funds which provided benefits of a mixed mode of finance, (i.e. finance through the Treasury and through their resources).

These transfers were all eliminated and accounted for in the "recipient" institutions, as defined in our methodology. However, assistance programmes and the Fund for Family Allowances were considered as transferences and were not consolidated. In the former case, these transfers were classed latter as transfers to the private sector, i.e. individuals. In the latter fund, only the proportion of the expenditures to finance family allowances and unemployment subsidies in private pension funds (AFP) remained as transfers, as the rest of these funds were already included in the pension funds' expenditures.

The other areas of the economic expenditure structure represent a negligible proportion of the sectoral expenditures. However, it is necessary to explain that, as in the case of housing, we do not consider financial investments as expenditures since they are part of the pension funds' assets.

#### Institutional Expenditure Structure

**Ministerial Bureaucracy:** Ministerial bureaucracy included a number of small institutions in terms of expenditures, which were summed under this heading. The institutions can be classified into two areas: i) Labour policy and planning: Undersecretariat of labour, Directorate of labour, National Training Service and Directorate of Pledge Credit. In this latter case, as explained earlier, financial investment was not considered as expenditure. This is again a departure from other studies of chilean public expenditures; ii) Institutions related to social security: Undersecretariat of Social Security, Superintendency of AFP and National Institute of Social Security Normalization, (this institute managed a number of small pension funds in dissolution).

**Pension Funds:** Pension funds' expenditures accounted for 83 to 88% of total ministerial expenditures. This was the area of greatest expenditure in the social sectors and was in 1987 6.7 times the total budget of the Ministry of Housing or 3.5 times the health budget. Total pension funds' expenditures have been increasing their share of the budget as a result of the public debt related to the introduction of the new social security

system. Within pension funds' expenditures, the greatest expense was incurred through the armed forces' pension funds which are deemed to continue to increase as this is the only sector not affected by the recent reforms.

Assistance programmes: Assistance programmes included the Family Allowance programme for low income families, Assistance Pensions and Special Employment Programmes. These accounted for 11 to 17% of total social security expenditures. The share of these programmes has decreased over the last years because Special Employment Programmes have been cut as a result of the improved economic situation of the country and the subsequent decline in the unemployment rate. Assistance pensions and family allowances have been frozen in their payment levels. In addition, the Ministry of Finance has established ceilings in the number of pensions and family allowances to be paid.



TABLE 8.2.  
THE STRUCTURE OF PUBLIC EXPENDITURES ON SOCIAL SECURITY  
(Millions of \$ 1987)

| 1985          | S.TOT | PENSION FUNDS |       |        |        |       |       |        | Sub    | ASSISTANCE PROGS. |       |           | Sub.     | TOTAL |       |        |
|---------------|-------|---------------|-------|--------|--------|-------|-------|--------|--------|-------------------|-------|-----------|----------|-------|-------|--------|
|               | MINIS | Armed         | For.  | EMPART | S.S.S. | Pub.  | Empl  | Other  | F.U.P. | F                 | Total | S.U.F.(4) | PASIS(4) |       | Empl. | Progs. |
| Personnel     | 1334  | 571           | 986   | 1494   | 477    | 474   | 0     | 4003   | 0      | 0                 | 0     | 0         | 0        | 0     | 0     | 5337   |
| G.& S. Cons.  | 293   | 621           | 1240  | 2117   | 505    | 312   | 0     | 4796   | 0      | 0                 | 0     | 0         | 0        | 0     | 0     | 5089   |
| Soc.Wel.Prov. | 0     | 88175         | 41710 | 86369  | 53280  | 31411 | 0     | 300945 | 0      | 0                 | 0     | 0         | 0        | 0     | 0     | 300945 |
| Transfers     | 168   | 217           | 12158 | 84     | 23     | 26    | 29675 | 42183  | 12582  | 21264             | 37397 | 71244     | 113595   |       |       |        |
| Cap.Inv.      | 25    | 73            | 15    | 34     | 28     | 20    | 0     | 170    | 0      | 0                 | 0     | 0         | 0        | 0     | 195   |        |
| Finan.Inv.    | 0     | 0             | 0     | 0      | 0      | 0     | 0     | 0      | 0      | 0                 | 0     | 0         | 0        | 0     | 0     |        |
| Other         | 179   | 420           | 0     | 0      | 251    | 129   | 0     | 800    | 0      | 0                 | 0     | 0         | 0        | 0     | 979   |        |
| TOTAL         | 1999  | 90078         | 56108 | 90099  | 54565  | 32372 | 29675 | 352897 | 12582  | 21264             | 37397 | 71244     | 426140   |       |       |        |

| 1986          | S.TOT | PENSION FUNDS |       |        |        |       |       |        | Sub    | ASSISTANCE PROGS. |       |           | Sub.     | TOTAL |        |
|---------------|-------|---------------|-------|--------|--------|-------|-------|--------|--------|-------------------|-------|-----------|----------|-------|--------|
|               | MINIS | Armed         | For.  | EMPART | S.S.S. | Pub.  | Empl  | Other  | F.U.P. | F                 | Total | S.U.F.(4) | PASIS(4) |       | Empl.  |
| Personnel     | 1416  | 519           | 895   | 1308   | 463    | 1883  | 0     | 5068   | 0      | 0                 | 0     | 0         | 0        | 0     | 6484   |
| G.& S. Cons.  | 355   | 723           | 900   | 1592   | 438    | 623   | 0     | 4275   | 0      | 0                 | 0     | 0         | 0        | 0     | 4631   |
| Soc.Wel.Prov. | 0     | 88287         | 41830 | 77264  | 51452  | 29883 | 0     | 288716 | 0      | 0                 | 0     | 0         | 0        | 0     | 288716 |
| Transfers     | 639   | 188           | 3     | 2      | 16     | 6844  | 22977 | 30029  | 9775   | 20262             | 22030 | 52067     | 82734    |       |        |
| Cap.Inv.      | 33    | 37            | 6     | 16     | 19     | 45    | 0     | 123    | 0      | 0                 | 0     | 0         | 0        | 0     | 157    |
| Finan.Inv.    | 0     | 0             | 0     | 0      | 0      | 0     | 0     | 0      | 0      | 0                 | 0     | 0         | 0        | 0     | 0      |
| Other         | 80    | 182           | 0     | 0      | 220    | 233   | 0     | 635    | 0      | 0                 | 0     | 0         | 0        | 0     | 715    |
|               |       | 0             | 0     | 0      | 0      | 0     | 0     | 0      | 0      | 0                 | 0     | 0         | 0        | 0     | 0      |
| TOTAL         | 2524  | 89936         | 43633 | 80182  | 52608  | 39510 | 22977 | 328846 | 9775   | 20262             | 22030 | 52067     | 383437   |       |        |

| 1987          | S.TOT | PENSION FUNDS |       |        |        |       |       |        | Sub    | ASSISTANCE PROGS. |       |           | Sub.     | TOTAL |        |
|---------------|-------|---------------|-------|--------|--------|-------|-------|--------|--------|-------------------|-------|-----------|----------|-------|--------|
|               | MINIS | Armed         | For.  | EMPART | S.S.S. | Pub.  | Empl  | Other  | F.U.P. | F                 | Total | S.U.F.(4) | PASIS(4) |       | Empl.  |
| Personnel     | 1756  | 486           | 751   | 1073   | 459    | 2284  | 0     | 5052   | 0      | 0                 | 0     | 0         | 0        | 0     | 6808   |
| G.& S. Cons.  | 390   | 506           | 767   | 1447   | 370    | 645   | 0     | 3736   | 0      | 0                 | 0     | 0         | 0        | 0     | 4126   |
| Soc.Wel.Prov. | 0     | 86313         | 43276 | 74426  | 51159  | 35483 | 0     | 290657 | 0      | 0                 | 0     | 0         | 0        | 0     | 290657 |
| Transfers     | 918   | 574           | 3     | 3      | 20     | 1018  | 19585 | 21203  | 7449   | 17733             | 15762 | 40944     | 63066    |       |        |
| Cap.Inv.      | 45    | 21            | 4     | 5      | 4      | 53    | 0     | 88     | 0      | 0                 | 0     | 0         | 0        | 0     | 133    |
| Finan.Inv.    | 1     | 0             | 0     | 0      | 0      | 179   | 0     | 179    | 0      | 0                 | 0     | 0         | 0        | 0     | 181    |
| Other         | 85    | 501           | 0     | 0      | 70     | 143   | 0     | 713    | 0      | 0                 | 0     | 0         | 0        | 0     | 797    |
| TOTAL         | 3195  | 88401         | 44801 | 76955  | 52082  | 39805 | 19585 | 321628 | 7449   | 17733             | 15762 | 40944     | 365767   |       |        |

SOURCE:

Author calculations based on:  
Estados de Ejecucion Presupuestaria del Sector Publico  
Contraloria General de la Republica 1985-1986-1987  
Leyes de Presupuesto del Sector Publico  
Oficina de Presupuestos 1985-1986-1987

TABLE 8.2. (Continuation)  
THE STRUCTURE OF PUBLIC EXPENDITURES ON SOCIAL SECURITY  
(% Structure)

| 1985            | SUB-T<br>MINIS | PENSION FUNDS |      |        |        |      |       |       | Sub<br>F.U.P.FTotal | ASSISTANCE PROGS. |          |       | Sub.<br>Total | TOTAL |
|-----------------|----------------|---------------|------|--------|--------|------|-------|-------|---------------------|-------------------|----------|-------|---------------|-------|
|                 |                | Armed         | For. | EMPART | S.S.S. | Pub. | Empl  | Other |                     | S.U.F.(4)         | PASIS(4) | Empl. |               |       |
| Personnel       | 66.7           | 0.6           | 1.8  | 1.7    | 0.9    | 1.5  | 0.0   | 1.1   | 0.0                 | 0.0               | 0.0      | 0.0   | 1.3           |       |
| Cap. & S. Cons. | 14.7           | 0.7           | 2.2  | 2.3    | 0.9    | 1.0  | 0.0   | 1.4   | 0.0                 | 0.0               | 0.0      | 0.0   | 1.2           |       |
| Soc. Wel. Prov. | 0.0            | 97.9          | 74.3 | 95.9   | 97.6   | 97.0 | 0.0   | 85.3  | 0.0                 | 0.0               | 0.0      | 0.0   | 70.6          |       |
| Transfers       | 8.4            | 0.2           | 21.7 | 0.1    | 0.0    | 0.1  | 100.0 | 12.0  | 100.0               | 100.0             | 100.0    | 100.0 | 26.7          |       |
| Cap. Inv.       | 1.3            | 0.1           | 0.0  | 0.0    | 0.1    | 0.1  | 0.0   | 0.0   | 0.0                 | 0.0               | 0.0      | 0.0   | 0.0           |       |
| Finan. Inv.     | 0.0            | 0.0           | 0.0  | 0.0    | 0.0    | 0.0  | 0.0   | 0.0   | 0.0                 | 0.0               | 0.0      | 0.0   | 0.0           |       |
| Other           | 9.0            | 0.5           | 0.0  | 0.0    | 0.5    | 0.4  | 0.0   | 0.2   | 0.0                 | 0.0               | 0.0      | 0.0   | 0.2           |       |
| TOTAL           | 0.5            | 21.1          | 13.2 | 21.1   | 12.8   | 7.6  | 7.0   | 82.8  | 3.0                 | 5.0               | 8.8      | 16.7  | 100.0         |       |
| 1986            | SUB-T<br>MINIS | PENSION FUNDS |      |        |        |      |       |       | Sub<br>F.U.P.FTotal | ASSISTANCE PROGS. |          |       | Sub.<br>Total | TOTAL |
|                 |                | Armed         | For. | EMPART | S.S.S. | Pub. | Empl  | Other |                     | S.U.F.(4)         | PASIS(4) | Empl. |               |       |
| Personnel       | 56.1           | 0.6           | 2.1  | 1.6    | 0.9    | 4.8  | 0.0   | 1.5   | 0.0                 | 0.0               | 0.0      | 0.0   | 1.7           |       |
| Cap. & S. Cons. | 14.1           | 0.8           | 2.1  | 2.0    | 0.8    | 1.6  | 0.0   | 1.3   | 0.0                 | 0.0               | 0.0      | 0.0   | 1.2           |       |
| Soc. Wel. Prov. | 0.0            | 98.2          | 95.9 | 96.4   | 97.8   | 75.6 | 0.0   | 87.8  | 0.0                 | 0.0               | 0.0      | 0.0   | 75.3          |       |
| Transfers       | 25.3           | 0.2           | 0.0  | 0.0    | 0.0    | 17.3 | 100.0 | 9.1   | 100.0               | 100.0             | 100.0    | 100.0 | 21.6          |       |
| Cap. Inv.       | 1.3            | 0.0           | 0.0  | 0.0    | 0.0    | 0.1  | 0.0   | 0.0   | 0.0                 | 0.0               | 0.0      | 0.0   | 0.0           |       |
| Finan. Inv.     | 0.0            | 0.0           | 0.0  | 0.0    | 0.0    | 0.0  | 0.0   | 0.0   | 0.0                 | 0.0               | 0.0      | 0.0   | 0.0           |       |
| Other           | 3.2            | 0.2           | 0.0  | 0.0    | 0.4    | 0.6  | 0.0   | 0.2   | 0.0                 | 0.0               | 0.0      | 0.0   | 0.2           |       |
| TOTAL           | 0.7            | 23.5          | 11.4 | 20.9   | 13.7   | 10.3 | 6.0   | 85.8  | 2.5                 | 5.3               | 5.7      | 13.6  | 100.0         |       |
| 1987            | SUB-T<br>MINIS | PENSION FUNDS |      |        |        |      |       |       | Sub<br>F.U.P.FTotal | ASSISTANCE PROGS. |          |       | Sub.<br>Total | TOTAL |
|                 |                | Armed         | For. | EMPART | S.S.S. | Pub. | Empl  | Other |                     | S.U.F.(4)         | PASIS(4) | Empl. |               |       |
| Personnel       | 55.0           | 0.5           | 1.7  | 1.4    | 0.9    | 5.7  | 0.0   | 1.6   | 0.0                 | 0.0               | 0.0      | 0.0   | 1.9           |       |
| Cap. & S. Cons. | 12.2           | 0.6           | 1.7  | 1.9    | 0.7    | 1.6  | 0.0   | 1.2   | 0.0                 | 0.0               | 0.0      | 0.0   | 1.1           |       |
| Soc. Wel. Prov. | 0.0            | 97.6          | 96.6 | 96.7   | 98.2   | 89.1 | 0.0   | 90.4  | 0.0                 | 0.0               | 0.0      | 0.0   | 79.5          |       |
| Transfers       | 28.7           | 0.6           | 0.0  | 0.0    | 0.0    | 2.6  | 100.0 | 6.6   | 100.0               | 100.0             | 100.0    | 100.0 | 17.2          |       |
| Cap. Inv.       | 1.4            | 0.0           | 0.0  | 0.0    | 0.0    | 0.1  | 0.0   | 0.0   | 0.0                 | 0.0               | 0.0      | 0.0   | 0.0           |       |
| Finan. Inv.     | 0.0            | 0.0           | 0.0  | 0.0    | 0.0    | 0.5  | 0.0   | 0.1   | 0.0                 | 0.0               | 0.0      | 0.0   | 0.0           |       |
| Other           | 2.6            | 0.6           | 0.0  | 0.0    | 0.1    | 0.4  | 0.0   | 0.2   | 0.0                 | 0.0               | 0.0      | 0.0   | 0.2           |       |
| TOTAL           | 0.9            | 24.2          | 12.2 | 21.0   | 14.2   | 10.9 | 5.4   | 87.9  | 2.0                 | 4.8               | 4.3      | 11.2  | 100.0         |       |

## 8.2.D. Budget and Planning

In this section we concentrate on describing the main features of the budgetary and planning process in social security and assistance programmes. In order to avoid repeating ideas introduced in the review of the other social sectors, we concentrate now on only those aspects exclusive to this sector.

### Formulation

The budget formulation can be presented according to the three expenditure areas introduced in the previous section: Ministerial Bureaucracy, Pension Funds and Assistance Programmes.

Regarding the ministerial bureaucracy, the formulation phase followed the traditional incrementalist approach of most social sectors, determining their total expenditures according to an aggregative model that consolidated the agencies proposals (<sup>13</sup>).

In relation to the pension funds, the general approach was also very incrementalist and aggregative. As a consequence each pension fund put its greatest effort into the estimation of the two sources of change in the annual expenditures: recognition Bonds and retirements. Each pension fund had recorded the ages of all beneficiaries (<sup>14</sup>), therefore it was not difficult to estimate the new expenditure commitments for the next year. The Budget Office (Ministry of Finance) would then closely scrutinize the justification of the new additional expenditures on recognition bonds and old age pensions.

.....  
13. The Undersecretariat also prepared a financial basis (Budget Circular).

14. And former beneficiaries in the case of recognition bonds.

The case of Assistance Programmes is a complex one as there was more than one institution behind them. The resources for financing assistance programmes were originally registered in the Treasury special account for subsidies. However, these resources were managed by the Superintendency of Social Security but in contrast to other cases, the resources were not incorporated into the Superintendency or Ministerial Budget. Nevertheless, the municipalities and the SSS were the institutions that finally provide the payments to the beneficiaries.

As a result of the different institutions associated with the assistance programmes the formulation of its budget did not seem to be a very important activity. The budget was usually prepared by the Superintendency of Social Security using the municipal information concerning the total number of subsidies paid in the previous year. However, the final estimates were decided upon by the Budget Office as these expenditures were under their direct jurisdiction. In 1987, the Budget Office imposed regional ceilings on the number of subsidies to be paid; the consequences of these changes are discussed below.

#### Authorization

The authorization phase followed the pattern of the national budget. Therefore, each pension fund depend upon the formal approval of the national budget.

#### Implementation

The budget execution did not present important problems to the agencies. The budget office followed the old system of allocating monthly one-twelfth of the total approved expenditures.

The only changes that occurred in the implementation phase were related to special inflation adjustments decreed by the executive. These additions were transferred directly to each of the agencies.

Evaluation

There was no evaluation phase of the social security budget apart from the financial auditing of the Comptroller.

After this summarised review of the social security budget it is important to dedicate some time to discussing some recent developments in the allocation of Assistance Programmes. In 1987, the Ministry of Finance initiated the "regionalization" of the Assistance Pension and Family Allowances for low income families (15). Under this new scheme the ministry fixed the number of pensions and family allowances to be paid in each region according to the previous year's allocations (16). Therefore, from 1987 onwards the Ministry of Finance transferred the resources to each region in accordance to the maximum number of pensions or family allowances to be paid. This was a departure from the original aims of these programmes as they were supposed to benefit all the people who had applied and fulfilled the defined requirements. The ministry stated that through this new system the regions were going to have freedom to allocate their resources according to their own needs.

In addition to the previous changes the Ministry of Finance introduced a "saving" scheme within the regional allocations for these programmes. According to this new procedure, the savings produced through an assistance pension not to be continued or a beneficiary no longer fulfilling the requirements could be transferred to the regional investment fund to be spent according to the regional priorities. The other half of these "savings" were to be returned to the Ministry of Finance.

Planning

Planning took place in two separate areas: labour and social security. Regarding the first one, the Undersecretary of Labour was in charge of analysing and reviewing the developments of .....

15. This was a result of a study commissioned under ministerial tasks.

16. This means, that the total number of subsidies allocated in 1986 were automatically defined as the maximum authorised.

labour legislation. At the same time the Directorate of Labour supervised the fulfilment of labour legislation. The regional ministerial branches (SEREMIS) were also dedicated to these activities. Due to the nature of these activities, they did not involve the management of important financial resources.

In relation to social security, the Superintendency of Social Security and the National Institute for Social Security Normalization were involved in the financial planning to meet their commitments. However, due to the fact that pension funds were gradually being phased out there was not much attraction in planning and studying new policies. This fact was endorsed by a superintendency officer, claiming that their planning horizon covered only one year.

In the case of assistance programmes, the Superintendency of Social Security acted only as a bank transferring the resources to municipalities to provide the benefits. However, the administration and selection procedures were defined by the Ministry of Interior. Therefore, in this area we found a mishmash of resource allocation and the administration of resources.

To conclude this section, we describe the most important weaknesses and strengths of the system. As in many other sectors, we found a case of "unaware incrementalism" in which most ministerial bureaucracy was obliged to follow a wide range of procedures for formulating its budget which were in the end overlooked by the Budget Office as these procedures were repeated year after year. Moreover, most of the traditionally budgeted items represented a tiny proportion of the sectoral expenditures.

Another problem was found in the mixture variety of institutions responsible for assistance programmes. The financial resources were formally allocated to the Treasury Subsidies Programme, but they were practically administrated by the Superintendency of Social Security. However, they were in the end provided through municipalities. This vague definition of responsibilities produced overlap in decision making and a lack of accountability. It is an obvious necessity to introduce some

coordination within these institutions which operated these programmes, ideally creating a single institution responsible the entire area.

It is difficult to summarize the situation of pension funds. As they have been gradually phased out not many improvements can have been expected to take place. However, it can be mentioned that the complex network of transfers and the variety of funds amongst them makes very difficult the possibility of obtaining accurate estimates of the real expenditures of each of them.

Finally, we consider the "regionalization" of assistance programmes as a positive step toward regional discretionary power at a regional level. However, this new procedure seems to be an alternative way of reducing social expenditures rather than effectively "allowing regions to allocate resources according to their own needs". In fact similar steps have been taken in other social ministries which have also resulted in reducing expenditures. Nevertheless, as this procedure has been recently implemented in this sector its results remain to be seen.

## 8.2.E. Discretionary Powers Over Public Resources and Decisions

In this section we discuss the discretion or autonomy of the regions in managing and deciding the social programmes undertaken within its territory. In Table 8.3. we have further summarised the institutional headings of the previous section: ministerial bureaucracy, pension funds and assistance programmes. Each of these institutional aggregations combined agencies with very similar characteristics (<sup>17</sup>).

### E.1. Regulation

The definition of the agencies tasks or functions occurred at a central level for all the institutions under the ministerial bureaucracy. Assistance programmes were highly dependent on central decisions as they were not an institution but a fund that received a financial transfer or subsidies that were managed by a group of institutions.

Pension funds have been defined as delegated institutions for the effects of government regulation. Although most public and semi-public pension funds were ultimately accountable to the Ministry of Labour and Social Security they also were supposed to respond to their beneficiaries and were created as a result of them. At the same time the mere fact that its directors were appointed by the President of the Republic gave them a different stand to other ministerial institutions. All these features allowed them an autonomy in relation to the source of authority and control. In relation to the source of authority and control of the other institutional aggregations, the ministerial agencies were structured in the same way as most other social sectors' bureaucracies. Central headquarters had regional agencies which were accountable to the central headquarter and to the regional governor. Therefore, they have a shared regulation. Assistance programmes were slightly more centralized since their authority relied on the ministry's capacity to encourage or constrain their coverage.

.....  
17. In the case of pension funds and assistance programmes the institutional organization was nearly identical.



TABLE 8.3.

DISCRETIONARY POWERS OVER RESOURCES AND DECISIONS IN SOCIAL SECURITY

| Govt. Intervention Forms    | Ministry | Pension Funds | Assistance Programmes | TOTAL           |
|-----------------------------|----------|---------------|-----------------------|-----------------|
| <b>REGULATION</b>           |          |               |                       |                 |
| Who Defines Tasks           | Centre   | Delegated     | Centre                | Centre-Delegat. |
| Source of Authority         | Shared   | Delegated     | Centre                | Centre-Delegat. |
| Control                     | Shared   | Delegated     | Shared                | Shared-Delegat. |
| <b>FINANCE</b>              |          |               |                       |                 |
|                             | CMF 99%  | CMF 100%      | SPF 100%              | CMF 86%         |
|                             | BF 1%    |               |                       | SPF 14%         |
|                             |          |               |                       | BF 0%           |
| <b>PRODUCTION</b>           |          |               |                       |                 |
| Personnel                   | Centre   | Centre        | Shared                | Shared          |
| Field Administration Levels | 2        | 1             | 3                     | 2               |

NOTE: See text for explanations

FINANCE: CMF Centrally Managed Finance  
 SPF Specific Purpose Fund  
 BF Block Fund

PRODUCTION: Levels of Field Administration  
 1 Central  
 2 Regional  
 3 Municipal

## E.2. Finance

In terms of the forms of financing the different sectoral activities, we found only two alternatives: centrally managed finances and specific purpose funds. A minute proportion of the funds were considered as block funds but they accounted for 0.01% of the sectoral budget.

Centrally managed finance accounted for 86% of total expenditures in social security and assistance programmes. Although the ministerial agencies enjoy certain amounts of discretion in terms of their regulation powers, their finances were totally determined by the central allocations of the ministry.

Pension funds were also found to be centrally financed despite being defined as delegated institutions. As a result of

the weak financial situation of the funds, due to their original insolvency and the changes introduced after 1981, the pension funds became increasingly dependant on the budget allocations of the Ministry of Finance. Our estimates suggest that approximately two thirds of the pension funds' expenditures stemmed from Treasury transfers. In fact, most negotiations of pension funds' levels and benefits (in the "old" system) between pensioners and trade unions were with representatives of the Ministry of Labour and Social Security and the Ministry of Finance simultaneously. Pension funds themselves had neither the power nor the resources to finance additional benefits from their own sources.

This classification of pension funds as centrally managed finances produced an instantaneous shift to an overall increasingly centralized pattern of finances in this sector. Moreover, as pension funds accounted for more than a quarter of total social expenditures, this also produced a significant effect in the classification of all social expenditures.

Assistance programmes were found to match the features of specific purpose funds. These resources were transferred to a region for a single pre-defined objective of which the central level had defined the eligibility criteria and the number of beneficiaries. In this case, the regional discretion consisted of selecting the individual beneficiaries according to the central rules (<sup>18</sup>).

.....  
18. According to a new legislation introduced in 1987, the "savings" brought about through paying fewer pensions or family allowances, due to death or to people no longer qualifying as "poor", can be spent according to a regional decision. These can be considered as regionally managed finance. However, there is no reference data about the occurrence of such savings.

### E.3. Production

Although most ministerial and pension funds personnel were recruited and managed centrally, the bureaucrats who provided and deliver the assistance programmes were mostly organized on a local basis. Thus an overall view of the personnel involved in social security and assistance programmes would correspond to a shared organization in which both the centre and the local level have influence in personnel decisions.

Regarding the levels of field administration, it can be said that this sector had fewer levels than the other sectors reviewed. This was a clear result of the important presence of pension funds which functioned as national institutions with no regional or local presence.

In sum, we found that social security and assistance programmes followed a more centralized model, especially in the case of ministerial bureaucracy and assistance programmes. This occurred despite the fact that pension funds were defined as delegated institutions in terms of regulatory powers, the reality being that they were centrally financed and their services were carried out for the most part on a central level as well.

## 8.2.F. Summary and Conclusions: Organization and Finance of Social Security in Chile

To begin this summary it is important to remember that for the first time we are dealing with a social sector which involved not a single ministerial framework. Labour, social security and assistance programmes are separate activities which are conventionally presented together, but in practical terms their organization and finances are not necessarily planned and designed as a whole.

The sector has experienced an important restructuring since 1975. The first reforms attempted to redress a number of the inequities of the old social security system. This implied the unification of most non-pensionable benefits (family allowances, unemployment subsidies and sickness benefits). This was achieved by transforming these benefits into a state subsidy rather than a contributory benefit; in this way the Ministry of Finance acquired the power to set the benefit levels. At the same time contribution rates and retirement age were also unified.

However, the most important reform was the creation of private pension funds (AFPs) in 1981. These new private schemes were based on the individual capitalization of workers' contributions instead of the old pay-as-you-go scheme. The introduction of this new scheme caused important additional expenditures for the public budget. The state became responsible for financing the deficit created in the old pension funds as most of the active workers shifted to the new system and ceased contributing to pay the pensions of passive or retired workers. At the same time, the state also paid a "recognition bond" to those workers shifting to the new system as a way of recognising their contributions to the old system.

The unification of social security benefits was also achieved through the creation of assistance programmes. These programmes sought to provide the same type of social security benefits to the non insured population, which was around 30% of the working force in 1987. The assistance programmes included

family allowances, assistance pensions and special employment programmes. These programmes were poverty-targeted and were designed as a way to help families in most need.

The total sectoral expenditures showed a countercyclical pattern during the 1980's. This was basically due to the creation of assistance programmes which followed this pattern by definition. In fact shortly after 1984, the special employment programmes began to be reduced as a result of the improved economic situation of the country.

Regarding the budgeting and planning procedures of the sector, we found that the ministerial bureaucracy and pension funds followed an incrementalist approach taking account of only marginal additions. In contrast to previous cases, in the case of pension funds we do found a clear reason to approach budgeting incrementally as their functions and historical expenditures are generally justified over time; therefore, it is necessary to explain only the marginal annual changes.

Assistance programmes initially followed the same style of incremental budgeting, but after ceilings were imposed by the Ministry of Finance, these programmes changed to a style of fixed budget in which justifications were almost irrelevant. In this regard, we consider that the "regionalization" of assistance programmes was related more to a cut in social expenditures rather than a real increase in the discretionary powers over these resources. The regional capacity to manage these resources remained the same, but they had now to face limited resources and waiting lists. Through this procedure the centre transferred to the regions its own uncertainty due to the cuts or stagnation of expenditures.

Although the Ministry of Labour had important planning agencies, they were mostly concerned with the implementation and evolution of labour policies rather than with pension funds. Instead the Superintendency of Private Pension Funds became an important institution in regulating the developments of all private pension funds. As a result of the 1981 reforms, the pension funds had been on a dissolution phase, therefore the only

planning activities to have been carried out in this area were related to the financial aspects for the payment of old age pensions. There were no innovations to test or plan here. In this form the Ministry of Labour and Social Security adopted the role of other social sectors related more to regulation and normalization of the services provided through private agencies (AFPs in this case) rather than planning the provision or production of the services.

In relation to assistance programmes, we found that none of the different institutions in charge of their finance and delivery took a leading role in planning the developments of these programmes. Most changes introduced here were a result of Ministry of Finance decisions to cut expenditures or to enhance certain groups of beneficiaries but these decisions did not take account of the local instances of delivery. In this regard, we believe there is an urgent necessity to consolidate these programmes under a single agency which manages its budget and plans its developments.

The agencies' discretionary powers for the management of public resources and decisions were found to be more constrained than in other sectors. This conclusion was reached despite the fact that pension funds were defined as delegated institutions, i.e., as having semi-autonomous status. The bulk of the sectoral resources were centrally managed as were their regulatory powers.

Overall, we conclude that decentralization has not proceeded<sup>ed</sup> in Social Security and Assistance Programmes. The only steps pointed in this direction (<sup>19</sup>) are understood more as a restriction in social security expenditures than an actual transfer of resources to lower governmental tiers. At the same time, it is not realistic to expect dramatic improvements along these lines, as pension funds were created on a national centralized structure. However, the demographic extinction of pension funds may allow a more decentralized social security system to be established.

.....  
19. (In the case of assistance programmes).

### 8.3. REDISTRIBUTIVE EFFECTS OF SOCIAL SECURITY AND ASSISTANCE PROGRAMMES

This section is aimed to review the redistributive impact of social security expenditures and assistance programmes. In other words, we attempt to estimate the proportion of the total sectoral expenditures that have reached the lower 30% of the population.

As has been described in an earlier section, the redistributive effects of the Chilean Social Security system has been an important issue since the mid 1950's. One of the first studies of this area estimated that 41% of the social security costs were paid by the non-insured through taxes and employers contributions, most of which were transferred to the consumer through higher prices <sup>(20)</sup>. The Prat commission also detected a considerable transfer of costs among groups of insured so that white collars workers and civil servants profited at the expense of blue collars workers <sup>(21)</sup>. These and other studies led Mesa Lago (1978, 55) to conclude that "the cost of Social Security is increasingly being paid by the non-insured, also among the insured, revenue from the non-insured goes increasingly to those groups which, because of their higher income and fewer insured, need it least".

Although social security programmes had been created with a clear redistributive aim they were not poverty-targeted as assistance programmes are. However, as has been explained in previous chapters, poverty-targeting was an official aim which encompassed all social expenditures. Therefore, we test to what extent social security and assistance programmes are benefiting the lower 30% of the population.

The valuation of the state transfers in social security and assistance programmes was approached in a straight forward manner. Every person interviewed in the CASEN survey was asked

.....  
20. Klein and Saks mission quoted in Mesa Lago (1978) op.cit.

21. Prat Commission quoted in Mesa Lago (1978) op.cit.

about their monthly income and the sources of it. Regarding this last question the respondents were asked to specify if it was salary or work income, rents, assets revenue, pensions, or assistance programmes.

Table 8.4. shows the estimates of direct social expenditures as a proportion of total public expenditures on social security and assistance programmes. For 1985, direct social expenditures captured almost 74% of total public expenditures in the sector. This proportion was estimated after deducting the contributions paid by the affiliated to pension funds and the administrative costs. In sum, this means that for 1985 our analysis of the redistributive effects of social expenditures is based upon a high proportion of total expenditures. However, in the case of 1987, there was no information about social security expenditures and the analysis is therefore constrained to assistance programmes exclusively. In this case, these programmes were totally financed from the Treasury and there were no contributions for financing them. Direct expenditures on assistance programmes captured almost 80% of total public expenditures on these programmes.

| TABLE 8.4.  |         |         |
|---|---------|---------|
| ESTIMATES OF DIRECT SOCIAL EXPENDITURES AS A PROPORTION OF TOTAL PUBLIC EXPENDITURES IN SOCIAL SECURITY AND ASSISTANCE PROGRAMMES |         |         |
| (Millions of 1987 \$)   |         |         |
|   | 1985    | 1987(*) |
| a) Total public expenditure on Social Security and Assistance Programmes  | 426,140 | 40,944  |
| - Contributions paid  | 97,998  |         |
| b) Fiscal social expenditure on Social Security and Assistance Programmes   | 328,142 | 40,944  |
| - Administration costs  | 14,372  | 8,407   |
| c) Direct social expenditure on Social Security and Assistance Programmes   | 313,770 | 32,537  |
| c) / a) %   | 73.6    | 79.5    |

(\*) See text for explanations

Author calculations based on:

Table 8.2.

Ley de Presupuestos del Sector Publico 1985 -1987

Haíndl & Weber 1986

Haíndl, Budinich and Irarrazaval 1989



Table 8.5. gives an outlook of the redistributive effects of social security and assistance programmes. Overall, we found that for 1985, sectoral expenditures were regressive as the lower 30% of the population captured only 23% of the total public expenditures. This outcome was heavily influenced by the regressivity of pension (social security) expenditures in which the lower 30% captured only 13% of the total expenditures on that programme. The considerable degree of progressiveness observed in assistance programmes was not enough to offset the pattern of social security expenditures as these were more than four times greater than the former.

| TABLE 8.5.   |                       |                       |                        |      |                   |
|--|-----------------------|-----------------------|------------------------|------|-------------------|
| REDISTRIBUTIVE EFFECTS OF SOCIAL SECURITY AND ASSISTANCE PROGRAMMES EXPENDITURES |                       |                       |                        |      |                   |
| (Millions of 1987 \$)  |                       |                       |                        |      |                   |
|  |                       | Total<br>Direct Exps. | Share of<br>Bottom 30% | %    | TYPE OF PROGRAMME |
| 1985   | Pensions              | 254,805               | 33,772                 | 13.3 | Regressive        |
|  | Sp. Employ. Prgs.     | 28,376                | 20,601                 | 72.6 | Very Progressive  |
|  | SUF                   | 10,513                | 7,044                  | 67.0 | Very Progressive  |
|  | PASIS                 | 20,076                | 10,841                 | 54.0 | Progressive       |
|  | Sub-Tot. Assis. Prgs. | 58,965                | 38,486                 | 65.3 | Very Progressive  |
|  | TOTAL                 | 313,770               | 72,257                 | 23.0 | Regressive        |
| 1987   | Sp. Employ. Prgs.     | 10,407                | 6,910                  | 66.4 | Very Progressive  |
|  | SUF                   | 7,337                 | 5,297                  | 72.2 | Very Progressive  |
|  | PASIS                 | 14,793                | 9,231                  | 62.4 | Progressive       |
|  | Sub-Tot. Assis. Prgs. | 32,537                | 21,438                 | 65.9 | Very Progressive  |

Author calculations based on:

Table 8.2.

Haindl & Weber 1986

Haindl, Budinich and Irarrazaval 1989

The information for 1987 allowed us only to make comparisons regarding the redistributive effects of assistance programmes. It is possible to note that the categories were maintained: Special Employment Programmes and Family Allowances for low income families were both categorized as very progressive. Overall, assistance programmes were classified as very progressive programmes in both years. The marginal gains in progressiveness between 1985 and 1987 were achieved through improvements in family allowances and assistance pensions. As a reminder these two programmes experienced a reformulation in 1987, in which the central level defined regional ceilings in the number of subsidies to be awarded per region.

In sum, despite the fact that assistance programmes were found to be very progressive, the total effect of social security and assistance programmes was found to be regressive. This means that these programmes are unable to improve the income distribution, i.e. to distribute the benefits more equally. In this sense the new private pension schemes (AFPs) were certainly not designed to make the income distribution more even, but they have at least contributed to decrease the cross regressive subsidies between occupational groups which occurred in the past.

## 8.4 REGIONAL ALLOCATION OF EXPENDITURES

### 8.4.A. Data Constraints and Methodology

This section explains the steps taken for producing the estimates of the regional expenditures in Social Security and Assistance Programmes. According to the information provided in Table 8.6., for the three years under analysis 99% of the sectoral expenditures were allocated according to Criterion A. This criterion represents a good accuracy level. Although the original data was not presented in terms of regional budgets, it was possible to allocate them in regional terms using alternative sources.

#### Ministry:

The ministerial bureaucracy concentrates all ministerial agencies which plan and implement policies related to the labour force. There was no specific information to allocate these expenditures. Therefore, they were allocated according to the regional distribution of the labour force. This corresponds to an indirect criterion (Criterion D).

#### Pension Funds:

In the case of pension funds, we are faced with a very similar situation to that of social welfare provisions in the National Fund of Health (FONASA). Each pension fund sent a monthly report to the Superintendency of Social Security describing the number of pensions paid, types of pensions (there are five types of pensions) and the amount of resources involved in these payments. This information was provided on a regional basis. However, as in the case of FONASA, the Superintendency did not compile annually this information at a regional level. Therefore, as the calculation of the annual average is a very cumbersome process which would not have contributed greatly to the general accuracy of the final outcomes, we selected a representative month.

After studying the monthly evolution of the total number of pensions paid and the amounts of resources involved, it was possible to conclude that only minor seasonal variations occurred. Therefore, we chose July as the representative month,

as in the case of FONASA. The objective here was to obtain the regional structure of social security expenditures and use that structure to allocate the Comptroller's estimates of the total annual expenditures on this item (22).

In sum, in the case of pension funds, we have a regional allocation of expenditures that is in accordance to criterion A, since these funds are based on original information with a clear "in and for" specification.

#### Assistance Programmes:

The National Institute of Statistics and the Social Insurance Service (SSS) has compiled statistics about the number of subsidies paid in assistance programmes per region. With this information and estimations of the unitary costs of each subsidy or the payment levels involved (23), we were able to estimate the regional structure of the expenditures on assistance programmes for each of the three years under analysis. This regional structure was later used to allocate the Comptroller annual estimates of expenditures on these programmes. These estimations were considered under criterion A.

.....  
22. An additional caveat must be introduced here in relation to family allowances and recognition bonds paid through pension funds. The pension funds did not report the regional distribution of these payments. Moreover, most were paid through private compensation funds. Therefore, these payments, which accounted for 9% of pension funds' expenditures, were allocated according to the regional distribution of pension funds' expenditures.

23. This information was supplied by the SSS.

The final estimates of the regional sectoral expenditures are presented in Tables 8.7. to 8.9. As has been done in earlier chapters the figures are presented for different alternatives: i) assistance programmes' expenditures, ii) ministerial and social security expenditures (pension funds) and iii) Total expenditures on Ministerial bureaucracy, assistance programmes and social security.

| TABLE 8.6.   |          |           |            |       |
|--|----------|-----------|------------|-------|
| CRITERIA OF REGIONAL ALLOCATION OF SOCIAL SECURITY AND ASSISTANCE PROGRAMMES |          |           |            |       |
| 1985   | Ministry | Pen.Funds | Ass.Progs. | TOTAL |
| Crit. A  |          | 100       | 100        | 99    |
| Crit. B  |          |           |            |       |
| Crit. C  | 100      |           |            | 1     |
| Crit. D  |          |           |            |       |
| TOTAL  | 100      | 100       | 100        | 100   |
| % Min. Budget  | 1        | 83        | 17         | 100   |
| 1986   | Ministry | Pen.Funds | Ass.Progs. | TOTAL |
| Crit. A  |          | 100       | 100        | 99    |
| Crit. B  |          |           |            |       |
| Crit. C  | 100      |           |            | 1     |
| Crit. D  |          |           |            |       |
| TOTAL  | 100      | 100       | 100        | 100   |
| % Min. Budget  | 1        | 86        | 14         | 100   |
| 1987   | Ministry | Pen.Funds | Ass.Progs. | TOTAL |
| Crit. A  |          | 100       | 100        | 99    |
| Crit. B  |          |           |            |       |
| Crit. C  | 100      |           |            | 1     |
| Crit. D  |          |           |            |       |
| TOTAL  | 100      | 100       | 100        | 100   |
| % Min. Budget  | 1        | 88        | 11         | 100   |

NOTE: See text for explanations

#### 8.4.B. Regional Expenditures and Regional Needs.

This section discusses the relationship between regional expenditures on the sector and regional needs. To tackle this task it is necessary to define some indicators of sectoral needs.

In earlier chapters, we discussed the difficulties related to defining a specific sectoral indicator of need. It is necessary to recall this issue again, specifically in this sector, as social security and assistance programmes can embrace more than one dimension of need. At the same time, as in other sectors, we are also constrained by the indicators available.

The indicators selected were the following:

**Affiliation:** This indicator reflects the proportion of the labour force affiliated to a social security scheme, either a pension fund in the old system or AFP.

**Contributing:** This indicator presents a more restrictive definition in comparison to the previous one. In this case, we computed the proportion of the labour force who contributed (no arrears) to a social security scheme.

For example, in 1987 more than 76% of the labour force was affiliated to a pension scheme; however, only 48% were up to date in their contributions.

**Unemployment:** The unemployment rate was obtained from the National Institute of Statistics sample surveys.

**Retirement:** This indicator was estimated as the proportion of population above 65 years old in relation to total population. This indicator represented the overall need for pensions.

EAP: This was the proportion of Economically Active population in relation to total regional population.

AFP: This was the proportion of the working force affiliated to a private pension fund (AFP).

In addition to the sector specific indicators, we also included a group of indicators which helped to test the hypotheses described in Chapter 3. These indicators are:

GDP: Regional GDP per capita

INCO: Regional average income

URBN: % urban population

URBZ: % Population living in cities with more than 20,000 inhabitants.

Finally, in relation to expenditure indicators, we defined three alternative indicators which showed the different dimensions of social security and assistance programmes (24).

EXSS: Included the ministerial expenditures on the central bureaucracy and social security expenditures.

EXAP: Included only the regional allocation of assistance programmes expenditures.

EXMSS: Included ministerial, social security and assistance programmes expenditures.

The indicators described are presented on Tables 8.7. to 8.9. The tables also show their average, standard deviation and coefficient of variation.

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24. All these indicators are presented in per capita terms.

TABLE 8.7.  
SOCIAL SECURITY AND ASSISTANCE PROGRAMMES INDICATORS - 1985  
(Index Total=100)

|               | AFIL  | CONT  | UNEM  | RETI  | EAP   | AFP   | GDP     | INCO    | URBN  | URBZ  | EXSS   | EXMSS  | EXAP   |
|---------------|-------|-------|-------|-------|-------|-------|---------|---------|-------|-------|--------|--------|--------|
| Tarapaca      | 130.9 | 138.2 | 108.8 | 72.8  | 95.9  | 123.7 | 136.5   | 85.7    | 113.3 | 127.3 | 98.1   | 93.0   | 67.9   |
| Antofagasta   | 120.1 | 124.7 | 94.2  | 76.8  | 92.0  | 128.1 | 200.3   | 83.2    | 118.5 | 119.9 | 85.2   | 86.7   | 93.8   |
| Atacama       | 128.4 | 129.5 | 61.2  | 81.1  | 88.2  | 128.2 | 148.7   | 82.8    | 110.3 | 83.9  | 60.9   | 68.1   | 103.3  |
| Coquimbo      | 91.7  | 88.1  | 108.0 | 106.5 | 85.2  | 80.4  | 61.1    | 69.0    | 90.2  | 63.7  | 68.4   | 78.5   | 128.4  |
| Valparaiso    | 95.0  | 93.1  | 101.9 | 116.2 | 103.5 | 91.9  | 99.4    | 90.8    | 109.3 | 101.4 | 157.8  | 149.2  | 107.6  |
| O'higgins     | 100.3 | 98.7  | 60.5  | 104.5 | 94.1  | 101.0 | 122.9   | 79.4    | 78.9  | 43.1  | 86.1   | 83.2   | 68.7   |
| Maule         | 86.1  | 84.2  | 86.3  | 102.6 | 94.2  | 79.2  | 65.7    | 83.3    | 68.8  | 57.4  | 64.7   | 69.5   | 92.6   |
| BioBio        | 93.8  | 94.2  | 80.7  | 95.9  | 89.6  | 92.3  | 79.9    | 88.6    | 92.5  | 81.6  | 86.0   | 89.4   | 105.9  |
| Araucania     | 72.7  | 68.0  | 57.5  | 113.5 | 87.0  | 67.1  | 55.6    | 94.3    | 69.6  | 41.3  | 66.6   | 75.4   | 118.5  |
| Los Lagos     | 86.1  | 83.1  | 54.8  | 108.3 | 89.9  | 82.9  | 66.9    | 98.2    | 71.5  | 46.0  | 61.0   | 78.3   | 163.3  |
| Aysen         | 95.2  | 89.4  | 38.0  | 70.0  | 110.2 | 81.5  | 81.5    | 93.8    | 95.8  | 63.8  | 43.6   | 60.7   | 143.6  |
| Magallanes    | 125.2 | 128.7 | 73.3  | 92.6  | 118.3 | 114.8 | 260.1   | 117.5   | 110.8 | 105.8 | 100.1  | 95.8   | 73.7   |
| Metropol.     | 106.4 | 107.7 | 125.7 | 96.7  | 110.3 | 110.9 | 110.0   | 117.0   | 116.0 | 135.5 | 115.9  | 110.9  | 86.3   |
| INDEX         | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0   | 100.0   | 100.0 | 100.0 | 100.0  | 100.0  | 100.0  |
| COUNTRY TOTAL | 68.1  | 44.2  | 12.0  | 5.8   | 33.2  | 32.9  | 29406   | 42788   | 83.3  | 71.4  | 29113  | 35155  | 5877   |
| AVG           | 69.7  | 45.1  | 9.7   | 5.6   | 32.1  | 32.4  | 33673.2 | 38952.8 | 79.8  | 58.8  | 24512  | 30792  | 6120   |
| STD           | 12.0  | 9.2   | 3.0   | 0.9   | 3.3   | 6.5   | 17068.2 | 5681.6  | 14.9  | 22.6  | 8290.7 | 7680.2 | 1624.8 |
| COEF.VAR.     | 17.2  | 20.4  | 30.9  | 15.7  | 10.4  | 20.1  | 50.7    | 14.6    | 18.7  | 38.5  | 33.8   | 24.9   | 26.5   |

|       |   |
|-------|---|
| AFIL  | % workers affiliated to pension scheme (Afil./work force)           |
| CONT  | % Workers contributing to pension scheme                            |
| UNEM  | Unemployment rate   |
| RETI  | % Pop. above 65 years (pop.65+/tot.pop)                             |
| PART  | % Participation in work force (Work force/Tot. Pop.)                |
| AFP   | % Workers contributing to AFPs in relation to work force            |
| GDP   | GDP per capita  |
| INCO  | Average regional income   |
| URBN  | % urban population  |
| URBZ  | % pop. living in cities above 20,000                                |
| EXSS  | Public expenditures in Social security                              |
| EXMSS | Public expenditures in Mins. Labour, Soc.Sec. and Assistance Progs. |
| EXAP  | Public Expenditures on Assistance Programmes                        |



TABLE 8.8.  
SOCIAL SECURITY AND ASSISTANCE PROGRAMMES INDICATORS - 1986  
(Index Total=100)

|               | AFIL  | CONT  | UNEM  | RETI  | EAP   | AFP   | GDP     | INCO    | URBN  | URBZ  | EXSS    | EXMSS   | EXAP   |
|---------------|-------|-------|-------|-------|-------|-------|---------|---------|-------|-------|---------|---------|--------|
| Tarapaca      | 107.4 | 111.8 | 107.2 | 74.1  | 112.3 | 123.1 | 133.7   | 83.8    | 113.0 | 126.9 | 101.5   | 96.5    | 64.2   |
| Antofagasta   | 111.0 | 115.3 | 89.0  | 78.3  | 99.0  | 129.4 | 190.5   | 78.2    | 118.1 | 120.2 | 87.6    | 87.3    | 84.5   |
| Atacama       | 120.0 | 118.1 | 67.0  | 81.3  | 93.5  | 126.8 | 142.0   | 78.9    | 110.3 | 84.0  | 54.1    | 59.1    | 88.6   |
| Coquimbo      | 88.3  | 84.2  | 87.8  | 106.8 | 89.5  | 82.7  | 61.3    | 68.5    | 90.1  | 63.9  | 64.3    | 73.3    | 129.5  |
| Valparaiso    | 97.5  | 93.6  | 139.0 | 115.3 | 98.3  | 90.2  | 100.5   | 92.1    | 109.2 | 100.9 | 164.2   | 157.3   | 116.5  |
| O'higgins     | 93.7  | 91.5  | 65.7  | 104.6 | 100.8 | 99.0  | 122.1   | 78.2    | 79.2  | 43.3  | 64.5    | 65.6    | 70.8   |
| Maule         | 79.7  | 76.5  | 74.9  | 101.5 | 99.8  | 78.2  | 65.8    | 83.4    | 69.3  | 57.4  | 58.7    | 64.1    | 96.7   |
| BioBio        | 92.3  | 92.1  | 72.0  | 96.0  | 91.3  | 92.8  | 77.6    | 85.3    | 92.5  | 81.7  | 81.3    | 84.0    | 100.6  |
| Araucania     | 69.8  | 65.1  | 80.1  | 114.1 | 91.1  | 67.7  | 55.2    | 92.4    | 69.3  | 41.5  | 54.8    | 64.0    | 120.7  |
| Los Lagos     | 83.5  | 78.2  | 56.6  | 108.2 | 92.3  | 83.2  | 68.1    | 99.2    | 71.9  | 46.1  | 49.5    | 61.8    | 138.3  |
| Aysen         | 92.3  | 88.1  | 31.3  | 70.8  | 115.4 | 85.8  | 81.1    | 92.6    | 96.1  | 64.0  | 35.5    | 44.5    | 97.9   |
| Magallanes    | 111.9 | 113.9 | 44.4  | 93.3  | 125.7 | 114.7 | 252.7   | 113.8   | 110.6 | 105.8 | 180.8   | 162.7   | 50.1   |
| Metropol.     | 112.2 | 115.3 | 121.6 | 96.7  | 105.7 | 111.2 | 111.7   | 119.1   | 115.8 | 136.5 | 121.2   | 117.1   | 92.0   |
| TOTAL         | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0   | 100.0   | 100.0 | 100.0 | 100.0   | 100.0   | 100.0  |
| COUNTRY TOTAL | 71.9  | 46.2  | 8.8   | 5.9   | 34.6  | 37.1  | 30553   | 45227   | 83.6  | 70.9  | 26677   | 31105   | 4224   |
| AVG           | 69.7  | 44.2  | 7.0   | 5.6   | 35.0  | 36.7  | 34366.0 | 40545.3 | 80.1  | 58.5  | 22942   | 27211   | 4062   |
| STD           | 10.2  | 7.8   | 2.5   | 0.8   | 3.6   | 7.2   | 16854.4 | 6251.3  | 14.8  | 22.5  | 11500.1 | 11113.4 | 1042.7 |
| COEF.VAR.     | 14.7  | 17.6  | 36.1  | 15.1  | 10.4  | 19.6  | 49.0    | 15.4    | 18.5  | 38.4  | 50.1    | 40.8    | 25.7   |

|       |   |
|-------|---|
| AFIL  | % workers affiliated to pension scheme (Afil./work force)           |
| CONT  | % Workers contributing to pension scheme                            |
| UNEM  | Unemployment rate   |
| RETI  | % Pop. above 65 years (pop.65+/tot.pop)                             |
| PART  | % Participation in work force (Work force/Tot. Pop.)                |
| AFP   | % Workers contributing to AFPs in relation to work force            |
| GDP   | GDP per capita  |
| INCO  | Average regional income   |
| URBN  | % urban population  |
| URBZ  | % pop. living in cities above 20,000                                |
| EXSS  | Public expenditures in Social security                              |
| EXMSS | Public expenditures in Mins. Labour, Soc.Sec. and Assistance Progs. |
| EXAP  | Public Expenditures on Assistance Programmes                        |

TABLE 8.9.  
SOCIAL SECURITY AND ASSISTANCE PROGRAMMES INDICATORS - 1987  
(Index Total=100)

|             | AFIL  | CONT  | UNEM  | RETI  | EAP   | AFP   | GDP     | INCO    | URBN  | URBZ  | EXSS    | EXMSS   | EXPA  |
|-------------|-------|-------|-------|-------|-------|-------|---------|---------|-------|-------|---------|---------|-------|
| Tarapaca    | 111.6 | 116.9 | 94.7  | 74.4  | 109.3 | 121.1 | 132.0   | 104.0   | 112.9 | 126.8 | 99.6    | 95.1    | 58.0  |
| Antofagasta | 117.1 | 120.4 | 118.7 | 79.5  | 96.2  | 126.0 | 191.6   | 96.6    | 117.8 | 120.7 | 88.5    | 87.2    | 76.6  |
| Atacama     | 114.5 | 113.0 | 64.9  | 82.3  | 100.4 | 126.5 | 143.4   | 98.8    | 110.2 | 83.9  | 55.6    | 57.8    | 71.5  |
| Coquimbo    | 85.5  | 82.0  | 102.0 | 106.5 | 94.2  | 84.5  | 61.4    | 75.3    | 90.3  | 64.3  | 66.9    | 71.7    | 107.7 |
| Valparaiso  | 105.3 | 102.4 | 88.0  | 115.2 | 92.8  | 90.4  | 100.5   | 95.1    | 109.0 | 100.5 | 164.1   | 158.2   | 117.1 |
| O'higgins   | 93.7  | 91.9  | 60.7  | 104.8 | 102.4 | 99.7  | 123.0   | 79.8    | 79.4  | 43.7  | 67.5    | 68.0    | 69.4  |
| Maule       | 81.7  | 78.9  | 68.0  | 100.9 | 98.6  | 79.4  | 65.9    | 90.9    | 69.4  | 57.3  | 59.9    | 64.2    | 95.0  |
| BioBio      | 89.3  | 89.0  | 111.3 | 96.3  | 96.1  | 93.1  | 78.2    | 81.6    | 92.6  | 81.9  | 84.3    | 85.9    | 97.8  |
| Araucania   | 71.9  | 66.1  | 71.6  | 113.7 | 89.1  | 65.8  | 55.4    | 89.9    | 69.4  | 41.9  | 56.3    | 63.4    | 117.1 |
| Los Lagos   | 87.2  | 82.5  | 44.8  | 108.6 | 92.8  | 84.3  | 68.7    | 76.3    | 72.0  | 46.2  | 52.1    | 61.2    | 130.3 |
| Aysen       | 86.3  | 77.7  | 32.1  | 70.8  | 122.0 | 82.9  | 80.8    | 127.8   | 96.6  | 64.6  | 32.2    | 38.3    | 79.2  |
| Magallanes  | 111.3 | 114.0 | 58.4  | 93.1  | 124.5 | 112.6 | 250.2   | 116.6   | 110.5 | 106.0 | 231.2   | 208.0   | 32.4  |
| Metropol.   | 109.8 | 112.6 | 124.8 | 96.6  | 105.3 | 111.2 | 111.1   | 118.0   | 115.6 | 140.0 | 116.9   | 114.9   | 99.9  |
| TOTAL       | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0   | 100.0   | 100.0 | 100.0 | 100.0   | 100.0   | 100.0 |
| TOTAL       | 76.4  | 48.4  | 7.9   | 5.9   | 34.7  | 41.7  | 31766   | 47803   | 83.8  | 70.4  | 25656   | 29176   | 3266  |
| AVG         | 74.4  | 46.5  | 6.3   | 5.6   | 35.3  | 41.0  | 35725.7 | 45990.0 | 80.3  | 58.4  | 23191   | 26345   | 2894  |
| STD         | 10.9  | 8.4   | 2.2   | 0.8   | 3.7   | 7.8   | 17386.6 | 7652.4  | 14.8  | 22.6  | 13375.1 | 13047.1 | 857.9 |
| COEF.VAR.   | 14.6  | 18.1  | 34.8  | 14.9  | 10.4  | 19.1  | 48.7    | 16.6    | 18.4  | 38.7  | 57.7    | 49.5    | 29.6  |

AFIL % workers afiliated to pension scheme (Afil./work force)  
 CONT % Workers contributing to pension scheme  
 UNEM Unemployment rate  
 RETI % Pop. above 65 years (pop.65+/tot.pop)  
 PART % Participation in work force (Work force/Tot. Pop.)  
 AFP % Workers contributing to AFPs in relation to work force  
 GDP GDP per capita  
 INCO Average regional income  
 URBN % urban population  
 URBZ % pop. living in cities above 20,000  
 EXSS Public expenditures in Social security  
 EXAP Public Expenditures on Assistance Programmes

## B.1. Preliminary Data Analysis

In this section and in the two sections to follow, we concentrate on discussing and testing the hypotheses presented in chapter 3. These hypotheses are related to the consequences of the regional allocation of social expenditures.

In Tables 8.7. to 8.9. it is possible to observe that social security expenditures (EXSS) and total sectoral expenditures (EXMSS) showed a very similar regional pattern. For the three years under analysis the Valparaiso, Magallanes and Metropolitan regions showed above average levels in sectoral expenditures. This was related to the regional pattern of GDP per capita in which the same three regions and the more urbanized regions showed above average levels. Therefore, we observed some positive links between regional sectoral expenditures and regional well being, (Hypothesis 2). In the case of assistance programmes expenditures, we found an almost opposite pattern. In this case Coquimbo, BioBio, Araucania and Los Lagos all showed above average levels, all of which are intermediate or rural regions with lower GDP per capita. The exception to this case was Valparaiso, which also ranked high in total sectoral expenditures. However, assistance programmes accounted for a small proportion of total expenditures (11 to 17% of total sectoral expenditures), therefore, they were not sufficient contradiction of the change the evidence supporting the occurrence of hypothesis 2.

The data also showed that total sectoral expenditures were related to urbanization. Three of the five regions with above average levels on this indicator were the regions with higher total expenditures per capita. This fact provided some initial evidence for supporting hypothesis 3, which states that social expenditures were concentrated on more urbanized regions.

In relation to other sectoral indicators it is possible to note that affiliation, contribution and AFP all showed a similar regional pattern. Urban regions provided above average levels of social security coverage in any of the three alternative measures. The regional patterns included the northern mining

regions and the regions whose main activities were services. This coincides with the historical fact that these two areas of economic activity have enjoyed the greatest levels of protection. This finding was consistent with similar outcomes obtained by Mesa Lago (1978) in the early sixties. In fact there seemed to be a relation between larger sizes of regional economically active population and better social security coverage.

It is difficult to analyse the relationship between sectoral expenditures and basic needs with the information provided in Tables 8.7. to 8.9. Unemployment appeared to be higher in urban regions, which coincides with higher allocations of social security expenditures. Therefore, there is initial evidence to suggest that sectoral expenditures were related to one dimension of need in this area.

The sectoral expenditures showed an important level of interregional disparities. This was especially clear in the cases of ministerial and social security expenditures (EXSS). In contrast, expenditures on assistance programmes showed a lower level of interregional disparities. This situation can be explained by the fact that pension funds were above 83% of the sectoral expenditures. This means that regional allocations of sectoral expenditures were heavily influenced by pension expenditures. Therefore, the regions with economic sectors highly protected through out the past <sup>(25)</sup> were still receiving higher allocations per capita. This was clearly the case with the oil industry, which is concentrated in Magallanes which and has traditionally enjoyed better pension benefits.

In sum, the preliminary data analysis has provided an indication that the richest regions obtained higher levels of social expenditures per capita (hypothesis 2) and that social expenditures were concentrated in more urbanized regions (hypothesis 3). In relation to hypothesis 1, we cannot conclude with the evidence presented up to this point, whether the government was or was not channelling higher proportions of its

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25. Protected economic sectors usually enjoyed better levels of pensions and benefits from the social security system.

expenditures to the regions with higher levels of basic needs dissatisfaction.

## B.2. Associations Between Social Security and Assistance Programmes Variables.

Table 8.10. contains the correlation matrix of the sectoral variables. From the table it is possible to note that the ministerial and social security expenditures (EXSS) were significantly correlated to GDP per capita. This supports our earlier findings suggesting the validity of hypothesis 2, that richer regions obtained higher proportions of social security expenditures. It is interesting to note that assistance programmes' expenditures also showed significant but negative correlations to GDP. This means that assistance programmes favoured proportionally the poorer regions. In other words assistance programmes were progressive in regional terms. However, as assistance programmes' accounted for less than a quarter of the total sectoral expenditures, the overall effect was that of a positive correlation between total sectoral expenditures and an indicator of regional well being (<sup>26</sup>), supporting the case of hypothesis 2.

The correlation matrix also showed significant positive correlations between social security expenditures (EXSS) and total sectoral expenditures (EXMSS) and both indicators of urbanization. This was basically a result of urban working forces tending to be better organised and informed about the social security system resulting in higher coverage levels. This fact was also comparable to the conclusions of Mesa Lago (1978) who found that rural provinces (i.e. regions) had a higher proportion of the labour force engaged in agriculture, which was poorly unionized and politically passive. In Table 8.10., it is possible to observe that all indicators of social security coverage (affiliation, contributions and AFP) were significantly correlated to both indicators of urbanization.

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26. It should be noted that due to the negative relation between assistance programmes expenditures and GDP, the correlation between total sectoral expenditures (EXMSS) and GDP was weaker (but still significant) than that of social security expenditures (EXSS) and GDP.

TABLE 8.10.

CORRELATION MATRIX - SOCIAL SECURITY INDICATORS

|     | AFIL     | CONT     | UNEM    | RETI     | EAP      | AFP      | GDP     | INCO    | URBN    | URBZ    | EXSS    | EXMSS | EXAP |
|-----|----------|----------|---------|----------|----------|----------|---------|---------|---------|---------|---------|-------|------|
| IL  | 1.00     |          |         |          |          |          |         |         |         |         |         |       |      |
| NT  | 0.99 **  | 1.00     |         |          |          |          |         |         |         |         |         |       |      |
| EM  | 0.16     | 0.25     | 1.00    |          |          |          |         |         |         |         |         |       |      |
| TI  | -0.58 ** | -0.58 ** | 0.10    | 1.00     |          |          |         |         |         |         |         |       |      |
| P   | 0.36     | 0.33     | -0.31   | -0.41 *  | 1.00     |          |         |         |         |         |         |       |      |
| P   | 0.90 **  | 0.88 **  | 0.01    | -0.54 ** | 0.41 *   | 1.00     |         |         |         |         |         |       |      |
| P   | 0.78 **  | 0.79 **  | -0.01   | -0.43 *  | 0.53 **  | 0.72 **  | 1.00    |         |         |         |         |       |      |
| CO  | 0.30     | 0.26     | -0.18   | -0.17    | 0.70 **  | 0.32     | 0.35    | 1.00    |         |         |         |       |      |
| BN  | 0.85 **  | 0.86 **  | 0.38    | -0.56 ** | 0.40     | 0.74 **  | 0.67 ** | 0.34    | 1.00    |         |         |       |      |
| BZ  | 0.76 **  | 0.81 **  | 0.55 ** | -0.46 *  | 0.37     | 0.67 **  | 0.58 ** | 0.39    | 0.91 ** | 1.00    |         |       |      |
| SS  | 0.40     | 0.44 *   | 0.37    | 0.16     | 0.36     | 0.28     | 0.55 ** | 0.34    | 0.53 ** | 0.60 ** | 1.00    |       |      |
| MSS | 0.33     | 0.37     | 0.42 *  | 0.20     | 0.28     | 0.18     | 0.48 *  | 0.28    | 0.50 *  | 0.56 ** | 0.99 ** | 1.00  |      |
| AP  | -0.49 *  | -0.45 *  | 0.26    | 0.24     | -0.59 ** | -0.69 ** | -0.49 * | -0.41 * | -0.31   | -0.31   | -0.22   | -0.07 | 1.00 |

Tailed Significance: \* 0.01 \*\* 0.001

- IL % workers affiliated to pension scheme (Afil./work force)
- NT % Workers contributing to pension scheme
- EM Unemployment rate
- TI % Pop. above 65 years (pop.65+/tot.pop)
- RT % Participation in work force (Work force/Tot. Pop.)
- P % Workers contributing to AFPs in relation to work force
- P GDP per capita
- CO Average regional income
- BN % urban population
- BZ % pop. living in cities above 20,000
- SS Public expenditures in Social security
- MSS Public expenditures in Ministry of Labour, Soc. security and Assit. progs.
- AP Public expenditures on Assistance Programmes

In sum, the correlations discussed provided sufficient evidence to accept hypothesis 3 which states that social expenditures had been concentrated in urban regions.

In relation to the first hypothesis which states that the government channelled a higher proportion of its resources to the less well off regions, (as measured in terms of basic needs insatisfaction), we required a selection of indicators of the for social security expenditures. The most simple indicator for this case was the proportion of population above retirement age. A positive correlation between social security expenditures (EXSS) or total sectoral expenditures (EXMSS) and retirement would make evident that expenditures were allocated in relation to those in this specific need. However, the correlation

matrix did not exhibit such an outcome. In fact, the outcomes allowed no conclusions to be drawn regarding this issue as there were no significant correlations in this case. Some individual evidence suggested the contrary. For example, Araucania ranked first in retirements during the three years under analysis but it also showed simultaneously one of the lower expenditure levels in social security.

In addition to the previous discussion, it is interesting to note that assistance programmes expenditures were negatively correlated to the different indicators of social security coverage. This implies that the assistance programmes benefited those regions in which the working population was<sup>ks</sup> formally organized (27).

In summary, the analysis of the associations between sectoral expenditures and indicators of needs supported the earlier findings suggesting that social security expenditures were concentrated in more urbanised regions (hypothesis 3). However, despite some evidence in the case of assistance programmes, the correlation analysis did not allow a clear conclusion to be made regarding a positive relation between total sectoral expenditures and basic needs.

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27. This was an original aim of these programmes.

### B.3. Defining a Model to Analyse the Relation Between Social Security and Assistance Programmes Expenditures and Sectoral Need Indicators

In this section we attempt to define a model that helps to explain the relation between sectoral expenditures and needs indicators. At the same time the models defined serve to test the hypotheses discussed earlier. In a similar approach to earlier chapters, we have defined sectoral expenditures as the dependent variable in all the regressions, since this equation form makes possible a test of the hypotheses. In this sector the same regressions were run for social security expenditures (EXSS), total social security and assistance expenditures (EXMSS) and assistance programmes (EXAP).

Overall, it was found that regressions having EXSS and EXMSS as dependent variables showed very similar results. However, when using total sectoral expenditures (EXMSS) as the dependent variable the equations had a lower goodness of fit. Therefore, the final analysis is based on the equations which have EXSS as dependant variable.

After the initial analysis, it was found that, because EXAP was a component of total sectoral expenditures which have a very different objective than social security expenditures, the outcomes of the regressions using this variable as the dependant variable were very poor. Therefore, it was decided to define different forms of models to analyse the relations between this specific area of expenditure and the sectoral indicators.

Because many of the indicators available for analysis on this sector were related to one another or were specific dimensions of the same general aspect (<sup>28</sup>), the problem of multicollinearity arose again as an unavoidable constraint in the quality of the estimations. Moreover, in some occasions it was necessary to use equations with some degree of multicollinearity in order to be able to test the initial hypotheses. As a result

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28. For example affiliation, contribution and AFP all represented the same dimension of social security coverage.



of this situation, equations 1 to 5 on Table 8.11. are presented in an order in which the first items have higher levels of multicollinearity and the last ones have lower levels.

TABLE 8.11.

REGRESSION ANALYSIS - SOCIAL SECURITY AND ASSISTANCE PROGS. EXPENDITURES

| No. DEPENDENT | VARIABLE | AFIL    | UNEM   | RETI    | EAP | GDP    | INCO   | URBN   | URBZ   | Adjusted R sq. |
|---------------|----------|---------|--------|---------|-----|--------|--------|--------|--------|----------------|
| 1             | EXSS     | -404.58 |        | 8720.59 |     | 0.37   |        | 664.93 |        | 0.69           |
|               | t Ratios | (1.9)   |        | (5.9)   |     | (3.9)  |        | (5.0)  |        |                |
|               | Betas    | -0.40   |        | 0.66    |     | 0.56   |        | 0.88   |        |                |
| 2             | EXSS     |         |        | 9333.60 |     | 0.27   |        | 498.02 |        | 0.66           |
|               | t Ratios |         |        | (6.2)   |     | (3.3)  |        | (4.8)  |        |                |
|               | Betas    |         |        | 0.71    |     | 0.41   |        | 0.66   |        |                |
| 3             | EXSS     | 204.73  |        | 8029.80 |     |        | 0.18   |        | 337.39 | 0.58           |
|               | t Ratios | (1.1)   |        | (4.7)   |     |        | (1.0)  |        | (4.0)  |                |
|               | Betas    | 0.20    |        | 0.61    |     |        | 0.12   |        | 0.67   |                |
| 4             | EXSS     |         |        | 7238.83 |     |        | 0.18   |        | 401.26 | 0.57           |
|               | t Ratios |         |        | (4.6)   |     |        | (1.0)  |        | (6.3)  |                |
|               | Betas    |         |        | 0.55    |     |        | 0.12   |        | 0.80   |                |
| 5             | EXSS     |         |        |         |     |        | 0.18   |        | 275.41 | 0.34           |
|               | t Ratios |         |        |         |     |        | (0.8)  |        | (3.8)  |                |
|               | Betas    |         |        |         |     |        | 0.12   |        | 0.55   |                |
| 6             | EXAP     |         | 309.68 |         |     | -0.02  |        |        | -36.57 | 0.33           |
|               | t Ratios |         | (2.8)  |         |     | (-1.2) |        |        | (-2.2) |                |
|               | Betas    |         | 0.51   |         |     | -0.22  |        |        | -0.46  |                |
| 7             | EXAP     |         | 345.47 |         |     |        | -0.02  |        | -47.05 | 0.30           |
|               | t Ratios |         | (3.0)  |         |     |        | (-0.4) |        | (-2.9) |                |
|               | Betas    |         | 0.57   |         |     |        | -0.08  |        | -0.59  |                |
| 8             | EXAP     |         | 221.56 |         |     |        | -0.05  | -45.95 |        | 0.24           |
|               | t Ratios |         | (2.2)  |         |     |        | (-1.3) | (-2.2) |        |                |
|               | Betas    |         | 0.36   |         |     |        | -0.25  | -0.38  |        |                |

AFIL % workers affiliated to pension scheme (Afil./work force)  
 UNEM Unemployment rate  
 RETI % Pop. above 65 years (pop.65+/tot.pop)  
 EAP Economically Active Population  
 GDP GDP per capita  
 INCO Average regional income  
 URBN % urban population  
 URBZ % pop. living in cities above 20,000  
 EXSS Public expenditures in Social security  
 EXAP Public Expenditures on Assistance Programmes

Equations one and two help to endorse the findings of the previous sub section (B.2.). Regional social security allocations were influenced by urban population (hypothesis 3) and by an indicator of regional well being (hypothesis 2); this arose as a result of the significative t-ratios of urban population and GDP. However, in addition to the previous findings the high t ratio of the retired population posed another aspect linked to the fact that social security expenditures were related with to least one of the indicators of need.

In equation three to five, we successively eliminated the variables which introduced multicollinearity problems. It is possible to note simultaneously that the overall goodness of fit of the regressions decreased in an important manner. However, the urban indicator (urbanization) holds its importance over other indicators; this was shown by its significant t-ratios. This means that the marginal changes on the urbanization rate influence the regional allocation of expenditures in a considerable way.

The change of average income instead of GDP as indicator of regional well being made the regression lose an important proportion of the overall variance to be explained.

On the other hand, the withdrawal of the variables correlated to retirement (<sup>29</sup>) caused it to lose strength in the overall equation. This can be observed by the decrease in its betas.

In sum, the outcomes of the five first equations suggest that there was a clear manifestation of social security expenditures being allocated in relation to urban population (hypothesis 3). At the same time the results also supported a situation in which the richest regions are received higher levels of sectoral expenditures per capita (Hypothesis 2). However, this was clear for only one of the indicators of regional well being. Finally, an initial relation between social security expenditures

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29. GDP and affiliation.

and one of the sectoral indicators (retirement) appears to be caused by multicollinearity problems rather than an effective association between these variables.

Although assistance programmes expenditures accounted for less than 15% of sectoral expenditures it is interesting to test the same original hypothesis regarding this single area. Equations six to eight show that these expenditures had a progressive regional allocation which was linked to one of the most important indicators of need in the area: the unemployment rate. This conclusion was explained by the consistent significant t-ratios of unemployment. From the table it can also be noticed that because of the negative signs of the indicators of urbanization on these equations, we were able to conclude that assistance programmes were not allocated in relation to urban population as was the case of the rest for these sectoral expenditures. These two features gave assistance programmes a very different perspective from the rest of the sectoral expenditures.

#### 8.4.C. Section Summary and Conclusions

In this section we have proceeded to estimate the regional expenditures on social security and assistance programmes. According to the final outcomes, it was possible to allocate the total sectoral expenditures on this area; this was done in conformity with the most demanding criterion of regional allocation (<sup>30</sup>). This fact makes an interesting contribution to the study of the regional impact of social expenditures. Earlier sectoral studies (<sup>31</sup>) have been unable to give a regional dimension to social security expenditure. Therefore, they have omitted more than a quarter of total social security expenditures. The main difference between this study and the former studies is the treatment and access to the pension funds monthly reports found on the archives of the Superintendency of Social Security (<sup>32</sup>).

The second part of this section was dedicated to the analysis of the regional expenditures and its relation to the hypotheses defined earlier in chapter 3. Following the procedure of previous chapters the hypotheses were tested on three stages: preliminary analysis considering some statistics of dispersion; the association between variables using correlation analysis; and finally an attempt to build a model that helps to explain the relation of the variables (regression analysis). In order to test the hypotheses it was also necessary to define some sectoral indicators.

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30. 99% of social security and assistance programmes expenditures were allocated according to criterion A.

31. Rackzinsky, D. (1986) and Mesa Lago (1978) only allocate the regional expenditures of a proportion of all pension funds.

32. It should be noted that even the Superintendency has failed to process these regional monthly reports.

The findings provided numerical and statistical evidence demonstrating that social security expenditures were more concentrated in urban areas (hypothesis 3) and especially in cities of more than 20,000 inhabitants. This outcome, which is also endorsed by partial earlier studies of Mesa Lago (1978), appeared to be a result of the structure and organization of the old social security system which was developed mostly as a result of more organized urban workers of minning and servvices.

At the same time the findings suggested a positive relation between one of the indicators of regional well being and social security expenditures. In other words, the results indicated that richer regions or those with higher levels of well being obtained higher proportions of social security expenditures (hypothesis 2). It is interesting to note that the indicator with more significance here was GDP. This indicator shows the regional contribution to the overall production of the country in per capita terms. The indicator is biased towards formal and quantifiable areas of production with common underestimations of local and home production. Therefore, although this outcome does support a case for accepting hypothesis 2, it also helps to further endorse hypothesis 3.

The analysis did not provide clear evidence concerning the the first hypothesis, which states that the governement channels a higher proportion of its resources to the less well off regions measured in terms of their basic need insatisfaction.

Two practical problems appeared here: On the one hand there was an intrinsic difficulty in defining and computing statistical indicators of the need for social security. On the other hand, once some indicators had been identified they proved to have increasing levels of multicollinearity among them.

However, the statistical information did suggest that at least a part of the sectoral expenditures were related to sectoral needs. Assitance programmes were allocated in a higher proportion to those regions having lower levels of labour force organization (low social security coverage). This was one of the official aims of these programmes.

In summary, according to the form on which social security expenditures appear to be allocated, it seems to be that these expenditures did not help to redress regional inequalities nor to improve the conditions of those regions in a relatively bad situation. This conclusion should not surprise the reader, since we have mentioned earlier that 86% of the total sectoral expenditures were managed centrally with no necessary consideration of the regional situation. In fact the organization of pension funds, which comprised almost a third of total public expenditures did not take consideration of the regional dimension but of the pressure groups or workers federations that created them.

## CHAPTER 9

### CONCLUSIONS

#### Introduction

This study has set out to tackle wide ranging largely unresearched issues. It has attempted to bring together the background history to the social services to describe their organizational structure and finance, and to analyze the distributional impact of expenditure on each of these services. In this chapter we summarize the research findings, appraise the research and consider future research possibilities and, finally, consider the implications of the findings for social and regional policy.

The chapter is structured in three sections. The first section outlines the most important findings of the study. The second section discusses the research methods and their implication for future research. The final section addresses the policy implications of the research.

#### 9.1. THE FINANCE AND ORGANIZATION OF CHILEAN SOCIAL MINISTRIES

After the analysis of the finances and organization of each of the social ministries, we discuss the common features of them attempting to define a model that may help to explain the general case of the bureaucratic organization of the social services in the country.

This section is divided in four sections. The first areas follow the structure of the early sectoral chapters. Section 9.1.A. introduces the most relevant aspects regarding the organization and finance of the social services, 9.1.B. describes the redistributive effects of social expenditures and 9.1.C. analyses the impact of the regional allocation of social expenditures. The last part of this section includes an outline of the most important findings of the research.

## 9.1.A. Social Expenditure and the Organization of the Social Sectors

### A.1. Total Public Expenditures in the Social Sectors

The development of total social expenditures during the last two decades can be observed in Table 9.1. and in Figure 9.1. The expenditure shows two peaks; for 1974 and 1981-1982. Both of them coincide with the developments of the sectors described earlier. After the fall due to the economic recession of the 1974-1975s, social expenditures began to grow from 1977 reaching a peak in 1982 when social expenditures per capita were almost at the same level as that of 1970. In 1981 social expenditures grow by more than 19%; they continued to grow in 1982, although at a lower rate, despite a GDP fall of more than 14%. However, this interesting countercyclical pattern was reversed in 1983 when social expenditures experienced a fall of 13% which was simultaneous with a 1% decrease in the GDP.

| YEAR | TOTAL SOCIAL EXPENDITURES<br>(Millions of 1989 \$) |             | TOT. SOC. EXPENDS.<br>per CAPITA<br>(1989 pesos) |             |
|------|--|-------------|--|-------------|
|      | YANEZ  | COMPTROLLER | YANEZ  | COMPTROLLER |
| 1970 | 809,834  |             | 86,451   |             |
| 1973 | 537,781  |             | 54,538   |             |
| 1974 | 672,517  |             | 67,077   |             |
| 1975 | 592,321  |             | 58,667   |             |
| 1976 | 546,930  |             | 52,732   |             |
| 1977 | 630,217  |             | 59,731   |             |
| 1978 | 660,479  | 735,870     | 61,063   | 68,033      |
| 1979 | 761,063  | 755,406     | 69,345   | 68,829      |
| 1980 | 760,612  | 784,965     | 68,248   | 70,434      |
| 1981 | 924,365  | 865,569     | 81,605   | 76,415      |
| 1982 | 950,664  | 954,763     | 82,531   | 82,887      |
| 1983 | 841,435  | 774,577     | 71,815   | 66,108      |
| 1984 | 862,068  | 795,075     | 72,330   | 66,709      |
| 1985 | 851,291  | 797,995     | 70,229   | 65,832      |
| 1986 |  | 775,353     |  | 62,899      |
| 1987 |  | 773,947     |  | 61,736      |

Source:

1. Yanez (1983) and Yanez y Aguilo (1988);
2. Contraloría General de la Republica  
Informes Gestion Financiera 1987

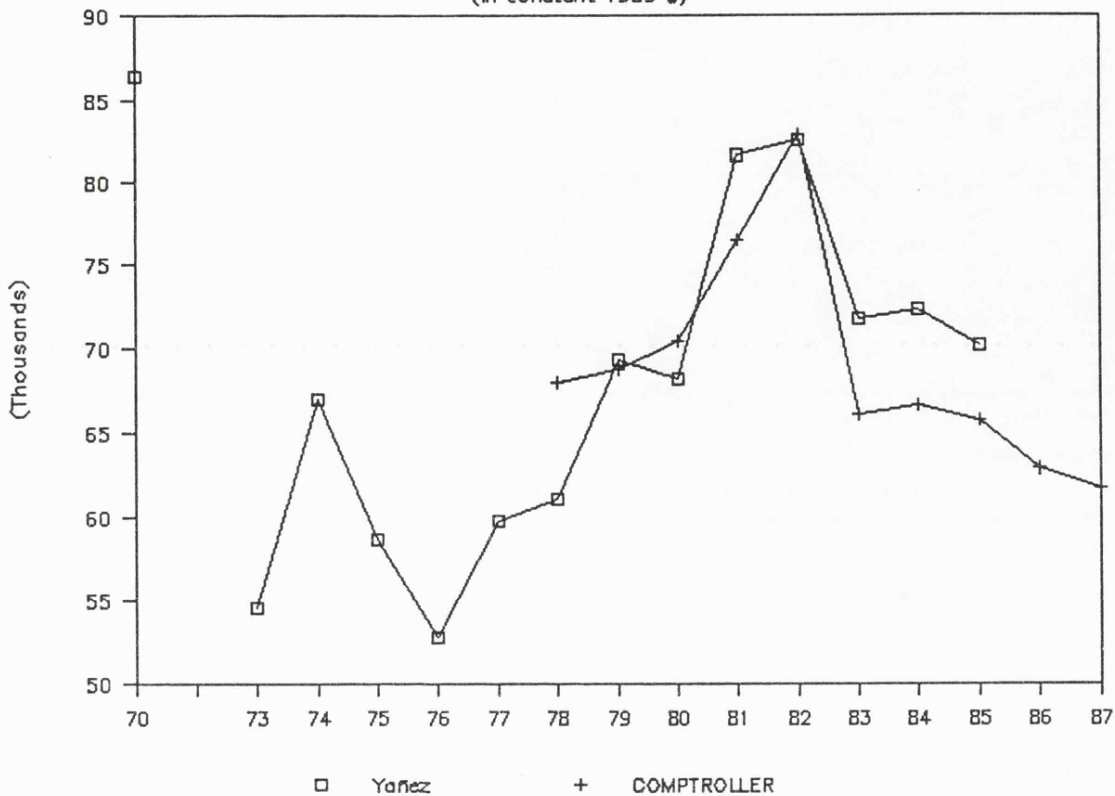
NOTE: Deflated by the National Institute of Statistics C.P.I.



FIGURE 9.1.

TOTAL SOCIAL EXPENDITURES PER CAPITA

(in constant 1989 \$)



In sum, it can be argued that although the trends of social expenditures have not been instantaneously affected by the economic cycle, they have tended to be reduced due a persistent poor performance of the economy resulting in decreases of public revenues. During these periods the social expenditures were unable to compensate for the negative effects of the economic cycle on poor families.

It is interesting to note that many of the transformations in the organization and finance of the social programmes are not necessarily a result of a planned process for policy implementation, but a result of the evolution of the economy as whole. As has been mentioned in the case of health and social security, the "regionalization" of social programmes in both sectors have really been thought of as a cost containment devices.

TABLE 9.2.

TOTAL PUBLIC EXPENDITURES ON SOCIAL SERVICES  
(Millions of 1987 \$) (Expenditure Structure %)

| 1985          | HEALTH        | EDUCATION      | HOUSING       | SOC.SEC.       | TOTAL          | HEALTH      | EDUCATION   | HOUSING    | SOC.SEC.    | TOTAL        |
|---------------|---------------|----------------|---------------|----------------|----------------|-------------|-------------|------------|-------------|--------------|
| Personnel     | 33,800        | 20,591         | 3,170         | 5,337          | 62,898         | 37.8        | 13.8        | 7.1        | 1.3         | 8.9          |
| G. & S. cons. | 19,379        | 2,450          | 897           | 5,089          | 27,815         | 21.7        | 1.6         | 2.0        | 1.2         | 3.9          |
| Soc.Wel.Prov. | 24,885        | 29             |               | 300,945        | 325,859        | 27.8        | 0.0         | 0.0        | 70.6        | 45.9         |
| Transfers     | 6,279         | 125,836        | 708           | 113,595        | 246,418        | 7.0         | 84.1        | 1.6        | 26.7        | 34.7         |
| Cap.Inv.      | 1,537         | 353            | 35,637        | 195            | 37,723         | 1.7         | 0.2         | 80.0       | 0.0         | 5.3          |
| Financ. inv.  | 0             | 1              | 3             | 0              | 4              | 0.0         | 0.0         | 0.0        | 0.0         | 0.0          |
| Cap.Transf.   |               |                | 258           |                | 258            | 0.0         | 0.0         | 0.6        | 0.0         | 0.0          |
| Publ.debt     | 18            |                |               |                | 18             | 0.0         | 0.0         | 0.0        | 0.0         | 0.0          |
| Previous year | 3,562         |                |               |                | 3,562          | 4.0         | 0.0         | 0.0        | 0.0         | 0.5          |
| Other         | 28            | 371            | 3,877         | 979            | 5,254          | 0.0         | 0.2         | 8.7        | 0.2         | 0.7          |
| <b>Total</b>  | <b>89,487</b> | <b>149,632</b> | <b>44,550</b> | <b>426,140</b> | <b>709,810</b> | <b>12.6</b> | <b>21.1</b> | <b>6.3</b> | <b>60.0</b> | <b>100.0</b> |
| 1986          | HEALTH        | EDUCATION      | HOUSING       | SOC.SEC.       | TOTAL          | HEALTH      | EDUCATION   | HOUSING    | SOC.SEC.    | TOTAL        |
| Personnel     | 34,797        | 17,244         | 3,207         | 6,484          | 61,732         | 38.4        | 11.8        | 7.5        | 1.7         | 9.3          |
| G. & S. cons. | 19,569        | 2,059          | 838           | 4,631          | 27,096         | 21.6        | 1.4         | 2.0        | 1.2         | 4.1          |
| Soc.Wel.Prov. | 25,105        | 47             |               | 288,716        | 313,868        | 27.7        | 0.0         | 0.0        | 75.3        | 47.4         |
| Transfers     | 5,732         | 125,299        | 444           | 82,734         | 214,209        | 6.3         | 85.8        | 1.0        | 21.6        | 32.3         |
| Cap.Inv.      | 1,422         | 417            | 33,172        | 157            | 35,167         | 1.6         | 0.3         | 77.6       | 0.0         | 5.3          |
| Financ. inv.  | 33            | 0              | 203           | 0              | 236            | 0.0         | 0.0         | 0.5        | 0.0         | 0.0          |
| Cap.Transf.   |               |                | 120           |                | 120            | 0.0         | 0.0         | 0.3        | 0.0         | 0.0          |
| Publ.debt     | 23            |                |               |                | 23             | 0.0         | 0.0         | 0.0        | 0.0         | 0.0          |
| Previous year | 3,515         |                |               |                | 3,515          | 3.9         | 0.0         | 0.0        | 0.0         | 0.5          |
| Other         | 359           | 932            | 4,775         | 715            | 6,781          | 0.4         | 0.6         | 11.2       | 0.2         | 1.0          |
| <b>Total</b>  | <b>90,554</b> | <b>145,998</b> | <b>42,758</b> | <b>383,437</b> | <b>662,747</b> | <b>13.7</b> | <b>22.0</b> | <b>6.5</b> | <b>57.9</b> | <b>100.0</b> |
| 1987          | HEALTH        | EDUCATION      | HOUSING       | SOC.SEC.       | TOTAL          | HEALTH      | EDUCATION   | HOUSING    | SOC.SEC.    | TOTAL        |
| Personnel     | 34,745        | 6,840          | 3,103         | 6,808          | 51,495         | 38.5        | 5.1         | 6.5        | 1.9         | 8.1          |
| G. & S. cons. | 23,263        | 1,306          | 839           | 4,126          | 29,533         | 25.8        | 1.0         | 1.7        | 1.1         | 4.6          |
| Soc.Wel.Prov. | 19,291        | 122            |               | 290,657        | 310,070        | 21.4        | 0.1         | 0.0        | 79.5        | 48.6         |
| Transfers     | 7,018         | 125,764        | 530           | 63,066         | 196,377        | 7.8         | 93.5        | 1.1        | 17.2        | 30.8         |
| Cap.Inv.      | 1,335         | 149            | 33,602        | 133            | 35,220         | 1.5         | 0.1         | 70.1       | 0.0         | 5.5          |
| Financ. inv.  | 538           | 0              | 573           | 181            | 1,292          | 0.6         | 0.0         | 1.2        | 0.0         | 0.2          |
| Cap.Transf.   |               |                | 1,161         |                | 1,161          | 0.0         | 0.0         | 2.4        | 0.0         | 0.2          |
| Publ.debt     | 27            |                |               |                | 27             | 0.0         | 0.0         | 0.0        | 0.0         | 0.0          |
| Previous year | 3,176         |                |               |                | 3,176          | 3.5         | 0.0         | 0.0        | 0.0         | 0.5          |
| Other         | 831           | 263            | 8,140         | 797            | 10,031         | 0.9         | 0.2         | 17.0       | 0.2         | 1.6          |
| <b>Total</b>  | <b>90,223</b> | <b>134,444</b> | <b>47,948</b> | <b>365,767</b> | <b>638,382</b> | <b>14.1</b> | <b>21.1</b> | <b>7.5</b> | <b>57.3</b> | <b>100.0</b> |

Author calculations based on:  
Tables 5.4., 6.9., 7.6., and 8.2.

At the same time not all of the sectors has experienced the same developments on their expenditures; while health was categorized as countercyclical, the contrary was found for housing. In this regard, it is important to consider the relative sizes of each; this is shown on Table 9.2. in terms of the sectoral share in relation to the total sectoral expenditures.

Any marginal changes on social security expenditures influence the total of social expenditures to a considerable extent. Nevertheless, not only the size of the sector is what matters for determining the developments of its expenditures but also the type of expenditures. In the case of social security there is an obligation on the state towards these expenditures as the government changed the social security system, taking on an important part of the pension funds' operational deficits and the cost involved in the transition to the new private system. In the case of housing, the government has not been bound to a level of expenditures or to a number of houses to be built each year apart from some rhetorical statements. On the other hand, both health and education have a number of claimants or beneficiaries per year, which the government cannot reduce. Therefore, in the case of social security, health and education it is necessary to use different procedures to decrease expenditures, like freezing benefit levels or organizational transformations like the "regionalization" of programmes. In the case of housing the changes in the overall expenditure levels can be more radical.

The economic expenditure structure of the Chilean social sectors is summarized in Table 9.2. It was generally expected to find that social services spend a large part of their budgets on personnel as they are labour intensive activities. However, this is not observed in this table, since most social services and social programmes are now financed through transfers which are, in practical terms funds, to finance or subsidize a specific activity. Therefore, it is from these global transfers that the agencies finance most of their expenses, including personnel.

## A.2. Finance and Organization of the social sectors

### Re-organization and changes

The organization of the social sectors has experienced important changes during the 1980s. These can be summarized in three areas: i) Re-definition of the sectoral roles, ii) Re-organization of the territorial structure and finance of the services and iii) Selectivity and targeting in social programmes.

#### i) Re-definition of the sectoral roles:

One of the most important recent changes involves the re-definition of the social services' roles passing from the state being mainly a producer of the services itself to a regulator or financer of the services.

This was achieved by "privatizing" the production of services. Using Glennerster's (1985) finance-provision (<sup>1</sup>) distinction it is necessary to differentiate between those services that are publicly financed but privately produced or contracted-out from those that are both privately financed and produced.

In the Chilean reality we have examples of both cases. In the case of contracted-out services it is possible to quote the changes in the school meals programme that now relies on private catering companies for the production of the meals but is still a programme financed by the state. Similar examples can be found in housing where the state is no longer the builder of houses or the Central Supply Warehouse (Ministry of Health) that now organizes public tenders to produce privately the milk to be distributed through the complementary feeding programme.

In the case of privately financed and produced services, it

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1. In relation to the definitions given in earlier chapters, Glennerster's "finance-provision" distinction is equivalent to a "finance-production" distinction, according to our terminology.

is convenient to differentiate again between "old" public services that are fully privatized and a new state regulation that allows the private sector to intervene in areas in which it was not allowed before <sup>(2)</sup>. In the Chilean reality there are very few examples of the former case; e.g. the sale of a public hospital to a private institution. However, there are many examples of the latter situation, like the creation of the private pension funds (AFPs), the new private health insurance schemes (ISAPRES), and the new private universities. The latter situation has been strongly pursued according to the neo-liberal policies implemented during the 1980s which aim to reduce the state involvement in the social sector. An intermediate case is that of municipalized schools and outpatient clinics. These services were transferred from the ministerial bureaucracy to municipalities. All of them are still publicly funded through subvention schemes or F.A.P.s, but most of them are managed by the municipal "private" corporations for social development.

Overall, the "privatization" <sup>(3)</sup> moves of social services have made the ministerial bureaucracies responsible for quality controls and policy definition rather than the actual delivery of services. However, in most cases this important shift of the ministerial role, has not been fully acknowledged by the bureaucracies. The bureaucratic efforts are still concentrated in elaborating clear and justified budgets which contain explanations for each single item of goods and services for consumption. Nevertheless, these days most of the sectoral budgets will go through transfers to "privatized" services on which there is not much specific quality control.

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2. In this case more than a change in the finance-production distinction, it is more appropriate to acknowledge a change in the state regulations for the organization of private social services.

3. Instead of privatization, the word "subsidiarization" can be used meaning that the state has transferred some of its responsibilities to subsidiary institutions. (See: Principle of Subsidiarity on Chapter 2).

ii) Reorganization of the territorial structure and finance of the services.

This issue involves two aspects. Regarding the structure of the services, the division of roles between normative (or Regulatory) and finance-production was duplicated at a regional level. The regional ministerial secretariats (SEREMIs) perform the normative and policy definition functions at the regional level controlling the quality of the contracted-out services. The nationally organized health services (Servicios de Salud) will perform the more administrative tasks related to the organization of a vaccination campaign.

In relation to the finance of the service there are two consequences. On the one hand, some pre-existing national social services were regionalized. The aim here was to have a better accountability of public funds, while at the same time the central level still controlled regional discretion or internal reallocations of the budgets. An additional constraint was related to the fact that the "regionalization" of these national programmes was mostly done considering the historical regional allocations rather than the regional sectoral needs or other indicators. Therefore, an interesting opportunity for trying to redress the regional inequalities was lost. This is the case with the National System of Health Services and the creation of the new regional universities as a result of the regionalization of the two biggest national universities. In both cases, the structure of the historical regional allocation was defined as the main criterion for future allocations.

On the other hand, at a programme level <sup>(4)</sup> there has also been a regionalization of the funds or the number of benefits to be allocated in each region. As in the previous case, the discretion transferred to the regions through these regionalization moves has been rather minimal as the criteria for selecting beneficiaries are all centrally defined. The gains in regional discretion are restricted to some potential savings that the regions can make from the allocated expenditures by

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4. Each social sector can have a variety of social programmes.

distributing less subsidies. In fact, in the regionalization of assistance pensions and family allowances we have claimed that it is more a case of cost containment rather than an effective transference of power because ceilings were imposed with the basis of only historical allocation.

Overall, the government has claimed that these changes have really meant a decentralization of social sectors. However, as most of the authority and discretion still remains at the central level it is more appropriate to define these changes as deconcentration. In practical terms, through this reorganization, the government obtained efficient regional agencies of the central level.

iii) Selectivity and Targeting Social Programmes:

In accordance to the neo-liberal policies implemented in the last decade there has been an important change towards a more residualistic model of welfare.

In this new approach to welfare, selectivity of beneficiaries has an important role. For this reason a national means test has been introduced as a pre-requisite for all assistance programmes and for accessing other services free of charge.

Targeting poor families has also been attempted through the creation of self-selective benefits which are attractive only to this group. This is the case of the sanitary infrastructures that provide a six square metres construction connected to mains services. The overall achievements on this regard are analysed in section 9.3.

These three features, ( i., ii. and iii.), are fully concordant with the free market style of planning that Chile has had since the mid 1970S. On this approach, the state reserves its role to a subsidiary function in social policies.

## Budgeting and Planning

As can be expected in the analysis of the budgeting and planning approaches in the Chilean social sectors we have found not a single planning model but a blending of the theoretical models described in Chapter 1. For practical purposes, we describe their features separately:

### i) Incrementalism:

Perhaps the most recurrent characteristic of all social sectors is the appearance of features of the incremental model. They are in fact only features, since the bureaucrats are seeking to approach the budget and the planning process on a rational approach without acknowledging fully the advantages of the incremental model. For this reason, we have called this approach "unaware incrementalism".

Despite the fact that in all social sectors the budgets are organized on a very rational and systematic approach, which includes justification of all expenditure items, the practice is that the bureaucrats themselves put more strength in justifying those areas on which there are changes from one year on to another or those areas on which there are no imposed ceilings. One reason is that they know that the Budget Office will concentrate on them. For example, in each of the Health Services they have to justify the expenditures in personnel despite the fact that the number of professional employed in each service are fixed by law. However, they know that it will be necessary to explain fully the over salary rate for doctors.

Therefore, social budgeters are not taking advantage of the incremental model. They could have concentrated on discussing and justifying only the policies and expenditures differing from those presently in effect achieving an important simplification in the policy making process and having more time to concentrate in the relevant areas of budgeting.



Our estimates suggested that more than 60% of the social sector budgets are prepared on this "unaware incrementalist approach". This comprises the expenditures on personnel, goods and services for consumption, social welfare provisions and other smaller areas of expenditure. Therefore, important efficiency gains <sup>(5)</sup> could be obtained by leaving aside the justification of the most traditional areas of expenditure within each social sector, for example the central bureaucracy of each ministry. The suggestion is not aimed to exclude these institutions or areas of expenditures from the budget, but rather defining its historical allocation plus a annual inflation allowance <sup>(6)</sup> as "approved expenditures" allowing the sector to concentrate more deeply on the marginal changes and future proposals.

Planning activities also have become incremental after the abandonment of the national development plans in the late 1970's. One of the main planning instruments of the present decade have been the Ministerial Programmes which define specific tasks for implementing or studying marginal changes in the organization or finance of the sectors. This implies the abandonment of the overall systematic ("rational") plans for sectoral development. The ministerial programmes respond to the necessity of replying to the problems detected by the practitioners, in this sense they have a "down to earth" origin which secures an interest in solving them.

Ministerial Programmes are far less ambitious than national or sectoral development plans, but they have contributed in an important manner to introduce changes in the organization of the sector through a process of smaller successive transformations.

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5. In terms of time availability.

6. To be defined by the Budget Office.

ii) Rational Comprehensive:

When the bureaucrats interviewed were asked to describe their ideal conception of planning; most of them ended up enumerating the features of the rational comprehensive model: Goal setting, identification of policy alternatives, evaluation of means against ends, etc. The majority believe that this is the way in which planning and budgeting are really taking place in Chile.

According to our analysis, it can be said that investment expenditures do follow a rational approach. Each sectoral capital investment project has to be processed through the Basic Statistical System for Investment (SEBI) which consist estimating the costs and benefits of the project and possible alternatives. However, our estimates suggested that capital investment is only 5 to 6% of total social expenditures.

Nevertheless, some of the elements of the rational comprehensive approach can be found in other areas of expenditure. Clearly, the year after year repetition of instructions through the ministerial financial basis or buget circulars allows the agencies to have a widespread knowledge of the budgeting procedures. These transparent and known procedures help the agencies to expect more certain outcomes from the processes in which they are involved. These are clear features of the rational model.

In sum, we have argued that around 60% of the social services budgets have some primary incremental features, at the same time, we suggested that about 5% of the social expenditures had a clear rational comprehensive approach. The remaining 30% has a mixture of both models; this area includes of transfers payments (7).

Transfers are resources that an institution passes on to one of its agencies or related institutions to perform delegated

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7. See Table 9.2.

functions. In this category we include funds that are transferred through diverse mechanisms and specifications like the transfers of the Central Supply Warehouse to the private sector to purchase milk for the Complementary Feeding Programme.

These transfers are usually budgeted considering the historical expenditures on them and justifying only the changes from one year on to another. However, the explanation of the previous expenditure trends is much more complex than in the "unaware incremental approach". They consider not only the development of the expenditures but also the evolution of registrations and demographic trends in the case of subventions or the expected performance of the economy and poverty levels in the case of assistance programmes.

iii) Transactive:

Throughout the discussion of the sectorial budgeting and planning approaches, we often described how the ministerial bureaucrats do not take into account the opinion of the prospective beneficiaries when designing a social programme nor do they ask the users about their results. Therefore, under the present organization it is not possible to see social planning in Chile as a process of mutual learning.

Most budgets and plans are decided centrally without taking into consideration the regional and agencies expectations. For example in the case of health and education both ministries have a predefined stage which should consist on a round of internal discussions for setting an agreed budget. However, these discussions are rarely held because of the pressures for elaborating the budget according to the Budget Office time table. On the other hand, the planning procedures, when they exist, are defined in a sophisticated way to be understood only by technicians.

#### iv) Advocacy and Radical:

During the military government, planning was approached as an in-house process in which only the most senior technicians participate. At the same time, as a logical result of a non-democratic government, there was no alternative to present alternative plans to the ones officially approved. In sum, it is not possible to find features of advocacy and radical types of planning.

Overall, the Chilean organization of the social sectors corresponds to one of a strong bureaucratic tradition in which the operation of the system is regulated by a variety of norms and procedures that have been established (formally and informally) through out its historical existence. These procedures and regulations assure the routine functioning of the system almost automatically. An important role in the maintenance of this scheme is played by the Budget Office (Ministry of Finance) as they have the power to introduce changes on the budget. The Budget Office is mostly concerned with trying to avoid increasing and unpredicted pressures on the public budget. Therefore, they give discretion in the management of resources only when they are certain that they control the agencies' expenditure levels.

In other words, the bureaucratic-historical model of the Chilean social services includes some elements of the rational comprehensive model as its procedures are transparent and known by the agencies. At the same time it incorporates features of the incremental approach since only marginal changes departing from the historical trends are analysed more in depth. However, it cannot be categorized as mixed scanning since these procedures form a complicated and rigid network which does not permit operation with the flexibility of mixed scanning. Moreover, there is no conscious distinction between fundamental and incremental decisions.

Regarding the other features of planning, it is necessary to mention that Chile has maintained its planning style of free market with a subsidiary state through out the period. At the same time social planning has been viewed as a social developmental approach but with a sectoral perspective rather than a unified one. This means that social policy is more concerned with the developments of each social service rather than social development as a whole.

Discretionary powers over public resources and decisions

Table 9.3. presents a summary of the sectoral findings related to the discretionary levels that each service enjoys for managing its resources and taking decisions.

| TABLE 9.3.  |         |        |           |       |         |                 |          |        |         |         |       |         |         |       |         |         |          |       |
|---|---------|--------|-----------|-------|---------|-----------------|----------|--------|---------|---------|-------|---------|---------|-------|---------|---------|----------|-------|
| DISCRETIONARY POWERS OVER RESOURCES AND DECISIONS |         |        |           |       |         |                 |          |        |         |         |       |         |         |       |         |         |          |       |
| Govt. Intervention Forms                          | HEALTH  |        | EDUCATION |       | HOUSING | SOC.SEC.        | TOTAL    |        |         |         |       |         |         |       |         |         |          |       |
| REGULATION  |         |        |           |       |         |                 |          |        |         |         |       |         |         |       |         |         |          |       |
| Who Defines Tasks                                 | Centre  |        | Centre    |       | Centre  | Centre-Delegat. | Centre   |        |         |         |       |         |         |       |         |         |          |       |
| Source of Authority                               | Centre  |        | Shared    |       | Shared  | Centre-Delegat. | Centre   |        |         |         |       |         |         |       |         |         |          |       |
| Control   | Centre  |        | Shared    |       | Shared  | Centre-Delegat. | Shared   |        |         |         |       |         |         |       |         |         |          |       |
| FINANCE   | CMF 70% | SPF 7% | FSSA 21%  | BF 2% | CMF 16% | SPF 7%          | FSSA 55% | BF 22% | CMF 21% | SPF 70% | BF 9% | CMF 86% | SPF 14% | BF 0% | CMF 64% | SPF 15% | FSSA 15% | BF 6% |
| PRODUCTION  |         |        |           |       |         |                 |          |        |         |         |       |         |         |       |         |         |          |       |
| Personnel   | Centre  |        | Regional  |       | Centre  | Shared          | Shared   |        |         |         |       |         |         |       |         |         |          |       |
| Field Administration Levels                       | 2-3     |        | 3         |       | 2       | 2               | 2-3      |        |         |         |       |         |         |       |         |         |          |       |

NOTE: See text for explanations

FINANCE: CMF Centrally Managed Finance  
 SPF Specific purpose Fund  
 FSSA Fund Subsiding Specific Activity  
 BF Block Fund  
 RMF Regionally Managed Finance

PRODUCTION: Levels of Field Administration  
 1 Central  
 2 Regional  
 3 Area  
 4 Local

Regarding the regulation function or the state's capacity to define what activities may or may not been undertaken, we found that this activity is mostly performed at central level. As a logical consequence of the unitary organization of the country, the definition of functions or tasks and the source of agencies' authority relies on the central level. However, the control of the agencies activities is more dispersed: in some cases this function is carried out by the institution's field agencies.

In relation to the finance of the social services, it can be seen in Table 9.3. that almost two thirds of the total resources available are centrally managed. This means that the social ministries have no discretion in the allocation of that proportion of their resources. At the same time, 30% of of social expenditures are funds over which agencies and regions have more discretion either through the selection of individual beneficiaries or in the allocation of resources. Finally, only 6% of the resources correspond to block funds, over which the regions have much more discretion in management as they can even determine its intersectoral allocation. Overall, we found that, in spite the interesting mechanisms of finance introduced in the last years, the social sectors rely very heavily on the budget allocations at the central level.

In this aspect, we acknowledged in the sectoral chapters that some of the new schemes for allocating social budgets more in line with the sectoral needs are interesting improvements. This is the case of the fee for service scheme in the health sector (FAPs), the educational subvention, and others. However, although these funds have an important share in some sectors the overall effect is not sufficient to change the centralized patterns of expenditure allocation.

Finally, the production of social goods and services is approached in a much more decentralized manner. Personnel is managed on a centre-regional shared basis. Whereas most social institutions have regional, area, or even local agencies.

In sum, we conclude that Chilean social services are organized on a deconcentrated model. This is explained by the

fact that the discretion of field agencies is mostly constrained to the production of services while the regulation and the finance are still in the hands of the centre.

However, as we mentioned in the first chapter deconcentration constitutes an important step towards achieving adequate levels of provision at regional levels. Nevertheless, this was to be improved by giving more discretion to them.

### The Strengths and Weaknesses of the Organization and Finance of Social Services.

Following the approach taken in earlier sectoral chapters, we summarize the earlier discussion by highlighting the system strengths and weaknesses.

Before proceeding with this categorization, it is important to mention that the social ministries have experienced a significant change regarding their roles. During the last decade, social ministries have passed from a productive role of social goods and services to become the regulatory institutions of social services mostly publicly financed but privately provided.

The major weaknesses can be described as part of the bureaucratic-historical model discussed above. This model is characterised by a rigid and bureaucratic mode of operation in which important efforts are wasted to fulfil the required bureaucratic procedures. This is the case with the annual justification of large parts of the budget which are late overlooked.

At the same time this rigid structure of operation does not allow consideration of the opinion of beneficiaries of the programmes nor it is possible to receive a feed back from them.

An additional constraint of the present organization of the social services is the lack of links between planning and finance (especially the budget). Both areas have worked separately, Finance has responded to the tight directions of the Budget Office whereas planning mostly responds to the ideas of

specialists. In this sense, we consider that, according to the new definition of ministerial functions being based mostly on a normative role, it is very important that these functions are approached simultaneously. Some of the more recent changes in the operation and allocation of resources for specific social programmes have been introduced taking into account only the financial constraints of the country rather than their full redistributive and inter-regional implications. In other cases contradictory aims were pursued. In the sectoral chapters we mentioned these cases; for example the regionalization of assistance programmes which is finally aiming to reduce the expenditures on this programme.

Considering now the positive aspects, it is acknowledged that some of the previous weaknesses can be thought as strengths of the system. The bureaucratic-historical model, although rigid, provides an important degree of stability for the functioning of the system. This is achieved through the existence of transparent and known procedures that guide the budget elaboration and policy implementation.

Another interesting feature is the possibility of studying and implementing specific changes in the social services through the ministerial programmes. As was mentioned before, these programmes involve the analysis or revision of a specific area of a service or a programme. Although this system has some incremental features, in the sense that only marginal changes can be introduced, it has the strength of allowing the bureaucrats to really concentrate on a specific area with a pre-defined task and time table. Unfortunately, after 1988, the ministerial programmes have lost most of their political support.

Finally, an additional virtue of the Chilean social services in the late 1980's is their deconcentration. During the last decade most social services have created regional, area, and even local branches for service delivery. Although this process has been subject to some rhetorical confusions involving the government claims of vast decentralization and the opposition claims of scarcely any transference of political power to the regions.



### 9.1.B. Redistributive Effects of Social Expenditures

In this section, we summarize the previous estimations of the redistributive impact of social expenditures. Table 9.4. describes the proportion of total social expenditures that are captured by measure of the direct social expenditures. In the case of 1985, it is possible to obtain that figure after subtracting the contributions paid, the loans recuperated, and the administration costs. We found that direct expenditures capture a high proportion of total social expenditures; this means that the conclusions about the redistributive impact will be the most representative of the public involvement in the social sectors (8).

|   | 1985    | 1987(*) |
|---|---------|---------|
| a) Total social public expenditures           | 709,810 | 313,559 |
| - Contributions paid and<br>Loan recuperation | 141,215 | 52,032  |
| b) Total Fiscal social expenditures           | 568,595 | 261,528 |
| - Administration costs                        | 49,343  | 30,681  |
| c) Direct social expenditure                  | 519,251 | 230,847 |
| c) / a) %                                     | 73.2    | 73.6    |

(\*) In 1987 the estimates for Social Security include only Assistance Programmes

Author calculations based on:  
Tables 5.6., 6.12., 7.8. and 8.4.

Table 9.5. shows the overall redistributive effects of social expenditures. It can be noticed that in 1985, the bottom

8. For 1987, the situation is rather different. Since there were no estimates for social security expenditures. The total expenditures under analysis are only a proportion of the total social expenditures. Therefore, the proportional coverage of direct social expenditures is taken in relation to that sub-total, which is different from the one obtained for 1985.

30% of the population received 29.6% of the total social expenditures. This is a bit less than its proportional share. Therefore, although by a very small margin, social expenditures are classified as regressive for that year. This outcome is heavily influenced by the regressive effects of social security. For 1987, we observe small gains in progressiveness in all programmes, except in social security which is not shown.

If we assume that social security maintained the same level of progressiveness as that of 1985, we may conclude that the marginal increases in progressiveness of the other programmes resulted in an overall neutral redistributive effect for 1987.

In sum, we conclude that the governmental rhetoric towards progressiveness and targeting has been effective in obtaining only small changes on this regard. We consider that is difficult to expect dramatic developments in this aspect as there are no legal grounds to introduce poverty-targeting aims to social programmes that were created under different circumstances aiming to produce horizontal rather than vertical redistribution.

TABLE 9.5.  
REDISTRIBUTIVE EFFECTS OF SOCIAL EXPENDITURES

(Millions of 1987 \$)

|      |                      | Total<br>Direct Exps. | Share of<br>Bottom 30% | %    | TYPE OF PROGRAMME    |
|------|----------------------|-----------------------|------------------------|------|----------------------|
| 1985 | Health               | 39,263                | 19,307                 | 49.2 | Slightly Progressive |
|      | Education            | 142,732               | 53,667                 | 37.6 | Slightly Progressive |
|      | Housing              | 23,486                | 8,220                  | 35.0 | Slightly Progressive |
|      | Soc.Sec. & Ass.Prgs. | 313,770               | 72,257                 | 23.0 | Regressive           |
|      | TOTAL                | 519,251               | 153,451                | 29.6 | Regressive           |
| 1987 | Health               | 41,191                | 22,967                 | 55.8 | Progressive          |
|      | Education            | 127,329               | 49,174                 | 38.6 | Slightly Progressive |
|      | Housing              | 29,790                | 10,776                 | 36.2 | Slightly Progressive |
|      | Ass.Prgs.            | 32,537                | 21,438                 | 65.9 | Very Progressive     |

Author calculations based on:  
Tables 5.7., 6.13., 7.9. and 8.5.  
Haindl & Weber 1986  
Haindl, Budinich and Irarrazaval 1989

### 9.1.C. Regional Allocation of Social Expenditures

#### C.1. Quality of the estimates

The aim of estimating the regional allocation of social expenditures was to be able to test the initial hypotheses that assumed specific associations between social expenditures and well being, urbanization and basic needs. For these reason, it was important to produce accurate estimates of these allocations. In Table 9.6., we summarize the criteria used overall.

| TABLE 9.6.  |      |      |      |
|---|------|------|------|
| CRITERIA OF REGIONAL ALLOCATION<br>OF TOTAL SOCIAL EXPENDITURES |      |      |      |
|   | 1985 | 1986 | 1987 |
| Crit. A   | 90   | 92   | 92   |
| Crit. B   | 3    | 2    | 3    |
| Crit. C   | 6    | 5    | 4    |
| Crit. D   | 1    | 1    | 1    |
| TOTAL   | 100  | 100  | 100  |

NOTE: See text for explanations

Source:

Tables 5.8., 6.14., 7.10., and 8.6.

Around 90% of the total expenditures were allocated according to Criterion A. This criterion represents the most accurate level of estimates as the figures elaborated under this approach have a clear regional basis, from the original data source. The remaining 8 to 10% of total expenditures were allocated according to a less precise basis, including secondary information. Overall, we conclude that the estimates produced have a high level of accuracy.

## C.2. Regional expenditures and Hypothesis testing

In this section, we attempt to summarize earlier sectoral findings regarding the occurrence of the hypotheses defined in Chapter 3. The outcomes are presented in Table 9.7.

It has to be remembered that each of the three hypotheses were analysed for each sector in three consecutive stages: preliminary analysis of the patterns, correlation, and regression analysis. Table 9.7. shows the number of times that the hypotheses were accepted, rejected or undetermined for each of the three stages. Due to multicollinearity problems, the estimated regression models should be interpreted as explanations of the general patterns of allocations rather than as predictive models. Similarly, in some cases it was thought inappropriate to estimate such regression models due to multicollinearity problems or lack of appropriate explanatory variables.

| HYPOTHESES IN RELATION TO THE REGIONAL ALLOCATION OF SOCIAL EXPENDITURES |        |           |         |          |       |
|--|--------|-----------|---------|----------|-------|
| Hypotheses in relation to resource allocation                            | Health | Education | Housing | Soc.Sec. | TOTAL |
| 1.- Basic needs bias   | R R -  | - A A     | - -     | - - -    | - R   |
| 2.- Well being - rich bias   | A A A  | - - -     | A A     | A A A    | A A   |
| 3.- Urban bias   | A - A  | - - A     | A -     | A A A    | A A   |

NOTE: A Hypothesis Accepted  
 R Hypothesis Rejected  
 - Undetermined situation  
 See text for explanations

From the results of Table 9.7. it is possible to note that health shows one of the most clear examples of a regressive interregional resource allocation. In this case the hypotheses concerning well being and urban bias in the allocation of

resources are both accepted while the hypothesis relating health expenditures to basic needs is rejected.

In the case of education it may be noticed that there are a number of undetermined situations which do not allow us to draw clear conclusions about the overall allocation of resources. However, the evidence suggests that hypothesis 1 can be accepted, meaning that the government is allocating its educational resources according to the regional needs for that sector. In the case of housing and social security it is possible to observe that they both have similar results. Hypothesis 2, that states a positive association between social expenditures and well being, is accepted in both cases. At the same time there are some indications that there is simultaneously an urban bias in the allocation of expenditures (hypothesis 3). However, in both cases there is no statistical evidence either to reject or to accept hypothesis 1.

In addition to the specific social sectors, we have incorporated, in Table 9.7., one estimator of the total regional allocation of social expenditures. It includes total health expenditures; school, ministerial and higher education expenditures; housing expenditures and total expenditures on social security and assistance programmes. Therefore, this definition is close to that of public social expenditures as it includes the total expenditures on each of the sectors (9).

The overall public expenditures in the social sectors tend to favour more those regions in which there is a higher proportion of urban population and are at the same time richer. Simultaneously, public social expenditures does not tend to be allocated in relation to the regional indicators of need.

In sum, it can be said that the "Total", which describes the developments of public social expenditures, has a negative interregional impact favouring the urban and better-off regions.

To conclude this section, we would like to compare the

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9. The actual estimates of the total regional social expenditures per capita can be seen in Annex 2.

findings of Table 9.7. with those of 9.3. Through this exercise we attempt to put together the conclusions about the regional allocation of social expenditures and the organization and discretion of social sectors.

From the comparison of both tables it is possible to observe that those ministries having a more centralized organization are that ones that simultaneously show the worse performance in terms of the interregional impact of the social expenditures (i.e. Hypotheses 2 and 3 accepted and Hypothesis 1 rejected). These are the cases of health and social security, this is also applicable to total expenditures as well <sup>(10)</sup>.

By contrast, it can be said that ministeries showing a more decentralized structure are the ones that simultaneously show a better interregional impact of social expenditures (i.e. Hypothesis 1 accepted and hypotheses 2 and 3 rejected). The only ministry that follows closely this structure is education. In the case of housing, although it has some elements in common it is constrained as more than two thirds of its finances correspond to specific purpose funds over which the regional discretion consists only in selecting the individual beneficiaries.

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Following these findings it is interesting to pay attention to the organizational features of education. As was described in Chapter Six, education has one of the most decentralized structures of all ministeries. Only 16% of its finances are centrally managed and it operates with more levels of field administration. At the same time part of the regulatory tasks are also performed at the regional level. The financing scheme of education has forced the school to be concerned about school attendance, as payments are related to it. Similarly, the widespread coverage of the system in all areas of the country has helped to incorporate the poor and rural population into the system.

Overall, it is possible to summarize these findings:

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10. The column Total on Table 9.7. is perfectly comparable with that of Table 9.3. Both of them have the same total figures behind them.

i. The ministerial organization and the discretionary powers that the ministries enjoy do have an important influence in the interregional impact of social expenditures.

ii. There seems to be a relationship between decentralization and more discretionary powers with a positive interregional effect of social expenditures (i.e. social expenditures do not favour rich regions but rather those in need).

Therefore, it is important to realize that through the organizational and financial decentralization it seems possible to obtain a better interregional redistributive impact of social expenditures. The few changes obtained in the Chilean case have been achieved despite the fact that the centre is still playing a substantial role in the financial area and that there has been no transfers of political power to the regions.

#### 9.1.D. Outline of the main research findings

1. An initial achievement of this research is that of having explained the organization and the finance of the social services in Chile following a consistent methodology. This simple accomplishment is important as there are no previous accounts of this type in the country.

2. Throughout the analysis of the organization and finances of the social sectors it has been possible to learn that there are a number of common features in all of them, which have been summarized in the "bureaucratic-historical" model. This model is featured by a rigid structure of operation, non-existent or weak links between planning and budgeting, practical consideration of marginal changes only, and no consideration of the beneficiaries of the programmes (non-participatory).

3. A methodological contribution is the development of an approach to study and estimate the regional impact of public expenditures. This methodological approach draws from earlier specific contributions of Short and Yanez, which have been adapted to the present research and complemented with additional criteria.

4. A conceptual contribution of this research is the definition of a framework of analysis of the regional discretionary powers over resources and decisions. This methodology can help to locate the organizational setting within the decentralization continuum. With this approach we shift from the endless discussion aimed only to categorize the different organization in relation to the different concepts of decentralization.

5. The historical account of the development of the social services organization showed that the services experienced three major transformations in the early eighties. i. The re-definition of the sectoral roles shifting from a producer of social services to a regulator of contracted out services. ii. Re-organization of the territorial structure of the services which involved the creation of regional field offices. iii. Re-definition of the overall state involvement in the social



services shifting from a more universalistic model of welfare to a more selective one on which programmes are poverty-targeted.

6. In relation to the overall evolution of the public expenditures in the social services it was found that they follow in general a countercyclical pattern increasing in periods of economic constraints. However, this finding was applicable only to the exact recessionary periods, because soon after the most important effects had passed, the social expenditures were constrained.

7. Despite the governmental rhetoric about regionalization and decentralization, the changes introduced in the finance and organization of the social services has had effects on specific programmes but has not produced a dramatic impact on the overall organization of the services. This can be explained by the fact that the regulation and source of the services' authority is mostly decided centrally. At the same time, more than two thirds of the sectors' finances are still centrally managed. However, it has to be acknowledged that there have been interesting improvements in the creation of regional field offices (Deconcentration).

8. Although the government has made an important effort in trying to concentrate its social expenditures on the poor population; the results showed that they have an overall neutral effect as the lower 30% of the population receives the same proportion of expenditures.

9. The analysis of the regional allocation of social expenditures showed that they have a rather regressive regional allocation. This is explained by the fact that rich and more urbanized regions receive higher levels of social expenditures per capita. At the same time, regions with higher levels of basic needs

unsatisfied obtain proportionally lower levels of social expenditures per capita. Comparing the social sectors, health obtained the most regressive regional allocation followed by social security and housing. The sector with the most progressive inter-regional allocation of social expenditures was education.

10. Following the result described in No. 6 above, it was found that there appears to be a relation between the features of the organization of the services and the patterns of regional allocation of expenditures.

## 9.2. RESEARCH RETROSPECT AND PROSPECT

In this section we aim to discuss the most important lessons that can be drawn from the experience of having done this research. These lessons are in two areas: The first one is related more directly to the research constraints and problems that were found throughout the development of the study. The second area delineates areas of future research that may enhance or improve the findings of the present work.

### 9.2.A. Research Retrospect

#### 1. "Administrative anthropology" or relying in the informants.

As a result of the methodology followed to obtain the information about the insights of the organization and finances of the social services, we had to rely very heavily in the information provided by the officials interviewed.

It is known that the bureaucrats usually attempt to describe their work in the best way possible. We attempted to question every subject in various ways in order to obtain the necessary feedback. However, despite these efforts our results are dependent on the information supplied.

#### 2. Social Security is a special case

In the definition of the research problem in Chapter Three, we explained that the study encompassed all the major social services. At the same time we have stressed that this is one of its important contributions as there are no previous overall studies. However, having done the research, it is possible to realise that social security has a completely different structure in contrast to the rest of the services.

The bulk of the social security resources are considered as a right for the contributing workers rather than a benefit as in the rest of the social services. Above all, the pension funds are in a process of being gradually phased out.

### 3. Accuracy of the estimates

One of the research aims was to produce an estimate of the regional social expenditures and contrast those figures with social indicators. As mentioned in Section 9.1. around 90% of the estimates were produced according to the most demanding criterion of accuracy. However, there are areas in which it is difficult to estimate the real "in and for" effect that some expenditures are producing in a region. For example, it is difficult to estimate the proportion of research expenditures that is reaching the region in which a university is based, and how much is reaching other regions. Similar situations can be found in most of the social services.

#### 9.2.B. Research Prospects

Following the previous section, it is appropriate now to delineate some areas of interest that could have helped to enhance the understanding of the research problem, but were not considered within the original aims of the study. However, they can be considered as topics for future research.

##### 1. Socio-political approach

As was mentioned in the methodological chapter, we opted for analysing the research theme under a pragmatic approach described as "administrative-anthropology". The aim here was to be able to understand and describe the organization and the finance of the Chilean social service, and relate its structure to its regional impact. The administrative arrangements existing during the late 1980's were taken as given.

There are no doubts that the study would have gained in an important way by analysing in depth the socio-political aspects related to the organization of the social services. It would have been quite interesting to analyse the role of pressure groups, trade unions and political parties in the developments of the social services. Moreover, it would have been possible to spend a

considerable amount of time discussing the political developments of the country, the socio-political conditions under the military rule and the prospective scenarios of the emerging democracy. However, we believe that because these issues are very important in themselves it would have been impossible to consider them appropriately within the limits defined for this type of research studies.

## 2. Public Finance Approach

From the public finance side, it is possible to say that the research could also have gained by having a more comprehensive analysis of the Chilean public finances. It would have been very interesting to take into account the full fiscal incidence of public activities at a regional level. This means obtaining the net effect of government intervention at a regional level. This is, not only how much a region is gaining from public expenditures but also at how much it is contributing towards it through taxation.

Similarly, it would be very interesting to estimate the proportion of social expenditures that are being financed by the regional taxes. It is possible to expect that the regional tax burden is not necessarily related to the level of benefits received in the form of social expenditures. Taxes may have a more progressive or regressive regional impact which will lead to a rather different net incidence.

However, this exercise would have probably driven us outside the area of social policy as it would have been necessary to consider total public expenditures, instead of just social expenditures, to contrast them with taxation revenues.

## 3. The need for need indicators

With the purpose of testing the hypotheses introduced in Chapter Three it was necessary to have selected indicators of basic needs both at sectoral level and at an overall level.

Since the 1960's, the social indicator movement has provided an increasing number of approaches towards defining representative indicators of sectoral needs. Similarly, various attempts have been made to produce composite indicators that are representative of a dimension of human social conditions (<sup>11</sup>). However, despite enormous amounts of research done on this field the reality is that we are far from having a single or composite need indicator that is widely accepted.

Therefore, despite the importance of the discussion about the concept of need, it was not thought appropriate to attempt to elaborate further indicators of human needs or to approach a new definition of them. Again, we believe that this exercise is very important in itself and it could have taken an important part of the research effort. For this reason, we constrained ourselves to the available social indicators for Chile and used them in accordance with the most common and agreed uses found in the literature.

#### 4. Time series of regional social expenditures

In Chapter four we defined the time period for the analysis of the regional impact of social expenditures. The time period from 1985 to 1987 was defined mostly on the basis of practical reasons of data availability and the research time constraints for estimating these figures.

It is clear from the results of the research that a long time series would contribute in an important way to determine the stability of the patterns found and, perhaps, contribute additional findings.

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11. See: Deprivation Index (Towsend, 1979), Physical Quality of Life (Grant, 1980), and others.

### 9.3. THE FUTURE OF REGIONAL SOCIAL POLICY

Before discussing the future proposals for regional social policy, it is important to bear in mind that in December 1989, Chile experienced the democratic election of its President and Parliament after 15 years of military government. During the election campaign decentralization and social policy arose as one of the important issues of discussion. This led to the conscious inclusion of the subject in the political programme of the contestants. The main two political contestants clearly referred to the need to increase the decentralization of the state apparatus and the direct participation of the citizens in it. One of the contenders specified their aim to achieve a more even regional development and an allocation of public resources more in line with the regional needs (Concertacion, 1989). The other political alliance stressed the necessity of strengthening the regional organization leading to an increase in the regional budgets (Democracia y Progreso, 1989). The political programmes also included specific sectoral proposals to achieve this principal aim.

In the light of these recent political developments in Chile, it is clear that the issues discussed in the present research might help to cast light on the agenda of future proposals for change in the administrative organization and regional impact of social services.

#### 9.3.A. Conceptual Frame for a Regional Social Policy

The issue of decentralization has become an important area of permanent discussion. Moreover, the decentralization of public bureaucracy and specially the social services, appears as one of the very few areas of overall consensus across the political spectrum. The aim of decentralization is not only a desire for more services in the regions but as a way of solving part of the Chilean historical problems of excessive central growth, lack of participation, and regional inequalities.

However, as can happen in a politicized atmosphere, the issue has shifted from discussing clear policy aims or goals to an ideologized discussion about previous achievements or failures in respect to this general aim.

It is in this context that we believe that our conceptual framework may help this discussion, moving the argument from the theoretical models of decentralization to a set of practical questions that would determine the degree of discretion that the institutions will enjoy. Therefore, a regional policy must take account of the issues included in this set of questions before categorising the ideal model of decentralization at which aims to reach.

The set of questions are drawn from Section 4.4. They were described in relation to the three forms of government intervention: regulation, finance and production.

#### REGULATION

1. What is the source of agency authority?
2. Who defines the tasks or functions of the agencies?
3. Who controls the functions of the agencies?

It is possible to expect that in a unitary country most of the regulation functions will remain at the central level. However, it is reasonable to think that in a more decentralized scheme the agencies will be accountable to the regional powers, therefore, their source of authority will be at this level. This can happen despite the fact that the centre may define the main tasks or functions according to the national interests.

If government is aiming to involve the regions in the management and developments of the services it is crucial to allow the regions to control the agencies operating within its boundaries.

#### FINANCE

Regarding this form of government intervention, we defined five



forms of finance ranging from direct central allocations to totally decentralized funds.

1. Centrally Managed Finance
2. Specific Purpose Funds
3. Fund for Subsidiating a Specific Activity
4. Block Funds
5. Regionally Managed Finance

As been pointed out, the fact that the centre transfers certain resources to the regions does not necessarily imply handing over autonomy. This will depend on the conditions on which the funds are transferred; these can range from a specific purpose defined by the central level to a block fund in which the region has the autonomy regarding the alternative uses of the resources. Total financial decentralization will probably mean allowing the regions to set their own taxes, but this is constrained within unitary countries. Moreover, as the research has shown, there seems to be a relation between more decentralized sectoral funds and more progressive patterns of regional social expenditures.

## PRODUCTION

Production is concerned with the actual delivery of the services. It includes :

1. Personnel Policies
2. Levels of Field administration

The pattern recruitment and promotion of personnel is a determinant of the level of decentralization that can be achieved. If recruitment is left at a regional level, but promotion depends on central policies this will usually mean that the officials will be following the central instructions, not the regional ones.

More levels of field administration will usually mean more responsiveness to local needs. However, if local field administrators are appointed from the centre they will be more concerned with the central instructions.

## PARTICIPATION

The return of democracy has strengthened the calls for increased participation in the Chilean social services. It is an issue that is closely linked with decentralization.

However, we consider that the issue of participation is an additional dimension to be incorporated in each of the forms of government intervention.

Participation involves two levels:

### i) Participation and accountability

There is a need for increasing political accountability of the social services at a regional or local level. This is specially necessary when it is aimed to increase considerably the amount of resources to be managed locally. In this area we will probably experience soon a radical transformation of the present system of local and regional government elections.

### ii) Beneficiaries

There is also a call to include the beneficiaries of social programmes in their process of development. In this regard, we believe that it is necessary to define levels of participation depending on the nature of the programme. It is possible to expect that a community development programme will be highly participatory but in a vaccination programme the participation of the people will be mostly constrained to their willingness to be vaccinated or have their children vaccinated.

A regional social policy should clarify the expected levels and the forms of participation to be introduced. It is common to expect that with regards to regulation the participation will be in a more political level, whereas in the production of the services participation will involve beneficiaries. However, there are now some social programmes that also require financial participation from the beneficiaries.

To conclude this section, we briefly mention some of the policies discussed in the study and their relation with this conceptual framework.

The definition of the ministerial regional agencies (SEREMIs) is a policy that has clearly contributed to there being more levels of field administration and more central presence in the regions (deconcentration). However, the SEREMIs budgets are still managed from the central level leaving few areas of discretion, at the same time most of the officials appointed have come from the centre (<sup>12</sup>). In the case of the payment for medical attention (F.A.P.s), they have contributed to allocate resources more in relation to needs, as the centre reimburses the part of cost of the medical attention to each out-patient clinic. Although we see a departure from pure centrally managed finances in the health services to a type of fund for financing a specific activity, these types of funds still comprise only a small proportion of the total sectoral budget.

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12. Although this also related to the serious shortages of professionals in some regions.

9.3.B. Outline of Policy Proposals

It was not the purpose of this research to elaborate a set of policy proposals; such activity might draw on additional research simulating the possible outcomes, the sources of finance and the different political scenarios in which proposals might be accepted. Our aim in this section is much more limited. We give a brief outline of possible changes that might be introduced in the context of the present organizational setting and the widespread acceptance of decentralization policies.

There are basically two proposals to be suggested, one is related to the general organization of the social services and the other to the decentralization of them:

i) Towards a more flexible organization of social services

Our proposal can be summarized as a gradual change from a bureaucratic-historical model towards a more flexible and pragmatical organization of the social services. This evolution takes into consideration the present features of the system but increases the levels of decentralization and participation and is more responsive to local needs. This process can be outlined in the following aspects:

A pragmatic operation of social services consists in taking advantage of the established transparent and known rules of operation to concentrate on those areas that really experience changes from one year on to another.

This form of internalising incrementalism means leaving aside from the budgeting and planning efforts (<sup>13</sup>) those areas that are historically compromised and / or are necessary for the routine working of the sectoral bureaucracy. Typical examples of these cases are the expenditures on ministerial central bureaucracies

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13. These areas would continue to appear on the budget but their justification and description is omitted, unless there is a major structural change.

and services, personnel and goods for services and consumption.

Throughout this approach the sectoral planning agencies should be able to concentrate more in the dynamic aspects of the system rather than the historical aspects of functioning. In concrete terms we propose two aspects to concentrate on:

i) Ministerial Programmes

The ministerial programmes have proved to be very successful. Each year a number of specific tasks are defined, most of them being carried out during the pre-defined time table. Through this procedure important incremental changes have been introduced in the organization of social services.

Our proposition is to enhance the role of these programmes to include each year, as an imperative ministerial task, the necessity of evaluating one of the programmes performed by a ministry. Through this method, planners and budgeters have to concentrate on really justifying and explaining the expenditures and the aims of the programmes under review. The findings of this exercise have then to be incorporated in the next year's budget.

ii) Linking policy making and planning to budgeting and finance

As a result of the gradual revision of the sectoral programmes it should be possible to produce estimates of both the total and unit costs of each of the social programmes. In other words, we are aiming to gradually change the traditional institutional budgets on to a programme basis. During the present times, not all the programmes have these estimated costs as they are budgeted under the traditional economic classification. Therefore, it is not surprising to see that these areas are not related one to another. For example, as has been seen, the programmes for health consultations for children and women are included with other health programmes in the budget of the National System of Health Services and it is not

possible to know the amount of resources spent in each of them.

## ii) Decentralization

Decentralization seems to be one of the most attractive and consensual words in Chilean politics in recent years. However, the proposals for decentralization are variable: some of them are aimed to achieve deconcentration, others to produce a semi-federal organization of the country. Our proposals are confined to two areas only: i) a further decentralization in social services finances, and ii) an increasing participation of the beneficiaries in the organization of the social programmes.

The decentralization of social services finances implies simply gradually increasing the share of the more decentralized modes of finance within each social sector. The aim might be to reach 80% of the sectoral finances being managed through specific purpose funds (SPF), funds for subsidising a specific activity (FSSA) or block funds (BF). Ideally, at least 60% of the sectoral finances should be managed in the last two modes. These modes of finance and their proportions have been defined on the basis of the successful achievements of education, which is not only the most decentralized sector but the one that showed the more progressive patterns of inter-regional allocation of resources.

This proposal will certainly encounter opposition from the Budget Office that would automatically lose detailed control of this part of the budget. However, some forms of control will remain to assure that the centre did not lose its capacity to manage public expenditures. Firstly, the centre could retain its capacity to set annually the total expenditure ceilings of each programme or aggregation of programmes (14). Secondly, the ministerial bureaucracy could also continue to define the mechanisms to select the individual beneficiaries on a territorial equity criterion.

The regional gains in discretion would imply that the regional ministerial office would manage the transferred funds. Regional financial management in this case means being able to manage financially the resources transferred; any transitory surpluses arising could be invested according to the legal regulations of public delegated institutions. The region would also be free to define some prioritization criteria after the fulfilment of the national requirements.

The increasing regional autonomy in the management of resources would also imply that the regional administrative offices need to put more emphasis on controlling and regulating their own resources that are transferred to the institutions that produce the social goods or services.

Finally, it is suggested that the decentralization of social services should also imply more participation not only in the accountability of the activities performed by the social services but also in the actual production of the services.

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14. If the programmes are too small it will be easier to work with an aggregation of them, leaving at the same time the possibility of internal transfers. It is not necessary to transfer all the funds immediately but as necessity arise. However, they should not be subject to further re-negotiations.

The future regional assemblies (or COREDEs) should have a clear knowledge about the total amount of resources that each sector is spending in the region and the types of transfers involved with them <sup>(15)</sup>.

The beneficiaries would have new forms of participation if subvention schemes, of the type of those existing in education, were enhanced. They can "vote with their feet" by opting not to attend to a certain service which does not fulfil their expectations. However, in many cases the local choices are severely constrained due to the distance to alternative services or transport costs.

The programmes have to be defined in a way in which the beneficiaries can become involved with the developments of the social programmes. This can be achieved through "local neighbourhood councils" (Juntas de Vecinos) reporting to the Municipal Assemblies about the activities or problems of the social services, as it is the case with parents associations in education.

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15. According to the present legislation, the regional assemblies are only informed about the capital investment budget. This area of expenditure constitutes the "regional budget", accounting to only 5% of the total social expenditures.



During the last years, social expenditures have attempted to play a "poverty relief" role to concentrate the public efforts on the poor in accordance with a basic needs strategy. This is a very important activity for the state and, it is desirable that this approach should continue because there are still some basic social conditions to be improved. Furthermore, we believe that social expenditures can also be thought as resources available to strengthen national development in a broader meaning.

Further decentralization of social services in Chile, such that outlined here, should not be taken as a straight forward self-evident matter. It is a complex matter in which progress is possible. The aim of these suggestions is to produce an allocation of social resources more in line with the regional needs and redress the historical regional inequalities. Through this process we will not only achieve better levels of well being but also national democracy, which starts by giving the regions a fairer chance to develop.

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ANNEX 1

SUMMARY OF STATISTICAL TESTS PERFORMED

As mentioned in Chapter Four, because of the constraints in using a pooled database an important effort was made in performing a variety of statistical tests to assure the reliability of the results.

Tests Performed

1.- Regression goodness of fit

A standard test of measuring the goodness of fit of the regression is to calculate the extent to which the regression accounts for the variation in the observed values of this dependent variable.

- Coefficient of Determination ( $R^2$ ): A traditional goodness of fit test is the  $R^2$ , which measures the proportion of the variation in "y" which is explained by the multiple regression (1).

The  $R^2$  is the square of the correlation coefficient between y, the observed value of the dependent variable, and  $\hat{y}$ , the predicted value of y from the fitted line. If all the observations fall in the regression line  $R^2=1$ , if there is no linear relationship  $R^2=0$ . However, the constraint of  $R^2$  is that does not account for the degrees of freedom in the problem.

- Adjusted  $R^2$ : A solution to the problem described above is to concern oneself with variances, not with variations, thus eliminating the dependence of goodness of fit on the number of independent variables in the model (2). It is interesting to note that when new variables are added in the regression model, the  $R^2$  will always increase, whereas the  $Ra^2$  may rise or fall (3).

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1.

The traditional statistical notation is used here:  
y= dependant variable or variable whose values are to be predicted  
x= Independent variables

2. Adjusted  $R^2$

$$Ra^2 = R^2 \cdot \frac{p (1 - R^2)}{N - p - 1}$$

Where,  $Ra^2$  Adjusted R squared  
p Number of independent variables in the equation  
N Number of observations.

3. The F test also helps to test how well the regression model fits the data. The null hypotheses is that none of the explanatory variables helps to explain the variation of y about its mean, a high value of F will mean that the null hypothesis is rejected.

## 2.- Parameters:

- Beta coefficients (Standardised Partial Regression Coefficients): It is always important for the researcher to know about the relative importance of each independent variable. However, as Johnston (1978) has pointed out it is inappropriate to interpret the partial regression coefficients as indicators of the variable weight in the model, since the actual magnitude of the coefficients depends on the units in which the variables are measured. Therefore, to make regression coefficients comparable, it is necessary to calculate the Beta weights, which are the coefficients of the independent variables when all the variables are expressed in standardised form (Z score).
- T-test: The T-test is the ratio of the absolute difference between sample means to the standard error of the difference. This means that there is no linear relationship between x and y, the null hypothesis is that  $\beta=0$ . A positive value, above two will mean that the two variables are linearly related.

## 3.- Heterocedascity:

Heterocedascity occurs when the variances of the conditional variances are not equal. In other words, if the variance of each disturbance term remains the same irrespective of small or large values of the explanatory variable the error term is homoscedastic (opposite of heterocedastic). If the error term is heterocedastic, the ordinary least squares estimates may be biased.

Two chek ups were performed to detect the presence of heterocedascity:

- i) Graphical analysis of residuals in relation to the regression line.
- ii) Outliers Analysis: The appearence of cases with relatively large positive or negative residuals may lead to heterocedascity. The regression coefficients may be biased by the influence of one or few observations only.

#### 4.- Multicollinearity:

Multicollinearity appears if the explanatory variables are perfectly linearly correlated (<sup>4</sup>), that is, if the correlation coefficient for these variables is equal to unity, the parameters become indeterminated: it is possible to obtain numerical values for each parameter separately and the method of least squares breakes down (Koutsoyannis,1985).

For preventing the ocurrence of multicollinearity, the variables entered to the regression models as independent, had to have a low correlation between each other and with the independent variable. A similar rule of thumb is suggested by Pindyck and Rubinfeld (1981) (<sup>5</sup>).

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4. this means that the variables are linear combinations of the others.

5. See also note on multicollinearity on Chapter Six:education.

ASDF

| TABLE 2  |         |
|--|---------|
| CORRELATION BETWEEN SELECTED VARIABLE<br>AND TOTAL SOCIAL EXPENDITURES |         |
|  | TOTAL   |
| GEMO   | -0.23   |
| INMO   | -0.49 * |
| EXPE   | 0.20    |
| PROM   | 0.53 ** |
| COVE   | -0.28   |
| SEWE   | 0.66 ** |
| WATER  | 0.66 ** |
| AFIL   | 0.41    |
| UNEM   | 0.28    |
| GDP  | 0.57 ** |
| INCO   | 0.39    |
| URBN   | 0.64 ** |
| URBZ   | 0.62 ** |
| TOTAL1   | 0.15    |
| TOTAL2   | 1.00    |

2-tailed signif: \* .01 \*\* .001  
See text for explanations