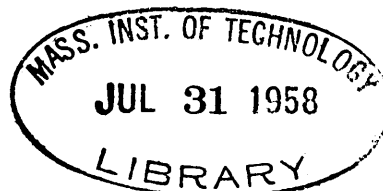


"PLANNING IN URUGUAY : A REGIONAL APPROACH."

by

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This thesis is impressive in the volume of data presented and apparently well analyzed. From the standpoint of the geographer it may be a worthwhile presentation of relevant material, and a reasonably systematic description of major problems. From the viewpoint of the planner, it suffers from a lack of crystallization of major policy questions - probably because they are so imbedded in the analysis sections - and from inadequate attention to planning methodology.

The background material presented and the planning policies suggested, ostensibly by way of illustration, go so far beyond what might have been necessary that they tend to obscure many of the recommendations as to methodology and planning procedure which, though good, still receive less attention than was desirable.

2/3/58

R.B. Greeley

Title: "Planning in Uruguay: A regional approach"

Author: Lorenzo Ruben Finocchio Bertozzi

The objective of the thesis is to develop a methodology of regional planning, or of studying the potential conservation and development of regional resources. Uruguay, the home of the author, is used as a basis for evolving and illustrating such a methodology.

The initial chapter sets forth the objective and describes some of the principles involved in regional planning, in delineation of regions, and in defining the scope of planning. There follows a detailed presentation of much data on natural, human, and to a less extent economic, resources in Uruguay, and considerable analysis of ways in which these resources may affect future development of a slow-growing, under-industrialized country. Attempt is made to show: 1) how social and economic problems are related to and dependent upon physical resources; and 2) how a significant number of these problems can be described in terms of land use, population density, and urbanization patterns.

The third chapter presents a general summary of needs, and of potential planning objectives; and then goes on to suggest, in the form of illustrative examples, land use planning policies which might be adopted and implemented by the government. Finally, a brief chapter outlines some elements of what might be a workable governmental planning organization, to analyze the necessary data, formulate physical planning policies, and in conjunction with an economic planning council, make recommendations for national development on a very broad basis.

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RBG

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Chapter I

- 1-Objective of the study.
- 2-Some of the reasons for undertaking this study.
- 3-Planning objectives.
- 4-Planning principles.

I. Objective of the Study

1- The objective of this thesis is to develop a methodology of regional planning: a method of studying the potential development and conservation of regional resources, both physical and human. The body of the thesis will comprise a systematic approach, presented in the form of an illustrative analysis, to the techniques of investigating regional resources, forecasting trends and tendencies, formulating alternative courses of action, and recommending specific plans and implementation programs. Also by way of illustration, it will present measures required for effectuation of plans and for setting mechanisms which will help to criticize, evaluate and review those plans and programs through research and education.

This means a study of the regional planning process itself, rather than related toward any specific planning operation.

At the same time, considerations of applicability to southern South America, with special reference to Uruguay, will always be a further objective.

So the result of this work-that will be developed in relatively short time, - expects to be comprehensive in approach, generalized in scope.

I do not pretend to recommend a plan for the Uruguayan region. Not only limitation of references, but lack of knowledge and investigation in various related fields makes it impossible to do so.

2. Some of the Reasons for Undertaking this Study.

2.1-During the past decades, Europe was, for various reasons, the principal source of inspiration for Southern South America. The cultural influence of Europe has marked the objectives and the techniques of the different disciplines and branches of social thought. Planning has not been an exception to this tendency. One of the results was - and still is - that training in planning is primarily concentrated in architectural or engineering schools and there is a strong drift toward physical planning ("urbanism"), to the detriment of economic and social aspects. At the same time, in those places where new, more comprehensive tendencies have appeared, the lack of well-trained personnel in the fields of applied social sciences makes very difficult the accomplishment of objectives. (This is particularly true in techniques related to statistical analysis, population studies, income and wealth, economic base, etc.).

2.2-Even in those places where integration between social and physical planning have been partially accomplished, the stage of implementation of plans has not generally been reached. The establishment of development programs accompanying legislative, administrative and financial measures, seems to be an essential requirement for Latin-American countries.

2.3-Another inheritance from Latin-European countries is the overcentralization of governmental functions - including teaching and education - and planning, eliminating public participation in planning processes. The result is a divorce of social objectives from rules of government, of decisions relating to control and development at different government levels from the aspirations and desires of the people.

2.4-The example of the more developed countries, wherein the process of change from an agricultural economy to an industrial economy occurred many years ago, and wherein also the pattern of urbanization and of growing of metropolitan areas began several decades in advance, gives us the chance to utilize emerging developing techniques, to test them, and to compare situations at different stages of development. (Of course, this is primarily a process of adaptation, because situations are not always exactly the same). This is applicable in the field of social sciences, in cultural anthropology, and might be applied to the planning of resources development as well.

2.5-The extension of rapid communications networks tends to equalize knowledge throughout the world. While assimilation rates may vary, educational learning processes require a step-by-step comprehension. They are something more than the mere adoption of techniques or rules. They require a difficult, sometimes painful, process of experimentation and trial. I think it is possible to accelerate this process of experimentation and trial. In order to enlighten the way, a clear objective and a method of approach are prerequisites.

These are some of the reasons why I intend to study a method of regional planning with special reference to Uruguay.

3. Planning Objectives

3.1-Although we have not tried to define a region, and have considered it more as a method of analysis, a generalization of human minds, rather than any area determined by a precise boundary, we will define planning as the procedure

necessary for deciding, with some foresight, how people will act, and how space, time, and natural and human resources should be used, in order to bring under delineation, a situation that is considered desirable.^{1/}

3.2-This definition implies that a certain method, order or partial model of rationality can be established to the decision-making; broad objectives should be determined, in order to:

- 1) Determine goals and targets, based on those broad ends.
- 2) Consider the alternative courses of actions in the context of requirements, needs, and available resources. This also implies that certain assumptions should be made in order to base this orientation, because we ignore or we cannot establish the precise terms of some required needs and resources.
- 3) Analyze the consequences which would follow from the different alternatives.
- 4) Choose the basic - or alternative - or set of alternative - course of action which brings out the most desired consequences.
- 5) Define, through scheduled programs, specific commitments to effectuate this alternative or set of alternative courses of action.

4. Planning Principles

4.1-We intended to define the major objectives and operational method that a planning process should have.

^{1/} It is not intended to limit the definition to any particular scale of operation.

Now we will describe some major principles that should be maintained to the attainment of those objectives through a certain method.

- 1) Comprehensiveness. That means, according with what was described in last section, to maximize the number of interdependent factors affecting planning operations.
- 2) Breadth. Both in terms of depth and extension trying to investigate and foresee the trends in time and space.
- 3) Practicability. To establish some boundary - although arbitrary or imperfect - to the last two points, in order to limit expansion to within practical goals. Planning should be related to day-to-day facts of public life in the different levels of operation: national, regional and local. This does not mean that planning should be limited in scope to palliatives or to piecemeal projects. It means that plans should be closely related to reality. Here, compromise between ideal plans and realistic situations seems to be more effective than immaculate models. It also means that public groups of citizens and institutions should be consulted, as well as the responsible agencies, for a proper evaluation of reality.
- 4) Feasibility. It is obviously one derivation of the meaning of practicability. Feasibility does not mean that plans should merely be based on a balance of monetary budgets. Long-range plans could be uneconomical or financially unbalanced in the short-run. So a proper evaluation of benefits and costs related to the time involved in the planning operation seems to be a necessary condition.
- 5) Progressive development of plans. Continuity of plans in time, and criteria in judging priorities for the development of programs will help the attainment of desired objectives.

6) Public Support and Education. When we talk about practicability we have said that one condition for a proper evaluation of reality should be the advice and opinion of public groups, institutions and citizens. This principle should not imply merely practicability of plans, but the entire philosophy of democratic planning.

People and their well-being is, and should always be, the essence and ultimate end of the planning process. But the way by which this process is performed is equally as important as the ends to be achieved. Democratic planning thus signifies that means should harmonize with these ends, and not be contradictory. It also decrees the planner's major responsibility and ethical behavior. The planner is not - or should not be - the commanding voice that shows the way, but simply the team worker who helps communities to express themselves through a better understanding of given future situations.

7) Evaluation and review. All the other conditions help to emphasize the importance of evaluation and review of planning process. If we agree that situations change with time and, consequently, space, it seems necessary to set forth the necessary mechanics for a proper evaluation of this changing reality.

It was intended in the last two sections to give some definitions in regional approach, planning objectives, process and principles.

It is not intended to follow these definitions as an inflexible rule, but rather that they become general guiding principles in future problems.

Chapter II

Part 1. -Natural resources.-Introduction.

1-Physical resources.-Geography and climate.

2-Vegetation.

3-Soils and sub-soils.

4-Natural regions of Uruguay.

5-Economic resources. -Agriculture and live-
stock.

INTRODUCTION

Generalities

1. Physical Aspects

Uruguay is situated in the 35 parallel, between Argentina and Brazil. Its territory comprises 72,500 sq. miles. Geographically, it consists of plains and uneven grounds, which slope gradually toward the Uruguay River, the River Plate and the Atlantic Ocean. The maximum height is 2,000 feet. Its grounds, watered by many rivers, are almost all suitable for agriculture. The climate is subtropical and humid. The average temperature is 60° F. (media low 55° - media high 72°). Moderate rainfall is irregularly distributed throughout the year (concentrated in the winter time), but regularly distributed throughout the territory.

2. Political and Administrative Organization

The Republic of Uruguay is the territorial unit of the State Government. The State Government is composed of three branches - Executive, Legislative, and Judicial.

Within the State organization, the country is divided into 19 Departments. Each Department has a government, settled in the capital city, and it represents the only authority for the whole area. That means there are no city governments. The departmental government rules both cities and rural areas within the Departmental boundaries.

Executive Power

With the ratification of the Constitution in 1952, the Executive changed its form. It became a National Council instead of a President, integrated by 9 members, directly nominated by the people. The National Council is assisted by 9 Ministers which hold the following (Ministries) offices: Agriculture, Interior, Health, Education and Welfare, Public Works, Treasury, Industry and Labor, Defense, and Foreign Affairs.

Legislative Power

It has the typical bi-cameral system with only one territorial unit for both cameras.

Judiciary Power

There is one important difference from the U.S. system:

In the U.S., the Court, in protecting property rights, is the arbiter between the public authority and the property owner.

In Uruguay, the Supreme Court has the power to review the law, but, like many European countries, an act of the legislative body is authoritative, it is law "ipso facto" when duly passed.

Local Government

Decentralization by territorial units has created Departmental government.

The management and administration of each Department (with Public Security excepted) is ruled by a Departmental Council as executive body, a Departmental Board as legislative body, and several local boards.

The local governments have, granted by the Constitution of 1952, police powers, the power of eminent domain, and the power of taxation in order to finance their own budget.

The sources of local government revenues are: real estate taxes, contribution for improvements, services rates, concessions, general taxes, administration of own rents, and fines, etc.

The issue of bonds is allowed, if proposed by Departmental Council, with the approval of the State Legislative Body.

Decentralized Services

Uruguay is a single state. Nevertheless, there has been a tendency to decentralize administrative functions since the constitution changed in 1918.

The decentralization occurred in two components: decentralization by services and decentralization by territorial units. The decentralization by territorial units has been discussed.

Decentralization by services, which includes the Public Transport System and the industrial interests of the State, is carried out by Decentralized Services and State Autonomous Entities, with different grades of financial and functional independence from the State Executive branch.

These organizations are governed by a Board of Directors (5 members) appointed by the Executive Body with Legislative approval.

They include services such as:

The Bank of the Republic - monopoly of money issue.

The Mortgage Bank (B.H.) - monopoly of first mortgages.

The State Insurance Bank (B.S.E.) - monopoly of all type of insurances.

The State Light and Power (U.T.E.) - monopoly of light and electricity.

The National Institute of Economic Housing (I.N.V.E.) - dealing with the planning design construction and administration of low income housing.

The National Administration of Oils, Alcohols and Cements (A.N.O.A.P.)

The State Sanitary Works (O.S.E.) - sanitary services and water supply.

The National Institute of Colonization (I.N.O.) - rural land and population.

The National Ports Administration (A.N.P.)

The National Tourist Commission (C.N.T.) - dealing with all recreational facilities, and operating hotels and restaurants.

PHYSICAL RESOURCES

1. Geography and Climate.

Uruguay, situated between 30° and 35° south latitude, has a temperate climate, almost maritime. The greatest difference in temperature between the warmest and coldest month in Montevideo is 12° (11° in winter, 23° in summer; average coldest and warmest month, respectively). The annual average difference is 16.5°.

Nevertheless, the territory is always affected by frequent changes of winds: polar cold currents of air from the SE. ("pampero"); cold and dry wind from the SW.; and northern winds from the N. and NE. bringing humid and warm, tropical currents. (see maps and tables).

As a whole, the climate of Uruguay can be defined as temperate, characterized as very variable in short lengths of time (wind directions change 360° within 24 hours). This is partly due to the fact that Uruguay lacks topographic barriers, thus facilitating frequent weather changes. The highest points reach 500 meters (Sierra de las Animas, around 1,600 feet) but practically 50% of its territory is less than 350 feet altitude; the rest is between 330 and 1,500 feet.

The major orographic systems are: Cuchilla de Haedo (Haedo Ridges) and Cuchilla Grande (Great Ridges) - see map. The major river basins embraced by these orographic systems are: the Uruguay River basin that covers parts of the territory of Brazil,

Temperate climate

Wind variation

Topographic conditions

Fluvial patterns

Argentina, and Uruguay; the Rio Negro basin the principal affluent of the Uruguay River, occupying the center of the country; the Rio de la Plata system and the Atlantic seaboard in the south and south-east respectively.

Average yearly precipitation increases from 950 mm. in the SW, at Colonia, to 1350 mm. in the NE. at Rivera. Frequency of rain is evenly distributed throughout the year.

Droughts, although not too frequent, must be taken into consideration as a very important detrimental factor, especially considering the type of Uruguayan economy depending upon natural pastures and land cultivations.

Importance of drought in agriculture

The last drought in 1942-43 strongly affected Uruguayan resources, destroying grasslands and killing around $\frac{1}{2}$ million of livestock. Frequent reductions of crop yields (wheat, oilseed, corn, etc.) are due to climatic factors.

Importance of frosts in land cultivation

Frosts are more frequent in low-rainfall years, and generally occur on somewhat less than 60 days as an annual average, and they affect several main crops. Snow or severe freezing are practically unknown.

Visibility

The sky is completely clear of clouds about 160 days per year, and partly cloudy 170. Cirrus, cirrus stratus, and cumulus predominate.

Characteristics of the weather

These conditions of the sky give characteristics of brightness, clarity, and variety to the landscape. Mists occur only a few days per year, commonly in the winter season.

2. Vegetation

Effect of climate
on development
of vegetation

Although rainfall is evenly distributed and frequent, average precipitation indices are low. This fact is reflected in the vegetation pattern. Uruguay has a low percentage of natural woods and forest areas (one of the lowest in South America), primarily composed of thorny species, with small development.

The resulting soil derived from this variable climate, with relatively frequent frosts and little rainfall, is primarily of the prairie type, with local variations in its composition.

The nature of the prairies varies with their distances from the waterways, with their degrees of slope, with their percentages of rocky or sandy land, and with their degrees of alkalinity or salinity. These all influence the use to which the land is put by man and locally it may be for grazing or for agriculture.

Influence of
foreign species
on conservation
and resources
development

During the last 30 years, there has been a perceptible increase in foreign species, like the eucalyptus and pinus maritimus and other coniferous-type trees. The spread of eucalyptus was remarkable, considering that it was planted and developed in different soils and regions: in the coastland, mixed with pines, and in rural cattle grazing areas. Ligustrus (big bush type), tamaris, and acacia trinervis are foreign species spread throughout coastal areas and have proved to be efficient against maritime erosion, in the conservation of soils, and in the process of soil formation (humus) from sand lands and dunes.

3. Soils and Subsoils

a) Soils

Degradation
processes
on soils

By the action of natural erosions, aeolic, fluvial and maritime, and the overproductive use by man (felling of trees, excessive pasturing) soils have suffered a continuous deterioration. In some cases farmers plow not in the fertile stratus, but in the geologic basement, which is without agricultural value (in some cases the fertile soil is less than 50 cms., or 20 inches, deep).

Interrelation of
soils, humidity,
and wind regime

Considering the average precipitation in our country (as previously discussed) it seems that Uruguay should have soils of sub-humid regional type. This is not exactly so, partly because rainfall is low, partly because of the fact of impermeable subterrains, but primarily because prevailing winds induce a very high evaporation rate. The so-called "Pampero" and generally all SW. and W. winds are particularly dry.

In the SW. part of the country, with an annual precipitation of about 1000 mm. (40 inches), with appreciable differences in climate, and with botanical growths of pasture-land type, the predominant group of soils are the chernozioms, also called "black earth", composed by the accumulation of humus similar to the soils of eastern Nebraska, Kansas, North and South Dakota, and part of Minnesota. These soils are typical in grain-producing countries. (Argentina, Mesopotamia, Ukrania, South Africa, etc.). Comparing this type of soil with our grain-production it is possible also to establish a correlation between these two facts. (see map),

In the center of the country the dominant-types are prairie-soils, like in Iowa and Illinois, Kansas, Oklahoma, and parts of Minnesota, Missouri and Texas. These soils vary from black-brown to brown-redish (at the boundaries of Brazil they are purple and red).

These are areas primarily devoted to cattle and sheep. Toward Merim Lagoon and Rocha, the soil becomes half-bog and muck. Along the coast the dominant types are sandy and/or saline soils.

Many studies have been made in the last 50 years mostly related to geology, geomorphology and geography, but not specifically to soils. The beginning of a systematic study of Uruguayan soils is relatively recent.^{1/} The Soils Conservation Department of the Ministry of Agriculture has begun this task as part of the daily work with farmers in technical assistance programs. When this job has been finished, correlations between groups of soils and type of productions will have been established.

1/ Some partial studies made in San Ramon area, in the Santa Lucia River coast lands, seems to prove a correlation between good agricultural soils and topographic levels, confirming the theory of geologic formation.

Studies made by a pilot project of I.I.C.A. (International Institute of Agricultural Sciences) in that area prove a corresponding variation in economic value of local landscape and soils. Up to an altitude of 40 metres the quality of land is excellent. Above that height the quality of land and landscape for agricultural use decreases proportionately with increases in altitudes.

b) Subsoils

A circumstance that affects Uruguayan economy is the scarcity of exploitable minerals resources, and especially coal and petroleum.

Instead of those, Uruguay has great quantities and varying qualities of sand, talc, lime, manganese, mica and peat, as well as a great variety of granitic stones and marbles, ballast, clay, and different earths for chemical, ceramic and cement industries.

The extent to which these products have influenced the economic life of the country will be later examined. The influence and relationship of lack of combustible minerals and fuel oils in our balance-of-payments will be described with commerce and foreign trade.

4. Natural Regions in Uruguay

Different authors and students of Uruguayan geography agree to the existence of certain natural regions in Uruguay; and despite their various other opinions, all land students agree that Uruguay has at least five (5) differentiated natural regions within the country as we see in (map):

- 1) The Uruguay River Low Valley, where more fertile lands are located.
- 2) The Coast lands ((a.) Atlantic and (b.) Rio de la Plata) with different indices of salinity of waters and soils,

different geological formations, and different landscape. (That is the reason why many authors consider two separate regions).

3) The Haedo Basaltic layer, occupying parts of Artigas, Salto, Paysandu and Rio Negro.

4) The area of hills, highlands and rocky lands along the Cuchilla Grande.

5) An extended area of natural prairies in the center of the country.

We will see how these natural regions acquire significance in relation to the production and use of the land, and how it is possible, to a certain extent, to reach some conclusions about the problems that affect land utilization and to point to possible solutions.

We will also relate these regions to human settlements, trying to establish an explanation of the type of housing and activity, even to the preferences of migratory groups for certain areas.

Perhaps in an economy so tied to the land as is Uruguay's this ecology is stronger than in those societies where industrial development took precedence over agriculture.

5) - Economic resources.

Agriculture and livestock.

Agriculture and livestock remaining the basic sources of wealth in the Uruguayan economy, accounting for roughly 30 percent of the gross national product and 90 percent of exports. In recent years, however, certain economic measures adopted by the Government have tended to alter the hitherto existint pattern of production.

Comparing trends in the last 12 years we can see the variations some main agricultural crops and cattle and sheep production.

Comodity	Main crops (figures in 1.000 tons.)							
	1943	Rank	1948	1953	1954	1955	% change 1943-55	Rank
Wheat	337.1	1	423.5	462.5	818.6	853.6	254%	1
Corn	46.4	3	137.	208.	237.3	183.9	400%	2
Rice	15.4	5	37.2	52.5	57.8	70.	455%	4
Oats	39.	4	37.5	38.5	59.7	32.9	84%	6
Barley	13.	6	11.3	22.2	40.4	41.3	316%	5
Linseed & sunflower	76.3	2	135.4	200.3	148.6	162.	213%	3
Totals	527.2		781.9	984.	1.362.4	1.343.7	256%	

Cattle and sheep production (in thousands units)

	1943	1948	1953	1954	1955	% change 1943-55
Cattle	1.492	863	1.410	1.280	1.000	
Sheep	4.223	2.659	3.155	2.800	2.500	

Agriculture is carried out on a limited, although increasing scale. The principal Uruguayan winter crops are wheat,

flaxseed, oats and barley; summer crops are corn, sunflower, and rice.

Livestock production declined in the last four years. The reduction in livestock production was due chiefly to increased crop plantings, which in turn reduced available pasturelands. Some crop productions dropped because of adverse weather conditions.

Maps 5,6,7,8,9,10,11 and 12 show the geographic distribution of the principal agricultural products within the country. -(see Appendix).

Also variations in productivity indexes are shown.

Chapter II

Part.2.-Social and economic conditions.

1-Population conditions.

2-Condition of health and education.

3-Income and general living standards.

4-Housing.

5-Condition of work and employment.

6-Industrial pattern.

Population:

As a foreword, it must be stated that any comment or observations of the Uruguayan population involve a great deal of speculation and subjective analysis and obviously are subject to criticism.

The fact that since 1908, a Census of Population of the whole country, has not been made, gives support to that assertion. Partial surveys have been effectuated by different institutions; police, health departments, education, food institute, etc. and there are surveys of population made by the Dept. of Interior -1947- and a partial Census of the City of Montevideo (urban area) also in 1947.

This information, of course, is not enough for a correct evaluation of the reality. Nevertheless, if we consider the relatively small size of this population, (2 1/2 to 3 million pop.) it can be recognized that differences are not so important afterwards, although it decisively affects percentages in comparing economic and social status with other countries.

It is really deplorable that Uruguay is not represented in international statistics, but more important is the implicit fact that lack of statistical information means that a great deal of analysis and planning has been substituted by guesses and improvisation.

This is a gap that I sincerely hope will be filled in the near future.

Population trends

The growth or decline of a population in a certain period of time is determined by the balance of additions through births and immigrations and subtractions by deaths and emigrations.

In Uruguay there is statistical information about births, deaths and migratory movements. With these four informations, the total population is estimated.

But at the same time unregistered internal movements, births and migrations have not been taken into consideration in these estimations, There is need for a regular census which could measure not only the total numbers of people, age, and distribution, and consequently create a correct basis for evaluation of economic and social trends, but which could also give us an idea of the magnitude of violations of frontiers and unregistered births.

If we compare an age pyramid of all the country's population in 1908 and a comparative pyramid made on a sample basis based on a census of different cities and towns (by the Ministry of Health through two services S.C.I.-C.H. L.A. in 1950) it seems that Uruguayan population tends now to be stabilized and it is no longer a young-type population. Comparatively, there is a lower proportion of children from 1-19 years old in the last survey sample age pyramid than in 1908's; there is a higher percentage of people between 20-45 years than in

1908's.

The same impression can be deduced from observations of the age pyramid in a Census made by the school of architecture in San Ramon and San Bautista, although the small size of sample population inhibits extensive conclusions on the matter - (populations near Montevideo). Migratory movements looking for economic opportunities in the capital must be one of the reasons of the aging population in those cities. On the contrary, other surveys, such as of the town of Cerro Chato and the Manga area give age pyramids with a predominancy (both sexes) of the 1 to 14 years age group over the other age groups.

Information from the Ministry of Public Health shows that Uruguay has the lowest index of natality in South America. At the same time Uruguay has a low index of general mortality.

These two facts related together might prove - considering an equilibrated balance of migrations - that Uruguayan population is aging. Once more, a National Census of Population is a requirement that will definitely help us to solve these important problems.

Migration

Uruguay's population is practically all white. Two centuries

ago, there were around 15.000 indians, that were exterminated in fights with Spanish settlers. The more pacific tribes (Chanaes and Minuanos) have been intermixed with white race and today in rural areas it is possible find a different color of skin (olive) and prominent cheek-bone, characteristic of the indian race. A negro population exists but represents 1% of the total population.

The major national and ethnics groups coming into the country are spaniards and italians followed in minor percentades by Argentinians, Brazilians and slavic migrations.

There are colonies or national groups from Lebanon, Turkey, Poland, Syria, etc..-

Inmigration per decades

	<u>population</u>
1900-1909	107.000
1910-1919	131.000
1920-1929	155.000
1930-1939	80.000
1940-1949 (1)	(Slightly negative)

In these last years there has been a favorable small balance fluctuating from 6.000 to 14.000 in 1952-53.

(1) Source: Plan Agropecuario Nacional-Montevideo-1947 M.G.A.

But more important that total figures is the fact that migration during these last 25 years has not responded to any plan or program. This is an important problem considering that big proportions of immigrants are farmers that cannot find economic opportunity in their villages or farms in Galicia (Spain) or South Italy or Turkey, Lebanon or Syria. These peasants are not coming to do farm labor, but to increase (and compete with) laborers in urban services, stewards of cafeterias, small shops dependents, bricklayers or taxi or bus drivers. All these migration groups enlarge the consuming population in occupations related to the production of goods and services.

Fertility

The rate of births has been continually decreasing (with small fluctuations) since 1882, when the first information was obtained; 42% up to 1943 when it was 19%. The information for 1950 shows a slight increase up to 23% and in 1955 the rate was 21% - the lowest in South America.

Latin America	40	United States and Canada	25
North-west-central Europe	19	Southern Europe	23

Studies of possible factors affecting declines in fertility rates, seem to prove that the decline in crude birth rates has not resulted from a decline in the proportion of persons within the reproductive age groups, neither in the tendency to marry. (In almost all the countries the proportion of women aged 15 years and over who are married and the proportion of women within the child-bearing age have increased)

Decline in reproductive capacity and deliberate efforts for family limitation are other possible causes that might explain this tendency.

Urbanization and social and geographic mobility are typical phenomena of this century and seem to appear concomittantly with the decline in birth rate.

Levels of living and costs, education, economic status, economic activity, employment of women and decline of religious interest have been assumed as causes of decline of fertility. Lack of statistical data on population impedes an establishment of correlation of phenomena.

Again, it seems to be an imperious need toward the establishment of regular Census of population and housing. No planning plans and policies can be seriously stated ignoring population trends.

No plans and programs can be undertaken without having at least a reference point for future expectations.

(1) Source: Report on the world social situation. New York 1957-Chapter on World Population Trends.

The implication of population trends with planning studies at local, regional and national level are of first-rank importance.

Conditions of Health and Education.

Country	Pop. per physician	Tuberculosis	Calories per day	Proteins g/d	Pop. per Hosp beds	Milk consumption	% Illiteracy t/pop.	Pupil per School Teach.	Enrollment per 100.000 pop.		
									Med. and Law	Eng. and Ag. Scie.	Enrollment in higher Education total
Kingdom	1.200	62	3.230	86	85	152	-5	30	-	-	151
U.S.A.	770	20	3.090	92	101	137	-5	32	84	135	1.816
Argentina	780	-	3.190	101	160	95	14	23	426	144	756
Brazil	3.000	250	2,340	57	310	26	51	30	62	16	117
Chile	1.800	143	2.490	77	185	65	24	-	-	-	167
Uruguay	1.050	52	2.951	90	175	161	12	33	400	127	890
Paraguay	2.500	102	-	-	615	-	32	32	-	-	169
Venezuela	1.900	233	2.280	59	395	-	51	36	-	-	97
						Kg. per p. per year					

Source: U.N. Statistical YearBook, 1951-1955
 U.N. World Social Situation. 1957.
 Sanitary Statistics-1956-L. Vidal, O.Ebole, & A.Giordano.-Montevideo.

The same geographic distributions that have been pointed out for many other social and economic conditions, can be applied to health indexes and general conditions of education.

Compared with southern South American standards, Uruguayan conditions are relatively high. Related to developed countries, standards are low in many cases, and relatively good in others.

These indexes should be taken only as a first sight approximation.

tion about problems and conditions. They merely give a quantitative approach to problems of health and education, without measuring intensities and qualities nor distribution in groups, sex, ages, incomes or area differences.

In the case of number of hospital beds per person or physician per total population, figures do not show the efficiency, distribution or kind of services performed among different countries. (as an example see map...)

Health. The processes in Uruguay are relatively similar to many western European countries and the USA..Natality and mortality indexes have both been continually decreasing in the last 50 years. Fertility rate (1950) 23%. Death rate (1949) 7%.-

The principal causes of diseases have been changing with the years, from pneumonias and pulmonary afflictions toward cardio-vascular and malignant tumours.

Parasitic and infective diseases have been effectily erradicated, with the exception of brucellosis that affects not only health but economic status in rural areas.

There are relatively low mortality indexes in accidents (both in working and traffic activities). There are increasing mental health problems and juvenile delinquency is important both in urban and low rural areas.

There are not to my knowledge - studies about life expectancy

cy. Information about infant mortality shows that indexes have continually decreasing - around 35% in the last years. Nevertheless there is still a gap between health conditions in Uruguay. The way that the Uruguayan government has fought and brought down tuberculosis indexes, should encourage public officials to new undertakings in physical and mental health.

Related to physical development at the state, regional and local level, the coordination of health programs with the rest of the planning policies and plans seems to be not only desirable but highly necessary. In 1912, Uruguay began, through government action, physical improvements such as playgrounds, hospitals, nurseries and health centers which were built all over the country, with special emphasis on urban areas. At that time and for some decades accommodations and facilities kept pace with needs. With increasing densities of population and changes through technological innovations, some buildings, services and accommodations became obsolete. Improvements could not kept step with increasing demand. The decentralization of services and facilities that have begun in other functions such as industry and education, should also be undertaken in public health programs and activities.

Replacement of obsolete techniques, machines, buildings and operations require capital investments, but also require co-

ordination of physical and economic planning at different levels and evaluation of costs and revenues.

This implies that type and extension of services to be performed should be related to the economic possibility and size of the population involved.

As first steps, standards are obviously necessary to be settled, in order to give some general ground to future plans and policies. But standards cannot be adopted from countries with different economic levels or dissimilar social conditions

So advisory commissions should be created with the specific task of determining local and present conditions, needs and requirements related to public health and in coordination with population, housing and physical planning requirements and standards. Similar foreign and local works and studies may be a great help in this respect and could serve as a starting point.

Public health, by its paramount importance, should deserve the fullest attention of government. Presently public health policies and plans are too compartmented through different commissions and branches of M.S.P. Although there is general agreement about general objectives, the way that those objectives are carried out through these different agencies tends to waste time, money and effort in duplicating and overlapping of functions. At the same time, the establishment of hygien,

health and safety standars at national, departmental and local levels to fefine criteria for priorities in improvement programs makes more necessary the coordination of all public health programs and policies with the rest of gobernmental plans and actions.

Education.

Although, Uruguay does not present such grave problems as many other countries in S. America or other parts of the world, educational conditions are not optimum and require special consideration.

- Illiteracy. The condition of mandatory as well as free school enrollment makes illiteracy around 5% in urban areas.

(1). In rural and rural-urban areas the situation is different, because:

- a) School facilities are not so widely spread as in urban areas.
- b) Deficiency of transportation facilities both in roads and carriers makes access to the school difficult in many cases.
- c) Generally speaking, lowest income groups and lowest educated groups are located in these areas.

Economic pressures make young people leave school at an early age to work.

These cumulative effects tend to affect school enrollment and consequently increase illiteracy indexes.

- The quality and type of education is also different. Many rural areas have one or two teachers.

The regular six year courses of primary urban schools are limited in some cases to five or even four years. These

unfavourable circumstances make the index for the whole country raise to aprox. 10% illiterate.

Consequently, there is an increasing pressure for improvements both in quantity and quality of services - school overcrowding, working with two or three schedules per day, in a same building. Buildings themselves tend to become obsolete in vast areas of urban centers. Also it is common to find school buildings are old structures, old "residences" of wealthy families .(1)

Insufficient space for recreation, substandard light and air general minimum requirements are very common. Improvements and replacements are not sufficient to keep pace with increasing demands and needs.

Secondary education.

Without judging the type of education imparted, the need for improvements in secondary education is equally as acute as it is in primary school.

Probably the shortage of teachers are more acute than in the primary schools. The same consideration about buildings, space light and air requirements apply . Many cities have beautiful examples of modern facilities, but the average is still low and inadequate.

High education.

It is very well known that high education in South America

tends to form generalists disregarding specializations and techniques. The proportion of people following law and medical science is exceedingly high in Uruguay and Argentina for example, although the proportion compared with the total high education enrollment is decreasing in these last years.

Handicaps of high education can be described in the following points:

- a) Lack of adequate personnel, building facilities and financial means to develop the necessary technical training, equipment and services according to increasing demands. The implication of research with invention, innovation and general standards of productivity in all fields are unnecessary to stress.
- b) Lack of information, knowledge and inter-communication with the leading scientific countries, in specific fields,
- c) Lack of adequate mechanisms or techniques to extend education to general public.

So it is clear to observe, that although there are differences in the type and quality of operations and services, the same kind of problems exist at all educational levels.

- Related to economic and physical planning, educational problems have the same character as those related to public health. There is the same need to set standards and requirements in accordance with economic and social conditions.

The relation of type, kind and densities of populations with educational facilities and services makes it necessary to coordinate general planning functions and policies with the activities of educational boards at local, departmental and state levels.

The type of long-range investment that education seems to have in national development, perhaps tends to create neglect of day-to-day operations. Nevertheless, the accumulative effect of present educational measures-parallel with economic and physical improvements, helps the gradual betterment of future living conditions, thus making easier the establishment of broader and higher standards.

In Uruguay, present educational levels are due to the wisdom of p~~o~~liticians and educators of thirty years ago. But all types of development require a continuous and beared effort. Education, as any other planning measures of social and economic life, requires a continuous process of evaluation and re-view. Our objectives should be focused according to the high standards of higher developed countries and not limited to the nationalistic patterns of false self-sufficiency.

Income and general living conditions.

Both income and general living conditions in Uruguay correspond to a country in an intermediate stage of development.

Table () shows two indexes; food consumption and gross national income in per capita basis (1).

According to that information Uruguay has a high index in food consumption and an intermediate level of income, according to international patterns.

We have no accurate information of per capita income. Nevertheless gross national product in per capita basis was in Uruguay- in 1950 - around \$ 400.-dollars. It ranked at the same level with Argentina, West Germany, Israel, Poland Czechoslovakia and USSR. (2).

Related to S. America, Uruguay ranks second at the same level as Argentina, after Venezuela, whose per capita gross national product reached around \$ 500 dollars, at the same

(1) Source. U.N. Dep. of Econ. & Soc. Affairs N.York 1955 Chart. VIII, pag. 52: Projections of Economic Development.

(2) U.N. Econ.& Social Council: Volume & Distribution of National Income in Underdeveloped Countries-June 1951 Tables 1,2.

year.

We shall see how income and living conditions vary according with urban and rural patterns and economic sectors of population.

Income

In accordance with available information about economically active population in the three basic sectors, we can estimate a distribution of income on a family basis.

Some gross approximations and assumptions have been made to establish these estimations.

- a) That the number of workers per family is equally distributed within the three economic sectors.
- b) Census on agricultural activities gives no information on land cultivated in areas of 2.4 acres or less. Consequently the figures on agricultural workers are probably lower than actual rural population.

Some conclusions can be stated:

- 1) Income derived from agricultural activities is the lowest, about half of the average income of the other two sectors.

Generalizing, income of the rural population is much lower than that of the urban population.

2) Manufacturing represents the highest income.

Let us now consider these observations comparatively with the rise in consumption indexes and general cost of living and prices.

(1) Family income per year by economic sector: Uruguay 1951

	National income in millions	working % populat.	Family income (in 1951 dollars)	
Primary	413	24.8	324.000	960
Secondary	471	28.2	180.000	1.970
Tertiary	784	47.0	341.000	1.730
Total	1.668	100%	845.000	1.480

average for secondary & tertiary: 1850 dollars.

(1) Source: Estudio de nuestro desarrollo económico
A. Villegas. Revis. de Econ. N° 39 pag. 55-57

(2) Family cost of living per year (in dollars)

Montevideo 1951

Items	Monthly (urugua- yan pesos) expenses	&	Yearly expen- ses	Year expenses in dollars - 1951
Food	120.30	30		668.
Housing	96.50	24		555.
Appliances	12.25	3		68.
Clothes	84.65	21		470.
Others	87.15	22		482.
Total	400.85	100%	4.800	2.225.

According with these last two informations and assuming that secondary and tertiary activities are entirely located in urban areas (which is not absolutely true), a difference of \$ 375 yearly appears between the estimation of the family budget for Montevideo (2,225) and the average income of tertiary and secondary sectors for the same year. (1.850 dollars).

If this is true, it seems to indicate that the average urban family budget should have required in 1951 an additional 20% to make even living costs with desired standards of living.

Average family for the country: 4.2 persons per family.
(Montevideo has smaller index)

(2) Source: M.I.T. 1953 Ministry of Industry & Work
Living Costs, pag. 799.

Again some major limitations seems to smooth these difference.

- 1) Montevideo standard prices and family budgets are quite higher than the rest of urban areas.
- 2) Total purchasing power related to food prices has increased around 25% from 1943 to 1956, thus allowing more expenses in housing, clothing and the like.
- 3) The relation between salaries and wages to living costs in Montevideo has also increased in the last years, as we can see in chart ().

The situation in rural areas is quite different.

- Wages and salaries are low. Goods and services are difficult to get, available only through Montevideo market, with consequent increasing transport costs and prices.
- Low incomes.-Incomes are much more lower with the exception of rural owners, whose per capita income ranks among the highest. Some living costs are perhaps lower than in urban areas, such as housing and recreation, but standards variety and quality of such goods and services - if they exist - are very limited.
- Lack of accessibility between different rural areas aggravates economic status.

(x) M. Industries and Work. Memoria 1956-VIII-45

Food - The effects of this pattern on living standards and food conditions are obvious. Practically all rural areas have deficiencies in daily food diet.

Mate, "tasajo", potatos and beans have constituted regular meals of rural workers for many years.

Although conditions have been improved lately, there is still a marked deficiency in the daily diet of fruits, fresh vegetables and milk in many rural areas.

According with A. Munilla (1) there is in the total Urugua^uyan population a deficiency in milk, fruits, and fresh vegetables and an excess in the diet of meat sugar and fat products.

(1) A. Munilla - Dietary conditions in Uruguay - 1951
School of Medicine. Montevideo.

Related to economic and physical planning, economic and living conditions both of rural and urban population should deserve the fullest attention of state and departmental government.

-First of all, we have pointed out the inaccuracies and lack of information about the Uruguayan population and economic status. We only have approached the problems based on innumerable assumptions and approximations.

This proves the need for accurate data on family living costs in both urban and rural areas, and also the urgent need to set adequate minimum standards of living both for ru

ral and urban areas.

This knowledge will enable us to further estimations on real income and purchasing power.

-Second, if increase of per-capita income seems to be an economic objective, or at least an increase in the purchasing power of the population - productivity and exploitation of local and national resources should be developed. The way to achieve this objective will not be described here, but industrialization, mechanization and technical innovations should play an important role in it.

-Third: Parallel with economic measures, development of physical improvements seems to be an urgent need.

Living conditions are a tight chain with income, education, housing as well as the rest of facilities and services. Demand can be developed by increasing services.

The rural population does not expend on general expenditures such as recreations, clothes, and the like, not only because they have no money, but also because they do not have the opportunities and services that urban areas offer. The same thing happens with education and health patterns.

-Of all needs, transportation needs the most improvement first. Situations obviously vary from area to area, but generally speaking, the limitations of the market are primarily due to the limitations imposed by an inadequate transportation system, - both roads and carriers. Good transporta-

tion reduces transport costs, diminishes time-distances and consequently tends to smooth differences in price levels, with a consequent effect on the cost of living. It brings accessibility, helps mass communication and consequently development of education.

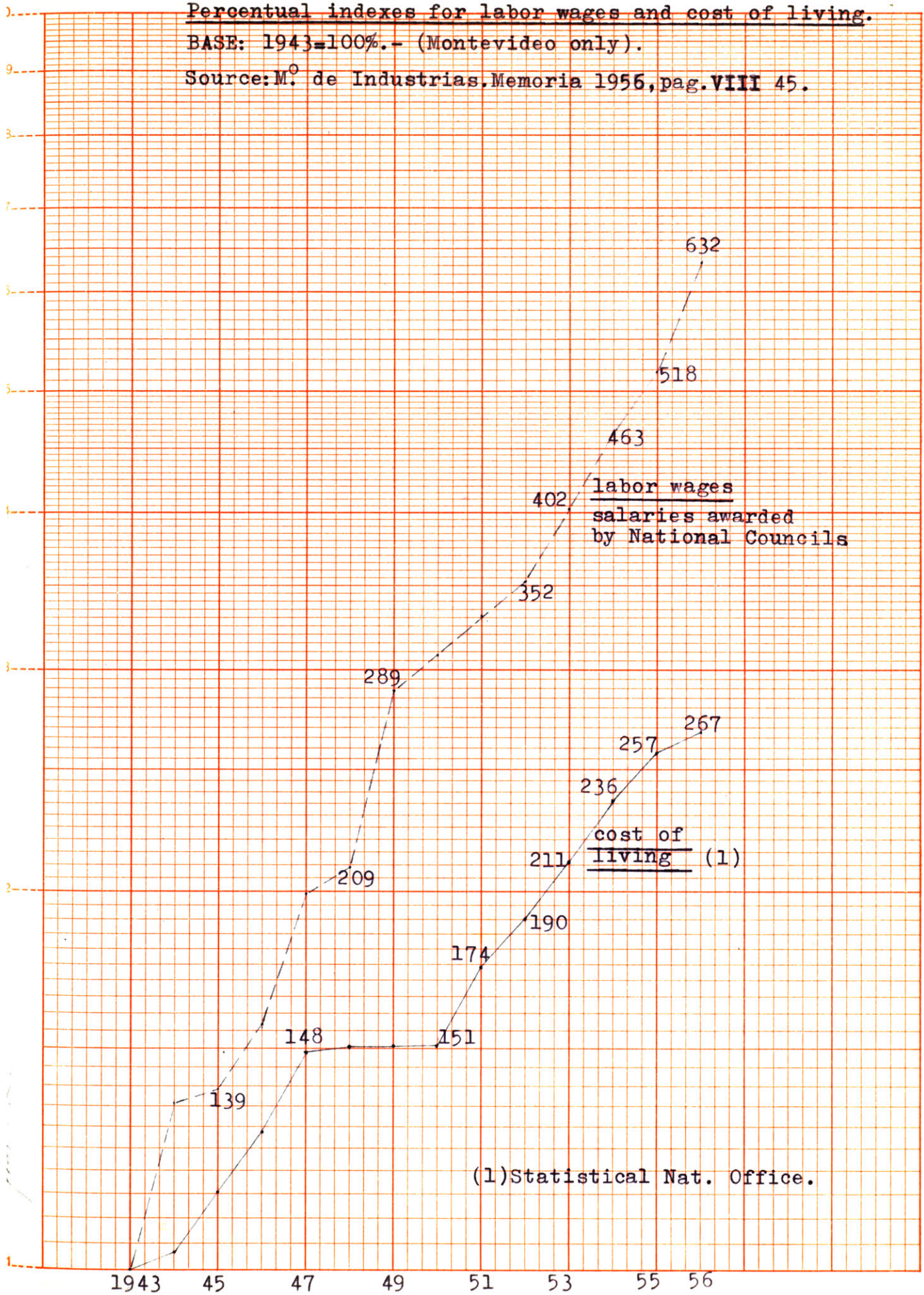
So implications between income levels, living costs and economic and physical planning are clear.

Some needs and problems have been pointed out. Orientation toward solutions will be described later.

Percentual indexes for labor wages and cost of living.

BASE: 1943=100%. - (Montevideo only).

Source: M.^o de Industrias. Memoria 1956, pag. VIII 45.



(1) Statistical Nat. Office.

Housing and residential development.

Closely related to income and living conditions is the housing problem.

We will describe separately urban areas and urban problems and conditions and their interrelation.

A) - Urban areas.

a) Problems.

The concentration of a large number of persons in a small area of a city may bring all sorts of population pressures and congestions. Some of these pressures are related to housing conditions.

1) Inadequacy of housing costs with family income.

A chain of factors and consequences affect housing problems. Lack of adequate housing facilities. Tenancy still predominates over home-ownership. Rent controls are unable to guarantee price and cost levels. However, the major problem primarily lies in the fact that family incomes are inadequate or cost of satisfactory housing is still too high for the average income.

Consequently either a large proportion of the family budget is spent for rentals or families have to live in substandard housing. To aggravate the problem, lower income families must spend a larger proportion of their income for rent than those of the higher income groups (see ta-

ble.).

2) -Obsolescence and old housing.

Between 1/3 and 2/5 of total dwelling units are 30 or more years old. A large proportion are in a condition of aggravated obsolescence and serious maintenance and repair. (We cannot give figures for lack of accurate information. Partial sample studies made by the School of Architecture in small urban and sub-urban areas of Montevideo and Canelones, show percentages varying between those two figures).

3) -Slums and blighted areas.

These are by no means limited to housing and residential areas. Nevertheless, the implications with regard to health and sanitary conditions are probably greater than in commercial and industrial districts.

Implications of slum areas with decreases in rent tax and general land values are also important factors in the general problem.

There is no public conscience in Uruguay about urban blight. Partly because we do not have the scale and size of American cities, also perhaps the problems and needs of the population are not so publicly discussed and also due to the fact that the low rural conditions have helped to disregard urban problems and needs. At

the same time, population demands for housing tend to put the emphasis on building and housing development rather than re development.

I also think that - as in many other cases - lack of adequate standards as well as information impede us from evaluating urban housing comparatively with rural conditions.

4) Lack of community facilities related to residential development.

Speculation of land helped concentration both through vertical expansion and over-use of residential land and also dispersion in premature or unplanned developments. In this last case, many suburbs outside cities lack adequate community facilities:

They lack a collective sewerage system. The water supply does not reach each house individually. Consequently the population has to share water from public sources.

Again the implications to housing facilities and sanitary and health conditions are evident. Lack of adequate space, light and air are aggravated by lack of sufficient space for play and recreation, both in housing and neighborhood scales.

5) Overcrowding.

People move into cities in the hope of better economic opportunities. After one family is settled, some parents,

relations or friends come in too. Probably many areas marked as single family housing are really constituted of two or more families sharing the same shelter.

b) -Shifts and trends of residential developments.

Dispersion as well as congestion and concentration tends to complicate the urban pattern. In the particular case of Montevideo, the residential development of the city mainly toward one single direction (coast line) brought a parallel increase of municipal expenditures and extension of public services. Problems of encroaching boundaries also appeared with Canelones government.

In this respect transportation is also strongly affected by residential movements. People move out looking for greenery, air and cheaper rent.

Suburbanites depend on cars (1) - as U.S. pattern - but mainly in public transportation. The centrifugal movement of the urban population brought a consequent increase in traffic patterns. The circulation system was not prepared for this growth and movement. Neither carriers (bus or rail) or roads are adequate to serve the increase of traffic movement.

B) Rural areas.

a) Problems.

Housing and settlement conditions in rural areas are extreme

ly different from those in urban places.

Although housing conditions are low in blight areas within cities, at least they have the proximity of some elementary public services in health, education, transportation, water and power supplies.

Inversely, many rural slums, in addition to substandard housing lack these elementary services.

They lack sewerage, water and electricity systems and medical services. At least 50% of them have no school in the vicinity. It was calculated that nearly 100.000 persons were living in those rural settlements.

(1) In Uruguay there is a car per aprox. 20 persons.

If we add the outskirting small towns located in rural areas that lack some of those services, the total population located in substandard housing and inadequate community facilities increases considerably.

Also the criteria for setting standards varies depending on whether it is an urban or rural settlement.

We will point out some of the major problems related to rural housing.

1) Low income.--They cannot afford better housing. All money is spent on food; Food prices are higher than in urban areas. Land is no problem, but there is a lack of materials and skills

labor

2) Lack of adequate public services such as:

Sanitation, light, water supply, etc...

3) Housing itself lacks adequate floors, ventilation and general services.

Overcrowding is a major problem with consequent effect on promiscuity as well as sanitary and health problems. It is common to find a simple curtain separating parents from children inside those ranchs.

4) Lack of accessibility. Lack of transportation facilities.

Roads in almost all cases are tamped earth or stone. Climate decisively affects circulation of goods and people.

5) Lack of adequate working conditions. Underemployment and unemployment.

6) Lack of educational and recreational activities and services. All these factors tend to create a certain environment from which substandard rural housing is only a result.

We will add one more problem that affects the whole rural pattern of low density areas, that is : dispersion.

7) In the city dispersion is the result of spontaneous and unplanned growth of residential areas toward edges. In rural country dispersion means to accelerate economic and social degradation.

Common rural
and urban
housing pro-
blems.

Summary.

Both urban and rural areas have common housing problems requiring solutions related to economic and physical planning. Housing conditions can be improved by raising income or diminishing costs. Incomes can be increased by improvement of working conditions and consequently through economic and industrial development.

Economic and industrial development require certain minimum technological standards. Technological changes can be improved by social and educational assistance as well as capital investments.

Some other problems require physical improvements - not only in housing itself - but all the environmental conditions. The transportation system affects not only market conditions and employment and consequently housing costs, but also education and vertical mobility. All factors are interrelated and have cumulative effects upon the others.

Specifically related to housing and residential growth is the development and location of industrial, commercial and administrative areas. Implication between working and residential areas with over-all land uses and circulation pattern are clear. Urban and rural housing problems, together with the rest of the economic and social conditions are tightly interrelated. Urban and rural problems are - or might be - dif

ferent, but a solution for one helps to solve problems for the others.

This seems to prove the need of coordination of both urban and rural planning into a regional approach.

Housing problems are - in this picture - one of the most vital, important parts of this comprehensive whole, but their solution require parallel and complementary measures in all the other aspects. Planning powers, land use controls and subdivisions regulations, building and health codes will undoubtedly help to improve present status as well as improvement of local building techniques , resources development and all the other economic, social and educational measures.

Finally housing is closely related to the process of savings and investments. It is the type of capital formation that both encourages and strengthens a long-term pattern of savings.

A combined effort is needed to mobilize all available resources, including self-help and cooperative methods, complementing government housing development and redevelopment programs, particularly in connection with housing programs for low and middle income groups.

The ways by which coordination can be achieved and general principles and policies will be discussed in the next chapter.

Conditions of employment and work.

- (1) Compared with some neighboring countries, Uruguay has no sensible differences in the proportion of working population related to total population. Nevertheless labor forces are differently distributed within different sectors of economic activities, as we can compare through the following figures:

	Sectors			% of total labor forces of total pop.	% of industrial workers in total population.
	Prim.	Sec.	Tert.		
(2) Uruguay	34.5	22.5	43.	34.	7.5
Argentina	26.7	30.1	43.2	39.	12.
Brazil	60.7	13.1	26.2	32.	4.2
(3) Chile	38.	16.	46.	33.	5.3
U.Kingdom	5.3	49.2	45.5	45.	22.
U.S.A.	12.5	37.	50.5	46.	17.
U.S.S.R.	43.	31.	26.		

(1) U.N. Demographic Year Book 1953-55; for Uruguay: M. of Industries 1955 and MGA 1953 Census.

(2) Secondary sector includes manufacturing plus electricity, gas and water workers.

(3) Includes male active population only.

(1)

We can see that the secondary sector is relatively low compared with more developed economies, while the tertiary sector is approximately the same as the U.S.A.

It is very possible that such increase in production of goods and services without a corresponding increase in productivity within the secondary sector may constitute a big handicap to economies such as Uruguay and even Argentina. At the same time the condition of cattle and agricultural economies of these two countries may represent a balance of that unfavorable situation, explaining also the relatively high proportion of people engaged in agricultural activities related to total population. (We should take into consideration the shifts of over industrialized economies toward agricultural land in those countries - England - where land is an important and scarce resource.

Another observation: while Argentina and Brazil have enormous natural and human resources and extensive unexplored lands, Uruguay has not too many possibilities of geographic expansion and expansion of natural resources. So policy orientations in this last case should recognize these facts. Shifts and booms of economic activities and consequently in the employment pattern are not likely to occur in a country such as Uruguay with no basic minerals and fuels, small si-

(1) Obviously, the composition and type of services performed in the tertiary sector are different in the U.S.A. and Uruguay.

ze population and with not so wide extension of land for big entrepreneurship as those other neighbor states have.

The solution seems to appear by improvement in quality and diversification rather than size of activities, unless international trade and economic unions play an increasing role in the Uruguayan economy.

Now let us observe the working population in Uruguay, classified in three economic sectors, and how it has changed according with the following pattern in the last fifteen years

Economic Sector	Rank in 1941	1941 pop.	%of work pop.	%of total pop.	1951 pop.	%of work pop.	%of total pop.	1955 pop.	%of worktot. pop.	%of pop.	Rank in 1955
Primary	1	350.	51.	16.	324.	39.2	13.3	320.	34.4	11.4	2
Secondary	3	85.8	12.6	4.	180.	21.4	7.3	210.	22.6	7.6	3
Tertiary	2	250.1	36.4	11.5	340.9	40.4	13.4	400.	43.	14.4	1
Total work population	-	685.9	100.	31.5	845.	100.	34.	930.	100.	33.4	-
Total population.	-	2.175.0	-	100.	2.480	-	100.	2.800.	-	100.	-

Source: Information for 1941 and 1951 from A. Villegas, Revista de Economía N°39 año 1955. "Indices para el Estudio de nuestro desarrollo económico".-Montevideo.-

1955 are estimations based on M.G.A. and M.I.T. Statistics.

Primary sector represents labor forces in agriculture.

Secondary, includes manufacturing plus construction and transportation.

Tertiary, includes government, professional and educational services, plus commerce and administration.

In 1941, the primary sector represented 51% of the total labor forces.

In 1951, only 39.2%. The secondary sector has arisen from 12.6% in 1941 to 21.4% in 1951 but since then it has remained approximately the same up to 1956. (22.6%).

Although these figures are estimations, if they are true, it reflects an economic situation that could be not too promising for the future of the country.

The pattern of industrialization of the country is still low. From labor forces representing 34% of the total population, only 7.5% are engaged in manufacturing. A high portion of this total figure are workers in establishments with 10 or less workers, small-scale operations.

Assuming the accuracy of these figures, some observation can be determined:

- 1) The rate of growth of industrial workers, (secondary sector) was by far the highest between 1941-1951, corresponding for the same period in an increase in the growth of the tertiary sector and a decrease in agriculture.
- 2) During that period, the tertiary sector overpassed the primary sector.
- 3) During 1951-1956, the rate of growth in industry and manufacturing went down considerably, being slightly the same as the rate of growth of employment in the tertiary sector. The agricultural sector remains approximately the same, with

a slight descent.

4) In the last four years, the proportion of total active population went down slightly, which seems to indicate higher unemployment and underemployment indexes.

Unemployment and underemployment.

It is not possible to estimate accurately figures for unemployment or underemployment.

Lack of statistics impede us to do so. The general pattern in the last five years has been a decrease of job opportunities, (meat industries); periodic shortenings in building and textile industries; demand of economic activities in some agricultural products such as dairy industry, wheat, corn and oilseed. The pattern of underemployment is extremely high in some rural areas due to seasonal activities, relatively high in the rest of the cattle industry areas and low in urban and rest of agricultural areas.

A steady increase in the demand of educational services, transport and community services, partially explains the rise of the tertiary sector. Government employment also contributes to the rise of the tertiary sector in a relatively high proportion, although the increase of the state in intervention in industrial activities tends to balance this situation.

Employment by sex and age. Women represent 39% of the total rural labor forces, and children 14 years of age and under repre-

sent 9% of the total rural working population.

The pattern of urban activities are different in the secondary and tertiary sector's- Women workers represent nearly 18% of manufacturing and around 25% of tertiary sector.

For total labor forces, the female working population is around 25% of the total. The tendency is to increase female participation in labor population. There are not high percentages of workers over 60 years old. I would guess that Uruguay should have one of the lowest index of workers over 60 years. It is even relatively common, to find 50 year-old people retired from government and private jobs, both in the tertiary and secondary sectors.

In this respect, the agricultural pattern is different. Although the pension system has been extended to agricultural activities and conditions of work and employment are guaranteed by law, standards are still very low compared with those of urban areas. If we add the fact that young people migrate from rural to urban areas seeking job opportunities, it is clear why the rural population is older than the urban.

Summary

As a summary, we can say that the pattern of employment in Uruguary corresponds to a country of an intermediate stage of economic development, having still large proportion of labor forces in agriculture by the very nature of natural resources.

There is no heavy industry, no large concentration of employment in single factory or establishment, - with some exception in the textile industry. The influence of the capital city is tremendous in the economy of the whole country, due to the concentration of employment and job opportunities.

The conditions of work and employment are stable and relatively good in urban areas although some tendencies toward instability can be observed in the last years. Rural working conditions are more subject to seasonal changes. Underemployment and unemployment are more common in rural than in urban areas. Government legislation related to working conditions has more adequate standards and controls in urban than in rural areas.

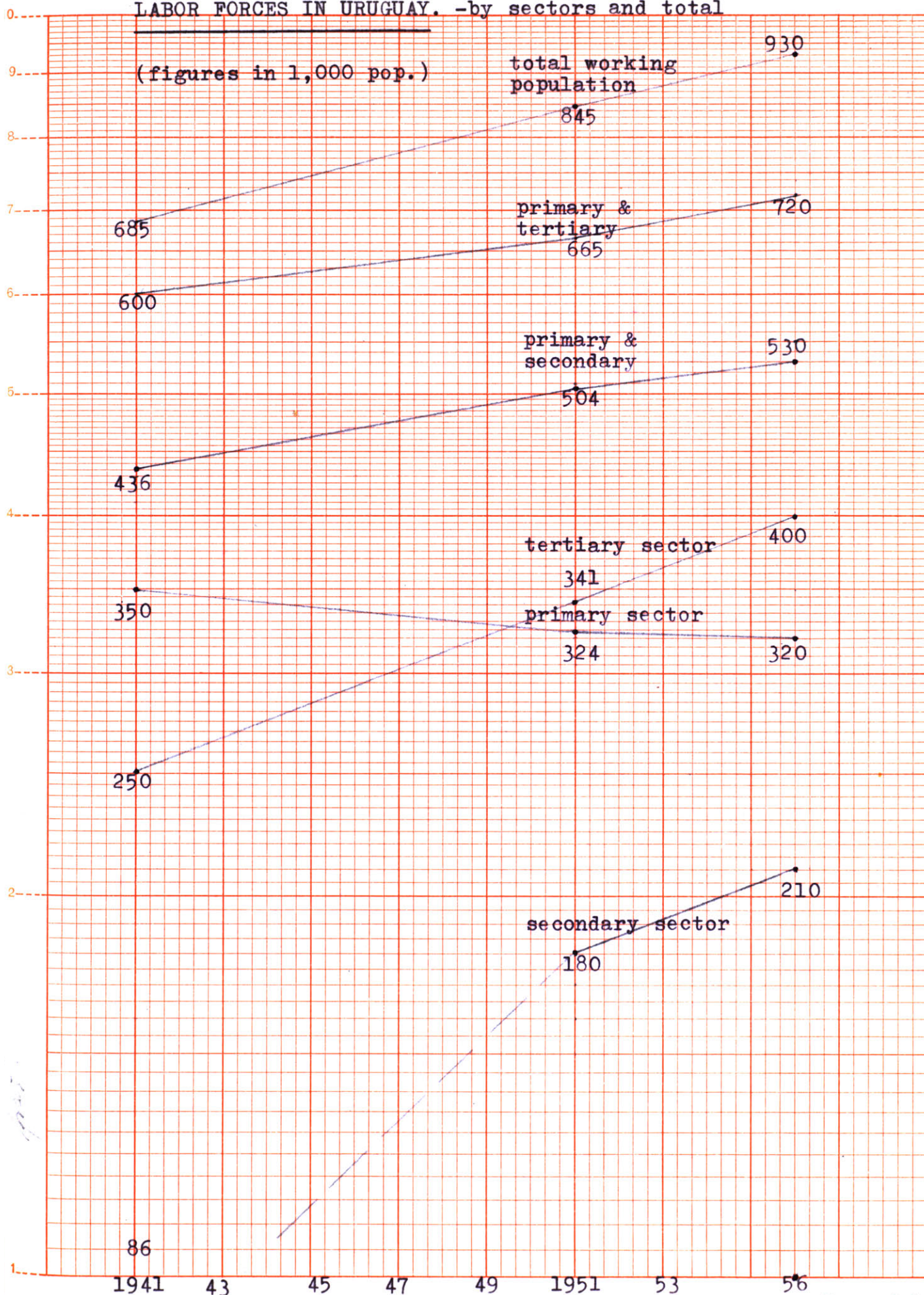
The increasing participation of the State in the economic life of the country tends to increase tertiary and secondary sectors.

The tertiary sector is constituted by government employment in the production of services, transportation and communication, networks and education.

Commerce is partly constituted of small shops and stores, mainly dependent on foreign trade. Only a small portion of employment is truly dependent on basic industries. There seems to be an exaggerated development of employment in consumption activities rather than in those derived from basic resources.

LABOR FORCES IN URUGUAY. -by sectors and total

(figures in 1,000 pop.)



Sources: Memoria 1955. Ministerio de Industrias y Trabajo - Montevideo. 1956. - Villegas. op. cit. - Market dat

Industrial Pattern.

Because of its particular importance in the total complex of labor forces and economic life of the country, a close in sight into the industrial pattern, its classification by type of activities and geographic distribution, may help us to understand the major problems and needs, as well as orientation toward future planning policies.

Although with higher percentage of secondary sector than other S. American countries, with the exception of Argentina, Uruguay is still far from the developed economies of such countries as the U.K. and USA.

According to 1955 figures, employment was distributed in the following way:

	1951	%	1955	%	% of change 1951-55
Total labor forces in manufacturing	180.000	100.	210.000	100	116.
Food and Beverage	45.	25.	47.800	22.5	105.
Building	35.	19.5	39.	18.5	111.
Textiles	20.5	11.4	24.5	11.7	120.
Energy, water & gas & combustibles	12. 12.	6.7	15.5	7.4	130.
Metallurgy	10.5	5.8	13.5	6.4	129.
Transportation & Motor equipment	8.5	4.7	10.4	5.	122.
Forestry & derivations	8.	4.5	8.8	4.2	110.
Cement, stone, clay, & sand.	7.5	4.2	6.2(x)	3.	-
Aparell & dress	6.	3.3	11.	5.2	184.
Leather & leather goods	6.	3.3	2.3	1.1	-
Printing	4.1	2.3	5.8	2.7	140.
Extractive industry	4.1	2.3	2.2	1.	-
Chemical industries	3.5	1.9	7.	3.3	200.
Rubber industry	2.5	1.4	2.8	1.3	112.
Electronics	2.1	1.	16.8	8.	800.
Paper & board	2.1	1.	2.8	1.3	133.
Special machinery (optical, etc.)	1.	-	2.	-	200.
Others	1.7	-	-	-	-

(x) This decrease perhaps is due to some inconsistency between classification of 1951 and 1955, related to different products. - Presently cement plants cover 100% the needs, with parallel expansions in output, establishments and labor.

Source: Ministry of Industries, 1951-1955-Memorias. Montevideo. Figures are in thousands, except totals which are units.

Some observations can be made: a) In time, b) in space.-

a) In time.

1) In the industrial employment pattern, the percentual increase in electronics, chemical industries, special machinery, apparel and metallurgy was remarkable.

2) If we consider production indexes, the increase of food industry, electronics and textiles, is particularly remarkable; there was also a high increase in services such as light and power, chemical industry and metallurgy.

3) In the long run: Similar to low-developed economies, raw materials (in this case agriculture) and foodstuffs dominate the structure of production of the country.

4) Similar to some communities in an intermediate stage of development, light industry, electronics, chemical products and some assembly processes are developing at a relatively high rate of growth. A quite developed textile industry and a fluctuating building industry not too independent from foreign trade represent the other two major production sources.

b) In space: Industrial decentralization.

According to the area development information from M.I.T. (Ministry of Industries) 1955; it can be established that a process of decentralization of industries from Montevideo has begun.

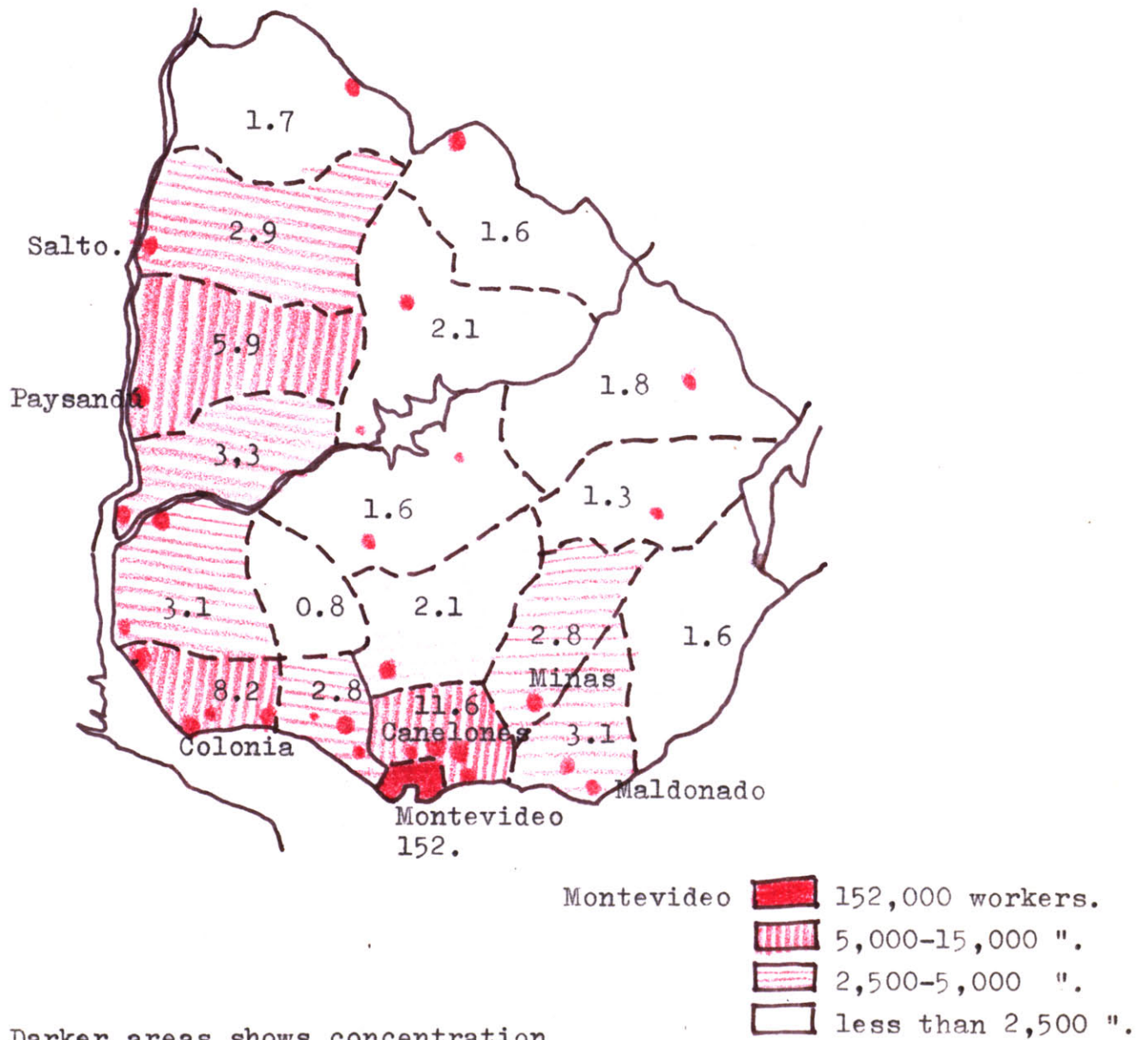
This process is not equally developed according to different activities and services. Industry tends to grow faster in other areas than Montevideo (Paysandú, Colonia and Canelones).

While the industrial development of Canelones is of the metropolitan - ring type, the industrial development of Paysandú and Colonia could help perhaps more effectively the criteria of decentralization and concentration without sprawl.

The Canelones development, with higher densities of population and services, and closely tied to the Montevideo economy, should require perhaps more detailed attention, especially with references to transportation, subdivision of land and control of land use. (It should not be forgotten that Canelones is an important source of food supply to the Montevideo area).

Manufacturing.

EMPLOYMENT. (figures in thousands)



- Darker areas shows concentration of employment on manufacturing .

Chapter II

Part 3.-Physical pattern.

1-Rural land uses.

2-Land subdivision and tenure.

Land use pattern.

Land is used in Uruguay mainly for agricultural purposes, primarily cattle raising with an increasing tendency to all other land cultivates, with the exception of forestry that has a low percentage of area related to total area of the country:

According to information for (1950 and 1951 Direccion de Estadistica Agraria M.G.A.)

	Natural prairies	74%
Properties	Forestry	2.6%
1 Ha.	Rest of land	
2½ acres.	cultives	9.8%
	Non productive	4%
<hr/>		
All other	Small farms	
properties	Kitchen-garden	8.6%
1Ha.		
plus urban	Urban places	
places, etc.	roads, rivers, etc.	1.%
<hr/>		
Total non produc-		
tive territory		13.6%
<hr/>		

The land use pattern can be summarized like this:

-A big area to extensive agriculture, primarily beef and sheep raising, with spots of other agricultural

cultives (potatoes in Tacuarembó, rice in Treinta y Tres), covering 4/5 of territory.

-The rest of the area, along the Uruguay River and Plata River with more intense and diversified agricultural use, and the major industrial and urban settlements.

-The relation of Montevideo to the rest of the country will be described later, but it is necessary to stress its importance as an impact in the whole economic and social life of the country (41% of total population, 50% of total number of industries, 78% of total capital investments in industries).

-To this riverside area corresponds higher indexes of subdivision of land, higher concentration of power, transport system and communication networks, including port facilities, and obviously a higher density of population, commerce, institutional facilities and public services.

-A simple comparison of the two major uses: natural prairies with extensive cattle raising and all the rest of land cultives proves this geographic distribution along riverside (map.).

-The intermediate area (Flores, Florida, Lavalleja, Maldonado and Salto), shows a higher-than-average index but relatively close to average.

-Comparing some schematic maps of soils with this map of land use (although the unit of area chosen -department- is too rough an approximation) the correlation between better soils with more intense agricultural use seems to appear. Nevertheless a detailed study of soils and a correlation of different agricultural indexes (on a police-section-basis and not departmental) with soils quality is a first requirement to more definite conclusions and a sound basis to rural zoning.

Resuming, land use patterns vary within the country from extensive agriculture primarily cattle raising, in the north, center and north-east of the country, to minifundic lots on the edges of urban places.

In the north establishments from 250 to 125.000 acres with isolated "estancias" representing the management and many "potreros", some "puesteros" or foremen and their families in small posts, renting in some cases, sharing production in others or just as employee or worker of the core.

From distances around 15-20 Kmt. (8-12 miles), small villages with population varying from 100-500 inhabitants and with shopping services and facilities, schools, some

sports clubs, machinery supply, police sub-station and health center.

At distances varying from 40-50 Kmts.(25-30 miles) small urban centers (500-5.000 pop.) with primary and secondary education, small hospitals, clubs, theaters, probably related to a principal road or railroad, police-station, judiciary post and a higher degree of shopping facilities and supplies. Most of these places are related to fairs or market places for cattle auctions and agricultural transactions.

Few or no industries are located in these small urban centers, but standards of living are relatively good due to cattle economy influence.

At variable distances in the cross-roads, it is easy to find isolate stores (boliches) that sell every thing from home appliances, oils or fuels to foods supplies, serving neighboring "estancias".

Complementing this land use pattern within an average density of 17 inhabit/sq.mile, 200 "rancherios" or rural slums villages are spread in this cattle raising area all over the country.

It is calculated that around 90.000 of persons live in those ranchs in very low sub-standard conditions of health, nutrition, housing, education and employment. The major ocupation is perfomed by women, washing and

serving for nearby villages. Man work temporarily in seasonal crops or sheep hair-cut activities. Matiarcathe is common. Illegitimacy are often base of family constitution. Illeteracy, sexual promiscuity and tuberculosis are some of the results - (schools serve only 50% of those slums areas; only 40% have medical facilities.

The situation of these people that represents around 3% of total population has deserved the attention of all types of social students and legislators. Nevertheless no concrete measurements has been taken to solve this problems that shows all the miseries of under-development and represents a challenge to the welfare policy of government.

As it might be seen in map () physical development is directly related to density of population.

Rural slums areas tend to depopulate and migrate to the edges of urban places where at least a minimum of public services and institutional facilities can be found.

According to this picture it is clear to recognize the disadvantages of this disperse pattern of land use and the need to set a new pattern with a more balanced relationship between costs of performing public facilities and services, such as roads, schools, hospitals

and the like with the revenues -when they exist- derived from those small settlements economies isolated in rural areas.

We can resume the disadvantages of the rural land use pattern in the following points;

From the viewpoint of the population of the area:

- Lack of economic conditions. Very low-income, unemployment and lack of economic opportunity and stability.
- Lack of educational facilities.
- Lack of health, sanitary and food standards.
- Geographic and social immobility, due to lack of communication and transportation system and services.

From the viewpoint of the government:

- Diseconomies of small scale due to low and extensive exploitation of natural resources and production techniques. Lack of modern equipment and facilities.
- Diseconomies in the size of the units of agricultural exploitation.
- Low densities of population within and extense area of the country unable to support or share the costs of public services and facilities with the government.
- A geographical distribution of settlements that helps waste in communications, transport and general services.

Land subdivision and tenure.

-Background.

First subdivision were made with spanish settlement and colonization within its military conquests. Two clear patterns were established: one urban -with the square plan and the 10 varas as a standard measure for subdivision of lots; the other rural, undertermined or only limited by geographical factors, rivers, hills, etc.

Around 1800's the pattern of the country was big - "estancias" with a reduced number of owners, covering the whole territory and few locations of rudimentary meat-processing ("tasajo" and "charque").

Subdivisions, it existed, were marked by small stone-walls. Extensive agriculture of cattle raising and a few small nucleus in the estancias which represented the core of this feudal economy and the social and cultural life (one owner and his family, many "gauchos" or cowboys in the surrounding ranchs and spread in local posts).

Around 1875 land subdivision was encouraged through the Rural Code 40 years prescription's rights to fee of land and the substitution of stone-wall by eith-wires fences required by law. Also heredity of land laws helped subdivision and -in many cases- latifundium and rural slums. The "potrero" substituted the "gaucho" now useless

Rural migrations to the cities began, where industrial development were taking place.

This pattern has prevailed in many rural areas, although improvements have occurred through industrial, agricultural and transportation developments.

Present pattern.

In the following figures we can clearly see that land is more subdivided in the southern part of the country, mainly in properties of less than 10 Hectareas (25 acres). If we compare the figures for each Department, those located near Montevideo area have higher number of properties smaller than 10 Hectareas than the rest of the country. This pattern corresponds to a more intense agricultural use. In some cases-like Canelones for example- excess subdivision of land was one of the main reasons for decreasing productivity indexes in some land cultivés like wheat and corn, also affecting economic conditions of the area.

Subdivision of rural land.

(figures in Has.)

	<u>H e c t a r e a s</u>					<u>T o t a l s</u>	
	<u>0 - 10</u>	<u>10-100</u>	<u>100-500</u>	<u>500-1000</u>	<u>1000 & more</u>	<u>Number of lots</u>	<u>Hectareas (2.47acres)</u>
<u>North & North-East Departments- Totals</u>	<u>9.928</u>	<u>18.572</u>	<u>9.446</u>	<u>2.133</u>	<u>1.630</u>	<u>41.709</u>	<u>8.221.837</u>
Artigas	434	1.062	629	266	309	2.700	1.183.505
Rivera	1.106	2.230	1.330	272	175	5.113	956.946
Cerro Largo	1.682	3.665	1.709	389	244	7.689	1.368.289
Tacuarembó	2.252	2.555	1.407	359	377	6.950	1.583.299
Treinta y Tres	602	2.073	1.167	275	176	4.293	918.206
Rocha	1.938	4.525	1.536	229	148	8.376	1.004.311
Durazno	1.914	2.462	1.668	343	201	6.588	1.207.281
<u>The other Departments excluding Capital City.</u>							
<u>Totales</u>	<u>36.437</u>	<u>41.732</u>	<u>11.829</u>	<u>1.962</u>	<u>1.491</u>	<u>93.451</u>	<u>9.071.596</u>
Canelones	12.399	8.466	584	33	9	21.491	430.629
Colonia	4.211	5.483	1.238	80	37	11.049	597.035
Flores	492	1.026	664	152	98	2.442	505.732
Florida	3.073	4.902	1.673	223	139	10.009	1.028.457
Lavalleja	2.397	5.284	1.914	206	96	9.897	989.173
Maldonado	4.125	4.977	995	67	22	10.186	463.763
Paysandú	1.810	1.680	953	316	310	5.073	1.383.757
Rio Negro	677	936	571	194	211	2.589	949.639
Salto	1.299	1.652	1.063	369	370	4.743	1.346.226
San José	3.791	4.877	807	82	54	9.609	492.343
Soriano	2.163	2.449	1.367	230	153	6.362	884.842
<u>Totals</u>	<u>46.365</u>	<u>60.304</u>	<u>21.275</u>	<u>4.095</u>	<u>3.121</u>	<u>135.160</u>	<u>17.293.433</u>

Source: Oficina Nacional de Catastro. Montevideo 1949.

Land Tenure.

According to M.G.A. Census 1951, there was in Uruguay (properties 1 Ha. within rural areas) the following classification:

Type of tenure	No. of persons	%
Ownership	9.204	54.3
Land-lease	7.197	42.2
Share-farming	409	2.5
Other forms	162	1.0
Totals	16.973	100.%

Distribution of owners is uneven within the territory, having the northern departments higher proportion of owners than of the southern departments.

Map () shows concentration of land indexes. It is clear the contrast between Canelones, with minimum lots and waste-land by over-work, and the northern part of the country, where a vast extensions of land belong to few owners.

Ownership in this case generally means (within the framework of an extensive agricultural production),

- 1) that less people are managing bigger areas.
- 2) Although Uruguay has one of the highest per-capita in-

dexes of modern technical equipment for agriculture, the distribution of these mechanical facilities - shows that higher proportion of equipment are located in the South and West as map () shows. Thus, lower density of population and less mechanical equipment means lower productivity indexes for the same type of operation.

Chapter II

Part 4.-Urbanization and regional approach.

Urbanization patterns in Uruguay.

I-Conditions

- If we compare Uruguay with the rest of South American countries we will find 1) that population is spread all over the territory. 2) The country has the highest density in S. America, although it is not high compared with many other part of the world. (39 pop./sq.mile).

Point of reference.

Geographic conditions.

- No geographic features such as mountains, extensive woods or forests, or swampy areas impede the circulation of goods and people. Topography is favorable to accessibility. Under these conditions we can set several observations:

Population concentration in urban areas.

a) The great majority of urban centers are located in the south and east of the country on the coast of the main rivers or near important streams (see map).

Condition of Montevideo

b) The capital city: Montevideo, has 41% of the total population. The two next cities in rank are times smaller (Salto and Paysandú).

c) The population living in urban places of 20.000 or more represents 53% of total population.

d) The rest of urban population (except Montevideo) has 24% of total population.

Rural dispersion.

e) The rural population, which has been decreasing with the years, represents 35% of total inhabitants, but with the peculiarity that half of this population (18% of total) lives in properties less than 1 Ha. (2.47 acres) in the surroundings of major urban centers.






Migration to cities.

Rural blight.

f) We can estimate that 20% of population living in properties 1 Ha., in substandard conditions, representing about 3.5% of total population, are located in rural slums.

This last conclusion is derived from the following table:

Population concentration in the southern areas.

See map next page:	sq. m. area	% total area	Populat. 1.000 pop.	Pop. Densi- ty pop./sq. mile.	% of total population
 Montevideo alone.	256	0.4	1.450	4.540	41
 Montevideo and Canelones.	2.090	2.9	1.355	650	48
 The last two San José and Colonia	7.000	10.4	1.586	230	57
 The last 4 plus Rio Negro, Soriano, Salto & Paysandú.	23.500	33.	1.968	83	70
 The rest of the country.	48.700	67.	832	17	30
All the country.	72.200	100.	2.800	39	100

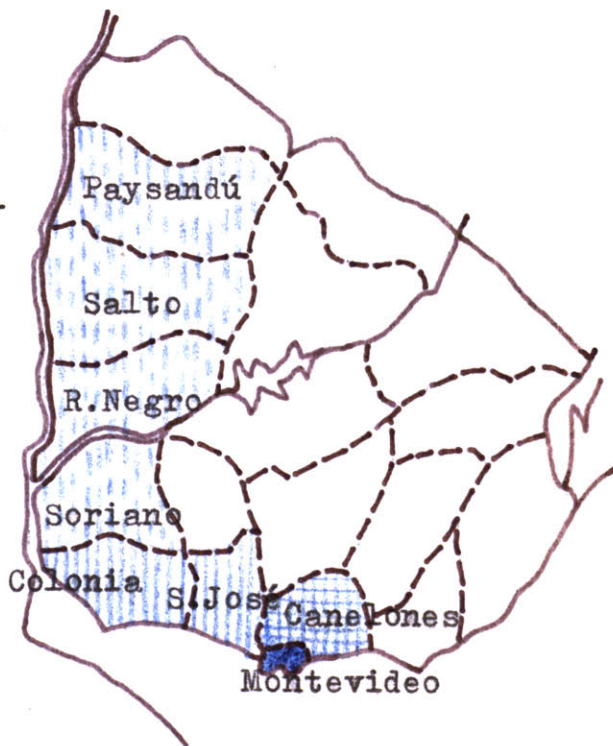
g) That, although it is difficult to estimate correctly, population in substandard housing in urban areas can be calculated in the neighborhood of 12% of total population. That gives us a percentage of around 16% of total population in substandard conditions in rural and urban areas.

-Also it is possible to deduce some conclusions:

-Rural conditions (health, food education, assistance, etc.) are graver but more limited in number: 3.5% of total.

-Urban conditions are comparatively better; school, health, and food assistance available housing and income substandard, but affecting much more number of people.

These figures, although containing some percentage of error in their estimations, will be taken into consideration for evaluation of policies on land use planning and housing.



Some other factors can be determined from the first conclusions, creating a whole range of problems affecting economic and social conditions of the country.

-People leave rural areas because there is no chance under the present conditions, for better economic opportunities, better standards of living, better health and educational services and recreation attractions in rural areas.

-The present land-tenure system, with high percentage of land renters (42.2% of total properties bigger than 2.5 acres) contributes to create instability and uncertainty about the future.

-The seasonality of employment pattern in agriculture, specially in livestock and sheep raising.

-The paralysing effect of bigger city on the economic development of the whole country, detracting growth potential of other cities, contributing to extend the pattern of agglomeration of goods and services, pulling up rent values on land and favoring inflation in housing conditions.

-The potential -or present- exhaustion of natural resources, misuse of cultivable land, by inadequate techniques of exploitation (in corn Canelones, cattle raising in other areas) or conservation (Rocha, Treinta y Tres, etc.)

-Summaryzing, it is not possible to justify present pattern of urbanization by present levels of agricultural and non-agricultural productivity (manufacturing and services).

B) Problems.

Let me summarize what I consider are some of the major problems affecting rural and urban areas.

The differentiation in rural and urban problems is not done in the belief that urban and rural problems are essentially different, but rather that - their solutions may require different treatments and perhaps different agencies, controls and standards.

Urban Problems.

- | | |
|-----------------------|--|
| Income | 1) Inequalities of incomes and wealth. |
| Employment conditions | 2) Unemployment and underemployment bringing economic instability and social insecurity. |
| Housing | 3) Substandard conditions of housing. Blight, obsolescence, age of building and overcrowding aggravate living conditions, affecting a whole range of social and economic consequences. |
| Subdivision | 4) Rapid city growth with consequent higher concentration and density of population, has been accompanied by uncontrolled subdivision and speculation of land. |
| Health | 5) Public Health conditions are getting worse, particularly in blighted areas and among low income groups. Dirt, smoke, waste are still some of the enemies of city life. |

Education

6) Education facilities are unable to keep demand under population pressures, while primary and secondary education are spread all over city areas, there is undoubtedly a shortage of buildings, equipment and open spaces for playgrounds and sport fields. Although all education is free, higher education opportunities are closed to low income groups because young people must supplement family income by going to work.

Land uses

7) Mixed land uses, as a consequence of unplanned and rapid city growth as well as speculation on land and buildings and particular interests in housing enterprises, have contributed to aggravate the pattern of congestion, overcrowding, and general social and economic conditions.

Circulation

8) Circulation pattern has become unable to channelize increasing quantity and type of traffic, both goods and people, with consequences in delays, - blockings, accidents and fatalities. Lack of coordination between different type of carriers helps waste and duplicating services, thus aggravating congestion.

Finance

9) Unplanned city public improvements complicates also public finance, aggravated by the fact that city taxation powers are limited.

Rural Problems.

- Income 1) Inequalities of income and wealth, aggravated by lack of facilities and services that city may offer.
- Employment conditions 2) Unemployment and underemployment.
- Housing 3) Housing conditions are lower than urban; while cities have slums, in rural communities there are wide range of shelters far below any reasonable standard of human living.
- Subdivision of land 4) Rural areas remain without sudden changes in exploitation of land. Land needs development and use in many extensive areas, with consequent subdivision of large extensions of territory.
- Health 5) Although types of sicknesses are different, health conditions and daily food diets are very low in many rural areas.
- Education 6) Education opportunities are lower. Lack of facilities, buildings, equipment and in many cases also lack of teachers, who prefer better payment and opportunities of the city.
- Land uses 7) Use, mis-use and abuse of land helps erosion, and consequently low-productivity, with consequences on income and general living conditions.
- Circulation 8) Circulation problems are even graver than those of urban areas, although opposite in character.

Congestion is substituted for lack of geographic and horizontal mobility with consequences on lack of economic and social opportunities.

Government
and finance

- 9) The fact that capital city government (Departmental government) controls rural areas is a handicap to rural development, because priorities in public expenditures tend to be located within urban areas to detriment of rural facilities and services. The low density of rural population aggravates this circumstance.

Nevertheless, from the regional planning viewpoint, it might be an advantage that city powers can be extended to surrounding region. The case of the city of Montevideo, where planning board exists, proves this statement.

C) Conclusions.

Positive and negative factors affecting urbanization.

The growth of urbanization pattern has not only occurred as a consequence of positive factors such as economic need for large urban population concentrations (economic opportunities), but also from negative factors due to low levels of rural living, insecurity or/and uncertainty about present and future conditions.

Disparities between urbanization and industrialization processes.

Thus increase in urbanization pattern does not represent always and only a paralell increase in productivity, standards of living or social and educational conditions, although it is possible to agree that urbanization generally brings greater opportunity of occupational and social mobility, adaptability to new situations for technical progress.

Urbanization and non-basic activities and services.

Urbanization requires a high-capital-outlay for public services and housing, partly due to the higher relation of tertiary employment to total employment and higher consumption indexes, aggravated by the fact that much of tertiary employment is of a marginal kind, including low-productive activities and small-scale services and operations. (small shops and stores with less than five employees).

Shortage of capitals.

In the short run, this need for high capital formation, along with an increasing need for educational,

health and other social basic overheads is one of the major problems which urbanization brings.

Main actions
by government-
tal agencies.

The need to decelerate the growth of these negative aspects in the process of urbanization are reflected in the large number of measures and actions taken by government agencies encouraging population to staying or return to rural areas:

- a)-Action to increase agricultural productivity and incomes.
- b)-Credit facilities for agriculture.
- c)-Cooperative methods (mainly in the western areas).
- d)-Spread new technical facilities and utilities, as well as recreational and educational services.
- e)-Decentralization of new industrial development; creation of local small-operated industries (Juan Lacaze; village and cottage industries -Maldonado and Minas).
- f)-Land tenure reform (I.de C.) .
- g)-Improvements in communications and transportation.
- h)-Control on the use of land (urban and rural in Montevideo, urban only in some others).
- i)-Resettlement programs including new agricultural methods and techniques.

Lack of coordination of government action.

But these measures are generally taken-if they are taken-through compartmental Government action, without a proper correlation of different policies and plans.

Thus, national and regional physical planning acquires a whole significance in performing this task of coordination of the different measures and actions above stated, because planning the control of urbanization processes means in this case planning for the whole economic and social conditions of the country.

Regional approach to urban and rural problems.

This implies a last observation. Urban centers (and consequently urbanization) must be viewed as tightly related with surrounding rural areas in a single interdependent whole. Control in one means control in the other. Effects and requirements are mutually interdependent. Consequently, economic progress achieved through industrialization and though urbanization not only depends on man-power, food and other resources obtained from rural areas, but also through the spread of economic development, higher productivity and specialization to the surrounding areas of the cities.

Economic development thus acquires a regional significance.

Urban misery and rural poverty are two different effect from a same cause.

Economic development through planning must consider them simultaneously with enviromental improvements, such as housing and the rest of community facilities and services.

Chapter III

Part 1.-Planning policies.

1-Economic and physical planning.-Introduction.

2-Physical planning as a government function.

Broad objectives.

3-Government policies on land use and land resources.

4-Summary.

1- Economic and Physical Planning.

Introduction - Points of reference.

As a member of a free society of the world we believe in economic life encouraged by private enterprise system, but with the state playing nonetheless a large and increasing role. Democratic government thus means for us not only control and regulations, but direct intervention in the entrepreneurial system.

We have been made aware of dangers of monopolistic trends and our legislation proves it.

But this is not enough. Democratic government must effectuate its direct interventions, and exercise its controls and regulations through mechanisms considering the maximum possible of factors affecting those controls and regulations, in measuring the consequences of those actions in the attainment of policy.

That means planning. A democratic philosophy pursued by social welfare policy must be complemented by economic and physical planning if it does not want to be utopian thinking.

Planning Resources development thus implies,
1st.) Democratic planning based on a philosophy of democratic government.

2nd.) A social welfare policy pursued through:

3rd.) Economic planning.

4th.) Physical planning.

This rank of importance, or hierarchy, gives us the order by which we can state the problems and give suggestions in the search of solutions.

We must have clear in mind the more general levels that directs and limits the orientation desirability, feasibility and possibility of physical planning. In a national level a democratic (philosophy) orientation, that emphasizes citizen participation and education in the planning process ; social welfare policy that give us the broad objectives to pursue; economic planning that implies the determination and establishment of measurements within which programs for resources development can be not only desirable and possible but feasible. Then, physical planning -in a regional scale and local scale- within those economic limitations, according to those social objectives and through a democratic action, establish priorities of plans and programs, set the organization for control and regulation of the use and development of land, transportation, the provision of public services and facilities, the settlement character and density of population, location of industries, and physical improvements of health, educational and recreational facilities.

2- Physical planning as a government function.

General objectives.

More developed countries have economic and physical planning within government activities and framework. Uruguay has developed a social welfare policy with a corresponding economic and physical planning measures.

Thus, the stabilization of the Uruguayan economy requires measures that cannot only be developed through mechanisms of price controls and taxation -although complementary measures in each case are required. It involves a national plan for natural resources development in all the country; land and water resources that need reclamation, development and conservation system, roadways and railways, waterways and airways and consequently, the facilities and equipments for those transports.

It means city and regional planning and urban redevelopment programs throughout the country. It also means an expanded and comprehensive housing programs, with fixed targets substituting the present apathy and indetermination.

When we look at the deplorable conditions of slum areas, both rural and urban, the congested transportation.

system within the city or inadequacies or lack of transportation facilities in rural areas, when we consider general levels of education and standards of living and nutrition in many parts of the country, it becomes clearly evident that our greatest deficiencies are precisely in those areas that require large public investment outlays. We need to undertake a comprehensive national program of development and therefore this national program will create, as in 1912, new rich fields for private investments, industrial expansion and innovations.

Thus, it is clear that a comprehensive system of social security and social welfare must be related to a program of economic stability and expansion through planning resources development. Health, education and nutrition, recreational facilities and community cultural activities are essential parts of a broad program of national development.

In the pursuit of these objectives, we should train the planners and administrators to perform and execute specific tasks and duties. This means education through planning and innovation through research and experimentation.

In the last decades Uruguay has been channelizing through government action almost all the measures for economic and social development. The dangerous effect of an exaggerated state intervention could be reflected in apa-

thy and lack of initiative from private groups and citizens. Consequently education -in and- through planning should take these facts into account and consider both the encouragement of private initiative and social responsibility as well.

3- Government policies on land resources.

In planning the use and development of use of land and land resources, two major type of actions should require government intervention.

- 1) One are positive actions, such as encouragement of economic and physical development or the government itself develop economic enterprises.
- 2) The second are constituted by negative actions regulating, controlling uses or development of uses of resources.

In the first category we have distiguished two directions a) positive encouragement, which can be developed through loans, discounts on land operation, technical assistance, tax exemption subsidies, and many other fiscal and economic measures.

b) On the other hand, government may act as entrepreneur planning, projecting, financing, constructing and operating some enterprise generally a public corporations - UTE (power), AMDET (transport), both state and municipal agencies.

The second category embraces what are called planning powers, which are constituted by a) police powers such as zoning and subdivision controls, housing, building, health, and sanitaty codes and similar regulations, performing standards toward the attainment of s cial welfare

objectives.

Those police powers regulate and control without compensation to individuals or institutions.

b) Eminent domain powers, for expropriation or condemnation of land for public purpose and

c) The power of taxation, which regulates revenues from land and services and also may prevent or encourage developments through the mechanism of general price level.

These two last planning powers require compensation in b) favoring individuals and institutions, in c) favoring only government at its different levels.

In the orientation toward solutions for Uruguayan problems both local and regional levels will be considered.

The term regional is used here either for State or Departmental areas. It merely means that both urban and rural problems should be integrated and jointly considered in a bigger unity of operation.

While regional problems need solutions encouraging more development of natural and human resources rather than negative measures, urban problems require more attention in controls on development and use of land, em-

phazising negative actions such as zoning and subdivision regulations, housing, health and sanitary codes pollution controls, and the like.

The next pages will be devoted to orientations on policies which may help development of Uruguayan natural resources, as well as planning controls in the use and development of land, settlements of population, industrial location and transportation patterns, their interrelationship with economic and social resources and the institutional base of the country.

4- Government policies on land resources. - Summary.

A) Laissez faire. -Allowing a "natural" growth without aid or interference.

B) Intervention and/or Planning.

1) Positive actions:

- | | | | |
|-------------|----------------------------|---|--|
| | Loans | to entrepreneurship | Public institutions
Individual firms. |
| a) encour- | Discounts | on land operations
sale and resale or equipment for indus- | trial development. Seeds, etc. |
| agement | Mortgage | | |
| and aids | Insurance | | |
| | Tax exemption | | |
| | Subsidies | | |
| | Special laws | for settlements. | |
| b) direct | Government as entrepreneur | planning, projecting, finan- | |
| opera- | | cing, constructing, operating, | |
| tion | | and administering the enterprise | |
| | | or land. | |
| c) training | Technical assistance. | | |

2) Negative actions. -Regulation and controls:

- | | | |
|------------------------------------|----------------|---|
| a) Regulation without compensation | | Police powers
Zoning laws
Subdivision regulations
Building regularions &
codes
Health & safety codes |
| | | Confiscation |
| | | Buy land (reserved)
expropriation (eminent
or condemn (domain
ation (powers) |
| b) Regulation with
compensation | To individuals | excess condemnation
control of develop-
ment rights |
| | To state | Taxation
Sale of land (fiscal). |

Chapter III

Part 2- Land use planning policies.

Chapter III

Part 2.-

1-Settlements and population policies.

- 1 -Problems: Rural dispersion and urban centralization.
- 2 -Orientations: Rural concentration and urban decentralization.

3 -Population distribution and resettlements.

A-Internal movements of population and settlements.

- a-Population shifts.
- b-Concentration of small villages into bigger communities.
- c-Possibilities of new towns.
- d-Extension of existing small towns.

B-External movements of population. Migration.

C-Orientations.

- a-Organization of significant knowledge.
- b-Levels of coordination.
- c-Establishment of planning powers.

4 -Planning powers and population policies.

A-Zoning.

B-Subdivision of land.

C-Utilization of fiscal lands.

D-Acquisition of land.

E-Eminent domain power.

F-Taxation.

Introduction-1) Problems of rural dispersion and urban centralization.Rural
dispersion.

We said that rural population densities are extremely low. Under such low population densities land resources are generally unexploited or exploited under low productivity indices. Concomitantly, the small size of rural communities impedes local governments in financing the establishment of necessary public services and facilities. The extension of those physical improvements represents a heavy burden to the economies of central government. Consequently, disperse rural communities patterns both affects extension and financial performance of public services and facilities.

Urban
concentration

On the contrary, urban concentration^{1/} in Montevideo aggravates population pressures, unemployment, space problems, land speculation, over-use of land and traffic congestion. As a result, there are inadequate standards in terms of housing, space, light and air, and increasing living costs.

Mixed land uses aggravate the general pattern. Extensive daily travel from residential to working areas consumes not only time but energy and money in transportation.

2) Orientations.Rural concentration and urban decentralization.

These opposite population patterns that we have described may also require opposite solutions. Rural patterns should require policies

^{1/} A remark should be made: When we say urban concentration, we consider mainly Montevideo problems. The next cities in rank-size are too small and they do not yet reach the scale of what might be called "urban congestion". However, orientations toward solutions in Montevideo may also help to prevent future conditions in these growing urban places.

tending to concentrate population in settlements of a certain economic size, thus enabling them to finance necessary community facilities and services (schools, health centers, shopping facilities, etc.).

Urban decentralization.

Contrarily, urban decentralization policies will help to solve urbanization problems. Parallel, coordinated and comprehensive policies on industrial decentralization will support population movements. Transportation policies should be consistent with the rest of policies on land use. The degree to which geographic mobility can help in urban decentralization processes may vary according to the extension, type and performance of the circulation patterns.

Main cities and surrounding areas should be integrated into a single interdependent region.

3) Population distribution and redistribution.

A) Internal movement of population and settlements.

Uruguay is an agricultural country which has not been affected by over-population problems, like China, India or Puerto Rico, where population pressures on natural resources often lead to the exhaustion of these resources through bad management or excessive use. Nevertheless, some areas in Uruguay are seriously affected by overuse and climatic factors. Productivity and living conditions become very low in those sub-marginal settlements.

a) Population shifts.

If after estimation of costs and benefits, eradication seems to be economically sound, then movement of workers from areas of limited economic opportunity should be encouraged by government agencies (I. de C., M.G.A.) in their public policies. Complementary measures contemplating possibilities of relocation and re-arrangement of small villages, slums and sub-marginal settlements into clean and healthy communities of bigger size, with enough population to support economically community facilities (health, education, power sewerage, etc.) able to have a range of different economic opportunities and to create conditions of market toward future demand possibilities.

b) Concentration of small and sub-marginal villages into bigger communities.

In this sense, the possibilities of creating small industries derived from natural resources should be taken into account. Ceramics, handicrafts, leather and wool industry, intense land cultivates, mechanization, cooperatives for farm and dairy industry should give a good economic base to these communities in the future.

These communities should be surrounded by agricultural lands. Good transportation facilities should provide the necessary link with higher production centers.

I do not think that a limited size or an arbitrary number may help to establish a rigid reference point in future policies of population. Such estimates should be made after studies of local and regional conditions in each particular case.

However, a rough approximation can be determined:

Assuming that Uruguayan population will be approximately 3.5 million in fifteen years (if rate of growth remains approximately the same and migration indices remain unchanged).

Also assuming that 40% of that population (although this is a large proportion) will be located in rural areas, it will give a density of rural population of 17 pop./sq. mile. Under very highly optimistic estimates we can assume 25 persons/sq. mile living in rural areas. Within an ideal pattern, it would be towns of 10,000 pop., separated by distances of 20 miles from each other. As we can see, it still is a very low number. In the best of cases it will double present densities of rural population. That should make it necessary to estimate very carefully future policies on concentrations of population and locations of industrial development. Boomtowns and sudden developments are not likely to occur in a country with so low density and small size of population as Uruguay.

Again some major questions may play an important role in the future. If the country wants to develop a policy of high industrialization and economic development - if it is likely to be possible - then probably it will be necessary large movements of population coming into the country, in order to create conditions for fulfillment of employment and market demands as well as economic base of communities. The degree in which this process may take place is beyond the scope of this thesis. We only point out the orientation of policies and interrelation of different factors.

Possibilities for creating new towns should be considered, especially related to policies of industrial and population decentralization from metropolitan areas.

)Possibilities
for creating
new towns

Relationship and degree of autonomy and self-sufficiency of new settlements are difficult to determine. An industrial location settled in Juan Lacaze (textile industry) has brought as a result a community with a wide variety and range of employment and living conditions.

However, pressures, size and densities of population are not equally distributed - or are not always big enough - to create adequate conditions for rapid decentralization and concentration of industry and population.

At the same time, industries should be closely related to natural and local resources if they are likely to endure and give economic base to communities. Competition and saturation of markets sometimes makes it uneconomical to create new industrial locations with consequent new investments. Again implications with wider areas and international trade are important and may help to solve some of these problems. Also evaluation of long-range economies may bring different results from a short-run viewpoint. Probably new investments required for these new settlements will need a high proportion of government aid in capital, which is not always available.

The extension of existing small towns - where economic and social conditions are more adequate than in the rest of rural areas - will require the same type of encouragement and aid that has been described in other last cases.

d) Extension of existing small towns.

The increase of agricultural and industrial productivity, via local and natural resources development; better economic opportunity and stability, raising of living conditions and environmental

improvements, will probably be more important to perform first in these communities rather than in those areas where conditions are so low that they cannot be repaired, unless by relocation. These small communities so common and easy to find in rural areas of Uruguay, where we can find poverty but not misery, where family organization, civic morale and working habits have prevailed over negative factors may constitute the starting point to planning aims and objectives.

2. B) Immigration or external movements of population.

It is highly desirable that immigration policies should be established in accordance with needs and resources of the country. In this regard, a sound program of national resources development should take into account the present and future estimates of employment conditions and trends. So long as there is a large surplus population in some rural areas of the country, it seems unnecessary and inadvisable to encourage immigration of unskilled rural workers to aggravate unemployment or underemployment. Whether a definite shortage of rural working population does or does not exist, the following orientations may help to evaluate migration policies:

- 1) Legislation on migration should be reviewed and improved in the light of new emerging trends and needs on population, employment and general living conditions.
- 2) It should be coordinated with all other public plans and policies related to economic and physical planning with special reference to economic, agricultural and industrial development.

- 3) Direct actions (loans, grants and credits, technical assistance) should complement economic and physical planning.
- 4) These types of measures can be performed through State and local, official and private efforts, although the determination of quality and quantity of migration - if needed - is only a matter of State policy and it can be achieved through coordination of the different agencies of government.

If immigration seems to be economically necessary and socially desirable, some complementary measures can strengthen this policy, such as:

- a) Conclusion of treaties with selected countries about migratory movements.
- b) Establishment of composite commissions (with technical representatives of both countries) with the task of selecting and directing the movement and location of those groups.
- c) The establishment of missions with the task to represent and promote the government migratory policy in those selected countries as a prior step to points a) and b).

Conclusions.

1) Organization of significant knowledge.

Any migration or resettlement policy should be preceded by studies such as:

- An exact knowledge of population trends (age groups, sex, net increase of births, population movements).
- An exact knowledge of employment conditions.
- Evaluation of production indices in the basic industries and agricultural products, and expectations.

- Evaluation of food and energy supply compared with food standards and potential requirements of energy.
- The potential productivity and expansion of agriculture and industry.
- Consequently, the Oficina Nacional de Estadística (Census Bureau) should give special consideration to inadequacies of existing National departmental and urban data, especially related to localization of population, employment conditions and production activities.
- The coordination of census and surveys performed by different agencies is absolutely necessary in order to avoid waste and duplication of efforts. National decennial census of population, housing and employment conditions should be immediately undertaken.
- Complementary census, on quinquennial basis, may be established at lower levels - city or departmental.
- These basic considerations imply some consequences in further studies for the evaluation of future location, size and character of industries and agricultural development, and consequently an evaluation of the future land use and transportation pattern as a whole.

b) Levels of coordination.

It also seems that the determination of such policy implies an interrelation of such different numbers of factors (population and employment pattern energy output, personnel for training, capitals, tools, etc.) that only through coordination of different institution and government agencies can this policy be determined with relative accuracy. This coordination should be performed by national, regional and local planning agencies.

c) Establishment of planning powers.

Consequently, it should be established and coordinated all planning powers - zoning and subdivision controls - eminent domain for land acquisition and taxation power for financial ability at State, Departmental and local levels.

It will undoubtedly help the attainment of a more comprehensive policy on population and settlements, relating more closely the development of natural resources to economic bases, bringing more adequate use of land of existing or renewed communities.

d) Planning powers and population policies.

Settlement and population policies should require parallel measures of land use controls^{1/}. Rural zoning is only applied in the Department of Montevideo where planning powers cover both rural and urban areas. There are no urban renewal legislations in the country.

Present legislation (Ley de Centros Poblados - Urban Centers Law) provides powers to departmental bodies to prevent new sub-standard developments, but there is no specific law attempting to solve and attack present obsolescence and blight.

Consequently, if abolition of sub-standard rural and urban settlements or partly blighted areas is so imperious to undertake, planning controls should be related to development and redevelopment programs. Urban renewal powers should be extended both to urban and rural areas, integrating Departmental planning powers.

1/One observation: Presently in Uruguay the Departmental police powers are mainly related to the capital city of the Department, but in Montevideo are extended both to urban and rural areas. It means that there is no legal restrictions related to the area of jurisdiction for zoning and subdivision controls, although it is a matter of opinion the degree to which those powers are applied. Eminent domain power and taxation powers are limited by law in both levels: State and Departmental.

A) Zoning.

All the orientations that we have described in this section, such as:

- Policies of concentration of small marginal settlements into bigger communities,
- new towns,
- renewed town and - in general -
- population shifts and resettlements can be guided through controls in location, use and development of land as well as parallel measures of governmental and private action.

Some implications can be described:

Zoning and land classification

-Zoning land uses according with land classification studies will help to establish more adequate levels of productivity of agricultural land, affecting consequently location of settlements.

Zoning and agricultural supply to communities

-Zoning for intense agricultural land use (kitchen-garden cultivates, small farms, etc.) in the surroundings of existing and proposed settlements, may contribute to establish a sound pattern of development toward basic economic conditions.

Zoning and subdivision of land

-Special importance should be given to the relation of zoning with size, and shape of land subdivision, because many agricultural uses require a certain size to operate under economic conditions (example: wheat in Canclones).

Zoning and conservation or recreational uses

-Zoning sub-marginal land against improper use should be incorporated in future legislations, complementing necessary government action on land acquisition and reservation of land for conservation, forestation or recreational uses.

Zoning and
taxation

-Zoning should be integrated with taxation policies on land, coordinating land values and revenues to economic possibilities of development and use of land in existing and proposed settlements.

In this regard, zoning can encourage or discourage developments, preventing or smothering effects on land speculation by tax delinquency and foreclosure.

Zoning and
mixed uses
of land

-Properly restricted zoning and mutually-exclusive zoning may help in the operational aspects of resettlements, preventing further degradation specially related to:

Zoning
preventing
developments

-Areas of low productivity.

-Areas where government cannot promptly act for restoration or other measures.

Zoning as a
renewal power.

-Blighted and obsolescent areas (both urban and rural).

B) Subdivision of land.

Orientation toward resettlement policies should consider the great importance of land subdivision.

At local scale, subdivision of land before development is one of the most important factors influencing suburban neighborhood patterns.

Land subdivi-
sion and
land uses

Shape and size of lots will affect the future uses of land, size and quality of houses, as well as population density. In Montevideo, subdivision controls have proved to be a useful tool in gradual decentralization of population.

Subdivision
of land and
productivity

At regional scale subdivision of land also affects the pattern of development, type of agricultural exploitation and may either help or discourage type, quality and quantity of production, as well as productivity indices.

Subdivision of
rural land and
mechanization

We have described before maladjustments in agricultural production due mainly to small size of properties (Canelones and Montevideo). Small size of holdings also discourages intense use of mechanical equipment, because maintenance costs of machinery are not compensated by small output of crops.

Premature subdivision of land, as well as excess subdivision of unexploited extensive areas, represent an important problem to consider in setting settlement policies.

It affects rural and urban areas alike.

This problem is particularly clear in urban surroundings and along eastern recreational coastlands, where premature subdivision of land brought petty residential developments without adequate, local community facilities and economic and consequent increase in land speculation, tax delinquency and foreclosure.

Orientations.

These problems makes necessary some general orientation toward solutions:

- 1) Although subdivision powers are exercised by some local and departmental agencies, it is imperative the extension of subdivision controls to all Departments, capital cities and main towns of the country.
- 2) Reclamation of land in those existing sub-standard subdivisions of land, either by replotting or by restoration to rural uses where it seems desirable or necessary.
- 3) Requirements for permanent public ownership on land suitable for parks, playgrounds, schools, street extension and widenings, municipal or State housing development or redevelopments, or any other public purpose.

Related to the development and conservation of agricultural land, it should be taken into consideration the following possibilities:

- 4) Readjustment of the size of the unit of land ownership and management, for better exploitation.
- 5) Readjustment of the shape of farms, for better use.
- 6) Readjustment in the size of farms (especially related to share-systems and holdings) by redistribution of fields to rectify faults in the lay-out of boundaries.
- 7) Rearrangement and replotting of farmhouses and other buildings, toward improvements or convenience:
 - a) of individual farms,
 - b) for the formation of economic grouping of farm villages.

These measures should integrate the powers of redevelopment and renewal both to urban and rural areas.

C) Utilization of fiscal land.

In agricultural development, conservational programs, forestation or recreational uses, fiscal lands may represent an inexpensive way to solve problems related to development of land and settlements.

For many municipalities, the circumstance of being owners of land in the surroundings of the cities made it easier to control developments of city growth.

In Uruguay the I. de C. owns extensive areas in different parts of the country. Possibilities to utilize these lands to future development both in agricultural programs and population resettlement should be contemplated as a possible inexpensive way to solve sub-standard conditions of rural settlements.

D) Acquisition of land for reservations or other uses.

Related to future development of settlements, this type of policy has been successfully applied in many countries^{1/} and is especially important where the price of land is still low and high government investments are not required.

Acquisition of land for reservation to further sale, or to public uses such as parks, recreational areas or public projects - although desirable - is not always totally possible.

Some major factors impede this:

- a) High cost of acquisition.
- b) Owners not always are willing to sell.
- c) Development may have already taken place in the area, and fragmentation of holdings may be difficult the assemblage.
- d) Deeds and titles aggravate delay and red-tape.

These factors may retard development of new sites, or may change rational courses (mixing uses, non-conforming uses).

In early stages of development, specially related to marginal rural land, acquisition for reserve may present a long-range inversion, helping future developments - either industry, agriculture or tourism.

Related to industrial development, acquisition of land for industrial location has been successfully applied in Puerto Rico, as a way to encourage the economy of the country. These possibilities should be taken into account for Uruguay.

^{1/} In Stockholm, practically all surrounding land belongs to the municipality.

E) Eminent domain.

Eminent domain may be the only device which can bring land into its best use. Some advantages can be summarized in this regard:

- It facilitates by a whole purchase of land the unification of many smaller holdings.
- It helps in clearing titles.
- It allows continuity and large-scale developments.
- It allows in case of high priced demand by land-owners to establish "a reasonable price" in accordance with both parties.

Related to decentralization policies eminent domain powers may prevent a city to sprawl by devoting land to agriculture, parks and recreational uses ("green belt" developments). It facilitates public housing program operations.

It may contribute to a balanced development - in accordance with zoning and subdivision controls - in establishing adequate population densities.

It may help to smoothen differences in land values from booms in some areas of the city.

These are some examples of the advantages of condemnation of land for public purpose.

In Uruguay both condemnation and "excess condemnation" are powers granted by constitution to central and Departmental government.

The power of eminent domain for condemnation mediating reasons of "public needs" has been established since 1912, with increasing extension of powers since then.

As a desirable final recommendation, we should emphasize the importance of extending eminent domain powers to prevent blight and obsolescence in residential, commercial and industrial areas.

This - I think - would be a real improvement in the operational aspects of condemnation procedures, thus establishing a sound base to relate all police powers in a single comprehensive operation with the consequent time savings and effectivity increase.

F) Taxation powers.

Taxation helping or discouraging developments

Taxation powers help developments of population either encouraging desirable land uses by increasing revenues from land, or discouraging settlements by high rates of contributions - to development costs.

Preventing speculation on land

Taxation should be closely related to land use and land rents, as a way to prevent land speculation with consequences in tax delinquency.

Absenteeism of land, under-use, low productivity may be discouraged by tax measures.

Tax exemption

Tax exemption - as a subsidy - may help housing development and resettlement as a complementary measure to loans, grants or special credits, or direct operations via public housing or urban renewal projects.

In Uruguay different rates of property taxes have contributed to urban expansion and low-cost housing.

Special assessments

Tax system has been modified, adding special assessment values to certain areas for improvements of public interest (such as roads, highways, airports, etc.).

Ad valorem tax on vacant sites to force development and limit speculation is authorized in urban areas. It has proved to be effective. In rural areas a similar tax exists, although the rate of encumbrance is very low and it cannot properly say to encourage agricultural development. Increment tax on land value or tax on fee or rural land burdening properties when changing ownership, has been established by I. de C. and it represents a good measure against land speculation, favoring localization and stabilization of economic activities.

Helping
localization
and
stabilization
of land

Chapter III

Part 2.-

2-Natural resources development.

I-Orientations.

II-Industrial development.

III-Agricultural development.

I National Resources Development and economic development.

a) Objectives and general orientations:

In our evaluation of Uruguayan problems and needs we stated that rural and urban differences, low productivity and inadequate living standards were two of the major problems of the country.

We also have established a point of reference to these problems comparing them with neighboring countries and more developed economies, for a closer insight in social and economic conditions.

Consequently with those problems, objectives for economic progress should be reached by:

1) Equalization of economic opportunities,

at national level: equalization of opportunities between rural and urban raising incomes areas;

at international level: equalization of opportunities between Uruguay and more developed economies through international trade.

2) Increase productivity.

3) Increase living standards.

Economic progress objectives can be achieved through the following factors of production:

a) Quantitative factors: Labor - Capital - Natural Resources.

b) Qualitative factor: Technological progress -or
increase in effectiveness.

4) At the same time, economic stability will be desirable in order to improve economic conditions without sudden changes and variations in the price level.

All these factors we will be especially concerned with natural resources development, although inter-relations and implications between all factors will be taken into consideration.

Orientations toward policies.

In order to achieve higher productivity and higher per-capita income some goals can be summarized, with reference to Uruguayan needs and resources:

- Mechanization and diversification of agriculture.
- Increase manufacturing activity, derived from basic resources.
- Increase productivity in all sectors of the economy.
- Reduction of unemployment and underemployment.
- Increase wages to living costs or decrease living cost related to wages.

Some of these necessary measures are more related to fiscal and economic policies.

However, in relation to natural resources development and specifically related to land use planning, two major aspects can be separated:

I- Industrial development.

II- Agricultural development.

These two sections will be described in the following pages.

II - Industrial development.

A) Conditions and problems.

Now it will be described what we think are some of the major problems affecting industrial development in Uruguay:

- a) Inadequacies of natural and economic resources.
- b) Shortage of capitals.
- c) Public Administration handicaps.
- d) International and interregional markets.

a) Inadequacies of natural and economic resources.

- 1) Lack of raw materials for heavy industry. Lack of minerals, oils and fuels.

We have said that Uruguay is a country singularly devoid of mineral deposits of any importance.

As a result Uruguay lack of heavy industry, specially related to iron and steel industry.

The circumstance of being a country foreign trade oriented for raw materials explains the location of industries near Montevideo, practically the only port.

- 2) Lack of an adequate transportation system.

Secondary industry is particularly vulnerable to

transportation difficulties. Manufacturing is often no more than a simple act of separation, synthesis or transformation preceded by the lengthy operation of assembling raw materials and fuels and followed by process of distributing the product to its multiple consumers. Thus, lack of a good transportation system affects decisively possibilities of better locations, increasing total production costs with effects and consequences in the general price level.

We have pointed out that the present transportation system of the country is based on Montevideo economy, (all lines converging toward the capital in a fan-shape). So the first basic task, if we want to encourage industrial development, is the creation of an efficient, flexible and interrelated circulation system upon which different types of carriers can make easily accessible all regions and areas of the country.

3) Power.

Another vital element to industrial development are power facilities. With increasing mechanization, manufacturing industry depends more and more upon local or regional power facilities.

We have pointed out that Uruguay has a 10 years program for electric development, assuming an increase in consumption from 632 mll.Kw/h. in 1954 to 1200 mll.Kw/h. in 1959, and 1800 mll.Kw/h. in 1965. The Baigorria plan

alone will be able to produce 400 millions Kwatt/year. Nevertheless, to the best of my knowledge is no comprehensive plan relating this future power output with the parallel potential increase in working population and industrial development. Definite power shortage exists.

4) Inadequacy of commercial sector.

Development of industry depends largely on the size and purchasing power of the market measured through national income and its distribution. The effectiveness of the organization in distributing industrial products also affects industrial development, and obviously the kind of goods produced. (consumer or non-consumer goods). In Uruguay and especially in the case of Montevideo -the commercial sector is constituted of an exaggerated middle-man operation in relation to the size of the market, with a direct effect on costs.

Fragmentation of commerce.

Commerce is constituted in a big proportion by small scale-operated-shops, with the consequent fragmentation of the distribution process affecting also total retail costs.

Lack of effectivity in circulation of goods and services.

Inadequacy of the commercial sector not only reduces the size of accessible market it also magnifies problems of supply making it necessary to maintain larger stocks of raw materials and consumer goods than would be re-

quired if trade channels were more effective.

Increased stocks -and increasing costs consequent-ly- represent a negative factor in this process.

5) Inadequacy of the market.

Several factors can be described as affecting industrial development.

Low income

First. -Low income or relatively low income compared with more developed economies. Low personal incomes-are neglected in the general pattern of expenditures which are very unfavorable to secondary sector. Generally, the lower the income the higher the proportion spent in food, much of which is unprocessed.

Higher incomes create conditions for a market in manufactured products. The pattern of Uruguay economy reflects in the last years a disproportion between needs or consumption and purchasing power through income. Not only secondary sector still represents a low share of production, but also productivity indexes are relatively low compared with more industrialized countries.

Low productivity.

2nd. -A very significant factor in the case of Uruguay: size of the market; less than 3 millions population.

Small size of population discourages future industries with high output.

The limited market also limits the possibility of establishment of factories with high output to no more than one or two segments of secondary industry (textiles and meat plants.)

This limitation of the market affects industrial development in several ways:

Offer no attraction to industrial capitals. As far as foreign capital is concerned, Uruguay has not received industrial investments in the proportion that other South American countries have (lack of varied natural resources, wood, oils, and fuels are other reasons).

Result:
Marginal
Market.

In this sense Uruguay is regarded mostly as a marginal market, able to be served from other better industrial country (B.Aires market tends to pull and attract)..

Implications
of size of
the industri-
al plants
with techni-
ques of pro-
duction.

-If the factory is settled-whether foreign or local capital, the small market is likely to limit the size of the plant (as car assembly or rubber industry for example). Obviously this brings into consideration the implication of production techniques and unit costs with size -and type- of industry. Generally speaking, the limitation of demand may impede the use of various cost-reducing devices that could be uneconomical under limited outputs. Consequently costs in Uruguay may be higher than in those countries in which market is large enough to absorb large-scale production. That happens to be the case in many nationally manufactured products. Of course, export-import controls and national barriers alter this pattern -some times artividially.

In connection, the possibility of expanding production for foreign markets should be kept in mind as a way to accelerate industrial expansion.

Concentration of the market.

A last observation: the concentration of the market in Montevideo brought consequently concentration of industry in the capital city with negative effects on the economic development in the rest of the country.

b) Shortage of capitals.

Availability of land and immigrations.

Where land is abundant in relation to population, a small number of producers are likely to constitute an obstacle to industrialization. Immigrations in countries such as Argentina, Uruguay and Brazil, -as well as natural increase- have contributed to a better exploitation of natural resources and increasing production, consequently not only incomes and demand, but also increasing savings for potential industrial investments.

Possible effects of immigrations on capital formation.

Nevertheless a rapid growth of population could be a negative factor in those countries with low or relatively low income and shortage of capital even if land is available. An increasing population by natural increase or migration: absorbs savings and investments, making it difficult, consequently, for capital formation of industrial expansion.

Related to migratory groups, Uruguay typifies this case in the last years, aggravated by the fact that unplanned, unselected immigrations tends to pamper tertiary sector even more, instead of enlarging industrial sector of agriculture, where probably they could help more effectively in food production activities, increasing land productivity.

c.) - Public administration.

One advantage stability of government.

It is not necessary to stress the importance of stability of government as an important factor-helping economic development. In the case of Uruguay, stability and democratic government have tended to balance the disadvantages of scale economies due to the small size market, that we pointed out in the last section.

Lack of administrative efficiency.

Lack of efficiency and a competence in public administration are also important factors that contribute to inhibit industrial initiative. Among the difficulties of the second type, lack of statistical information should be considered one of the major causes of uncertainty. Deficiencies in industrial information tend to reduce the effectiveness of government programs for industrial development as well as private efforts.

Risks associated with industrial investments increase in those countries where sudden changes in tax and foreign exchange rates occur.

Sudden changes
in tax rates
discouraging
industrial de-
velopment.

In Uruguay this factor has not been always avoid-
able and it should be kept in mind as a counter-ef-
fect to future economic policies and controls (wool
duties typifies the case between Uruguay and U.S.A.).

d) International markets.

The negative influence of foreign markets can be de-
termined in:

1) Difficulty of capitals, equipment and technologi-
cal advance.

-Geographic factors-great distances from remote sour-
ces of technical advance.

-Capital factors -lack of capital to equipment .

-Communication factors -lack of adequate means of com-
munication and distribution of information.

-Educational factors -lack of adequate standards to
utilize and adapt this equipment and knowledge to lo-
cal conditions.

-Organizational factors -lack of adequate administra-
tive set-up to carry-on some necessary operations.

2) Competitive practices between countries.

-Opposition to local industrial development by foreign
company or group of companies. (especially true in the
case of metropolitan country and its dependencies, or
colonies.)

-Through patents, in machines or manufacturing process.

-By special permissions privileges or concessions.

-By price competition

I) Through C.I.F. prices control.

II) By high customs duties.

III) By restriction of imports under a system of quotas.

These measurements have been undertaken by Uruguayan Government to protect and develop a national industry. Nevertheless, especially related to price competition some local industries favored with protect: laws or controls may constitute a handicap to the whole economy of the country.

Their high production costs, and consequent high prices may haul tributary industries into inflationary processes, in detriment to general price level, and consequently affect economic stability.

The search for the determination of "basic" or non-basic" activities both evaluated through long-run and short-run analysis, could help toward more stable economic situations.

II -Industrial development.

B) Orientations.

When we described problems affecting industrialization and economic development in Uruguay, we pointed out several handicaps:

- Lack of raw materials, minerals oils and fuels.
- Lack of adequate transportation system.
- Lack of adequate power under increasing demand.
- Limited size of the market.
- Concentration of industries in Montevideo, with physical results on traffic congestion, smoke, mixed-uses, etc.
- Probable shortage of labor for large industrial expansion.
- Definite shortage of skilled labor for high specialized manufacturing processes.
- Lack of capitals .
- Public Administration problems.
- Lack of information about industrial possibilities.

Some of these problems require measures related to physical and economic planning.

Others will probably be closely related to physical development and land use planning.

However some common goals can be established in orientations toward solutions.

Orientation related to geographical distribution:

1) Decentralization of industries from the capital city.

This will help:

- Equalization of economic opportunities between rural and urban areas.
- Avoid congestion in the core of the country.
- Localize settlements, in the rest of the country.

2) Concentration of industries according to rural pattern.

Consequently possible and desired policies or rural concentration and industries may effectively help to establish economic base of these new or renewed rural communities.

Improvements on transportation will allow rural workers to move to greater distances from their work. Thus the rural land pattern can be integrated with intense agriculture and industry derived from local resources. Commerce can also be concentrated. Instead of the isolate rural "boliche" that we have described, a store with an assortment of various supplies equipment and food will supply the rural population.

Orientation related to economic base:

- 3) Increase of basic industries derived from natural resources.

Orientation related to economic stability:

- 4) Diversification of industry -to smoothen and balance economic fluctuations due to foreign trade changes.

According to these orientations: it is necessary to foster industrial concentration in specific areas of the Departments, out of Montevideo, where agricultural conditions, size and character of population availability of land and water, transportation facilities, power supply and community facilities and services make economically feasible those establishments.

Inter-relation of the different policies.

Orientations related to points 1,2,3 and 4 are -or should be- complementary.

-Related to national level, industrial decentralization and industrial development are not antagonic.

Industry must "grow up" and "grow across" the country at the same time, to equalize economic opportunities between rural and urban areas.

-In relation with National Planning and Resources Development, the future promotion of new industries will require a complete study of natural resources of the country, for new potentialities to develop in the national

economy. These studies will be one of the functions of the National Planning Board, -to be created- in close cooperation with other State Agencies and Departmental Planning Boards. (MGA., MOP., etc.).

Locational factors.

In the development of a comprehensive plan for resources development, special consideration should deserve the most economical and feasible location, size and character of industrial uses. Locational factors for the provision of physical and economic facilities needed by industry should be adequately balanced:

- Climate.
- Adequate topographic conditions.
- Population distribution.
- Adequate size of available land.
- Available sources and capacity of power and water.
- Waste disposal facilities (in many industries is an important factor).
- Available labor forces: a) adequate number; b) adequate wages conditions.
- Sources of raw materials.
- Market facilities and conditions: a) related to consumers; b) related to production -in semi-processed or processed manufacturing.

- Provision of adequate housing and parallel residential development including community facilities, services and recreational areas.
- Transportation planning, with especial consideration to the location of terminals, ports, airports, roads and railroad lines in relation with alternative location and character of industries. The distinction between locational factors depending directly upon transportation, such as industries raw material, oriented or market oriented, is of decisive importance in the future pattern of land use and transportation system.

In a country as small as Uruguay, improvements and planning transportation system will undoubtedly help to establish better conditions for economic stability, because the effect of transport costs on total production costs will be smoothed and balanced by equal accessibility from different areas of the country, with the subsequent equalizing effect on general price levels and living standards.

In a country as foreign-trade oriented as Uruguay development of port facilities should deserve special consideration. Decentralization of foreign-trade industries from Montevideo area will be possible if adequate port facilities provided in other areas of the coast.

However, one remark: when we talk about industrial

decentralization, one is apt to think in the transfer of existing establishments from one place to another. This is not necessarily so. A shift in the geographical distribution of industry must involve increased activity in some areas or decreased activity in others, or both. Variations in the type of economic activity will probably occur. In some places it is easier to change products than to change locations.

The best example of this practice can be found in agriculture, where farmers change crops within specific locations.

This may help the idea of a flexible industrial pattern, with possibilities both for expansion and changes processes.

The complementary character of industrialization with physical improvements, power and transportation facilities and the like, make inseparable those processes. Development plans for industry cannot be framed in isolation; they must be integrated with plans for the development of agriculture, transport, power and all other sectors of the economy. Simultaneously, land use and population settlements planning should be coordinated with all other plans and policies. Although the country is not likely to solve all difficulties at the same time, a simultaneous attack on

obstacles or factors is necessary to industrial development.

Also industrialization, as an important part of planning process, has a cumulative effect. Successful solution of early difficulties, may help the establishment of favorable conditions to future related improvements.

That makes more necessary coordination of all processes of economic development with physical improvement programs and planning controls.

Government intervention in Industrial Development.

Possibilities:

Fostering industrial development related to:

- 1) Direct intervention.
- 2) Financial assistance.
- 3) Technical assistance.
- 4) Land use Planning controls.

At State level:

1) Direct intervention

Study the possibilities to extend present functions of ANCAP. for industrial development acting as an entrepreneur:

- a) Acquiring land.
- b) Building factories.
- c) Installing machinery.

- d) Putting working capital.
for:
e) Selling or leasing to private enterprise.

2) Financial assistance.

Long-term loans in to private enterprise . It could be undertaken by Bank of the Republic (B.R.U.).

- Land acquisition
- Factory construction.
- Machinery
- Working capital.

3) Technical assistance.

- a) Research and guidance in solving production and marketing problems, to
Through: Departmental agencies private entrepreneurs or institutions.
- b) Selection and training of personnel and employees.

Technical assistance can developed by ANCAP., BUR. and an office of area Development to be created in M.of Industries.

4) Land use planning powers.

Zoning and subdivision controls are exercised by Departmental Planning Boards and local Planning Boards (where exist).

Eminent domain

Land acquisition for future industrial development is already granted by constitution to ANCAP.

Renewal powers.

Study extension of renewal powers to industrial redevelopment and renewal exercised by INVE., in coordination with State and Departmental and local Planning Boards.

Taxation powers.

Tax policies may encourage industrial development through incentive programs:

- a-Granting tax exemption to qualified and basic industries.
- b-Rental subsidies.
- c-Custom duties exemptions.

Similarly, market oriented industries can be helped through encouraging business development in a particular area.

At Departmental level:

Direct intervention:

Cooperating with National Authorities in developing programs (ANCAP - MOP.)

It is highly improbable that Departmental governments will be able to develop industries through direct action.

Probably they will receive grants in aid from National Government for specific industrial developments in the region.

Nevertheless, financial and technical assistance to small communities and towns can be extended from Departmental Government. An office of Area Development be created in each capital city of the Department.

- Coordination with local boards or commissions for local development should be established:
- Granting information about resources and industrial possibilities in the areas.
- Undertake in cooperation with Departmental planning boards, research about industrial location and integration of local industries, such as, ceramics, stone, marble, leather, etc., derived from natural resources with future location of settlements or resettlements, establishing economic base to communities.

Planning powers.

Zoning and subdivision controls.

Specially related to Departmental Planning Board, and possible local Planning Boards.

At city level

Zoning and subdivision controls are basic tools in the reservation of space for industry, guidance industrial location into a desirable pattern and provision of related facilities and areas needed for a balanced economy.

Major problems such as residential encroachment, and mixed uses can be solved in early stage of city development which happens to be the case of communities in Uruguay, where industrial development has not yet taken place.

Zoning can encourage a proper balance of residential and industrial uses. Performance standards should be ap-

plied and enforced especially in Montevideo and Paysandú where industrial land uses are growing fast.

Space for future industrial expansion should be considered both at local and regional level.

At regional
or depart-
mental level

Industrial zoning and highway planning should be especially correlated.

Subdivision of land and roads lay-out should be related to industrial zoning.

Urban re-
newal powers

Urban renewal powers should be extended for industrial blight, as well as residential and commercial blighted areas

Eminent
domain.

Coordination between Departmental Housing Authority, INVE. or an equivalent Redevelopment Authority with Departmental or local Planning Board.

Agricultural Development.

The conditions, problems and orientations related to agriculture have been described in last chapters, specifically in the section about rural land uses.

Increase of productivity in agriculture, require technical measures for the improvements of renewable resources -land, crops and livestock.

Improvements of pastures, sheep and cattle breeding, rotation of crops, tenacing and the like will certainly help agricultural development and raising of productivity indexes. The detailed description of these measures are beyond the scope of this thesis.

However, some particular plans for agricultural development are more related with the improvement of land and environment conditions, thus affecting development and uses of land and -consequently- possible controls and regulations upon land uses.

Those are:

- 1- Land classification
- 2-Forestry.
- 3-Soil conservation
- 4-Water power and energy.
- 5-Flood Control and irrigation.
- 6-Mechanization
- 7-Agricultural Stations.

1. Land classification.

A) Related to land usage planning:

Land classification studies will have important applications

such as:

- 1) Planning irrigation, flood control, drainage, erosion control and all other similar projects for conservation.
- 2) Basic element in the determination of better future land uses, through potential productivity of different agricultural cultives, forests, potential mineral, and industrial areas and marginal lands.

B) Related to governmental action:

- 3) Planning research programs, experimentation in fields and pilot farms.
- 4) Supplying farmers with exact information about soils, in order to apply results from other experiences with similar types of soils.
- 5) To estimate price of land of agricultural credits, transactions on property, buying public lands, and taxation.
- 6) Orientating future buyers of land, and planning settlement groups.

2. Soil conservation.

Erosion is a major problem in Uruguay. Lands have been always dedicated to two major types of usage: cattle raising and field cultivation.

Conservation programs

Economic base of agricultural land

Problems

Although in the case of livestock raising, there was no extensive exploitation, the degree of soil utilization has initiated in many areas a process of land degradation by erosion.

Field cultivation and tillage areas, that have been more intensely cultivated, suffered graver erosion processes.

This is especially true in southern and SE. areas, where the erosions of wind and water were augmented by over-use and misuse of land.

Orientations

Planning process related to conservation.

Zoning

Erosioned and sub-marginal land should be zoned against improper use. Utilization of restricted-use laws in rural zoning may help to stop degradation of land, complementing technical assistance programs. In a country with limited land resources, such as Uruguay is, conservation programs should be fully developed.

Land acquisition

Land acquisition for conservation should be fostered by government agencies. Possibilities of extension of the power of eminent domain for conservation should be considered.

Eminent domain

Land Subdivision

Land subdivision may play an important part in conservation of soils and land. Subdivision of extensive rural areas may encourage productivity. Replotting areas of excess-subdivision may prevent degradation of land. Government agencies should foster subdivision of land through the extension of subdivision powers to rural areas. Land utilization and subdivision will be specifically related to this purpose.

Government Actions

Some measures have been applied to control erosion and to conserve soils in good condition for use (rotation of cultivates and pastures,

terracing, increasing the use of super phosphates and fertilizers, channeling of water, etc.).

Presently the Soils Conservation Department of M.G.A. works under those directions. Again, substandard budgets limit the sphere of actions.

Decentralization of services all through the country is necessary, similarly expansions in methods of erosion control, educational and advisory services and pilot projects will improve present situations.

3. Forestation.

Forestation programs should deserve special consideration in the total development of natural resources.

Conditions tend to aggravate problems from different points of view:

a) From the physical viewpoint:

-Climate variations, low humidity of soils, wind and rainfall erosions, and sand dune movements contribute to aggravate generally adverse conditions of agriculture and use of land.

b) From the economic viewpoint:

-Uruguay imports of wood and lumber represent a heavy burden on the balance of payments.

-Wood and lumber production and planting is not organized with more able tree species for industrialization.

-The area covered by woods and forests represents only 3.2% of the total area of the country.

-Improductive territory (swamps, hilly, rocky, dunes, sandy land) is 10% of the total country area. It means that if some of those areas are improved it will undoubtedly bring an increase in national wealth and natural resources.

-In a country so dependent on agricultural production, wood and its planting development represents encouragement of adequate climatic and physical conditions to land cultivation and cattle raising improvements.

These are some of the main reasons why forestation should deserve special consideration in national plans and policies related to land and land use.

Some major orientations can be indicated:

1) Complementing resettlement policies:

-Unproductive areas should be furthered by government purchase of land unsuited to agriculture - or trade it to farmers for other land of better productivity - and the destination of such lands to forestation or other conservational uses.

2) Regional and local studies should be undertaken in fiscal properties in order to determine quality and quantity of land capable of forestation, as a base for future plans and programs.

3) As a way to help erosion and flood control, watershed protection, replanting and forestation on watersides of rivers, brooks, lakes and dams should be undertaken.

4) Forestation on Rio Negro and Santa Lucia watershed should deserve special consideration, inasmuch as those rivers are sources for power and water supply.

5) Development of both public and private forests should be encouraged by government action and agricultural extension programs.

6) Recreational uses, such as national and regional parks, should be developed through a coordinated forestation policy.

Acquisition and development of extensive river frontage for recreational use may often require complementary development of forestation and tree planting.

4. Electrification and Waterpower.

At a national level, looking toward the future, and relating hydroelectric developments with all other potential developments and possible multipurpose programs, we can clearly recognize the urgent need of coordination between development programs from different entities such as U.T.E., M.G.A. and its sections, M.O.P. (Hydrography and Highway Department) with the rest of social services and community facilities required.

Special consideration should be given to rural electrification programs, especially related to the milk industry, the fruit industry and, in general, to all industries based upon agriculture.

Exploration of electricity derived from nuclear energy is at present in the research stage. Total energy output of the country, limited numbers of technicians in the field and the amount of capital outlay required for installation of nuclear plants make solutions difficult for the moment.

Nevertheless, hydro-electric, thermo-electric and nuclear-electric developments are not antagonistic, and can be complementary in the future.

For Uruguay, the relation between total imports and gross energy consumption was, in 1952, 72% - the highest in South America (Economic and Social Council, United Nations, July 1955. Preliminary Report on Energy Production in South America).

That shows the disadvantageous position of Uruguay which, with a relatively high energy consumption, has no sources of oils, fuels, or coal as raw materials (fuel only represented 15% of total imports in 1954 and 18.5% in 1955), making the country so dependable on foreign trade in energy production.

That explains also why Uruguay is so interested in increasing hydroelectric power output that now is about 50% of the total, to 75% of the power developed in 1965: that will represent savings in our balance-of-trade.

Summarizing: As one of the first requirements to economic and physical development, Uruguay needs to increase power output. Increasing the hydroelectric output at the present moment (perhaps nuclear in the near future), seems to be an economic solution to this requirement. But the distribution of this energy should be a matter of national policy in coordination with the development of land use, transportation and industry.

Coordination in this case means top-level or state planning complemented by departmental planning. In this sense present conditions seem to show (efficiency is not questioned) that administration is doing a piecemeal job. Power programs (UTE) are neither related to national public works (MOP) programs nor to a policy on employment or colonization (I. de C.)

Especially important is the relation of power output to industrial development possibilities. An increase of energy allows a parallel growth of basic industry, with benefits to the entire economy of the country. All these programs should be interrelated and the possibilities of one should be considered along with the limitations of the others. But this organizational aspect will be discussed later. Let us now simply recognize the need of coordination between these programs.

5. Flood Control.

Conditions
and problems

Uruguay has a varied system of rivers and main streams. Extremes from summer's dry, or almost dry brooks, to winter's torrents contribute to erosion and destroy soils, fields, and crops.

Relation with
irrigation
programs

Protective walls such as reservoirs, water-walls, bars, levees, and channels seem to be adequate solutions to problems of local flooding, creating artificial lakes or reserves of water during the rainy season, and keeping them for the months of higher temperature and evaporation when cattle raising and agriculture need more water and irrigation. Thus, it is easy to understand that flood control must be complemented through irrigation programs.

In Uruguay, there is a legal restriction of 120 mts. (360 feet) back from the maximum line of waters in all navigable rivers and water streams. This legal measure obviously does not cover all of the hydrographic systems of the country. Many flood areas are far beyond navigable streams. Although the location of cities and new towns is limited by Urban Centers' Law to topographic conditions, the possibility of original flood still is a major potential danger in smaller streams.

The same problems seem to exist in the coastlands and beaches where abnormal tides and waves built up by storms batter and flood construction close to the sea.

The 120 mts. restriction gives to the State a good measure to prevent flood effects, but temporary construction sometimes encroaches this boundary, especially in recreational areas and also in rural slum areas where people build their ranches within flood areas as a result of their poverty.

Orientations

We will describe what could be a way to attack the problem in the country, where the accumulative effect brings in the long-run tremendous waste of soils, efforts, obstruction to communications, and economic losses, not even counting the loss of human lives.

First: The gathering and analysis of flood data. Determination of the lines of maximum heights of waters. In doing this, and considering the changing character of floods, the study should encompass the whole basin system and not exclusively one or two major streams.

Second: The complementation by zoning procedures of reservation of uses of those areas subject to flood. Encroachments into flood areas should be punished and severely controlled.

Enforcement by law seems to be a good solution in recreational areas, and prescriptions of use or standards of occupancy, according to the hazards inherent in such locations, must be determined by the responsible planning board.

But enforcement does not seem to be a solution to those families (generally unemployed) that occupy areas subject to flood in

substandard housing. Complementary measures to provide work, housing and community facilities and services are important as well.

All that we said seems to prove the need for comprehensive legislation on waters and streams, providing an extension to the concept of the 120 mts. Riversides State Property Law, providing powers to the State to promptly act in cases where it would be necessary to acquire land by condemnation in those cases of private neglect of legal land use controls by planning boards on private land subject to flood. Also limitations by subdivision regulation prohibiting planning for residential occupancy in areas subject to flooding, enforcement of laws against the encroachment of boundaries by corresponding authorities. These and many other measures could be taken both by private and official action, such as consolidation of riversides by special planting, desiccation of swampy areas, (Rocha, T. Tres) drainage and channel systems, etc.

All these possibilities prove the need for coordination between the different agencies involved with these problems, in providing the necessary information to the planning agency, and avoiding overlapping jurisdictions and activities. M.G.A. and its branch offices, Hydrography of M.O.P. and Departmental and State planning boards should work together coordinating their respective spheres of action.

6. Irrigation.

In Uruguay, numbers of rivers have permanent all-year streams, and a great number of other rivers could be in similar conditions if reservoirs, small dams and bars would be created.

Orientations

To insure present plans and policies on irrigation, first it is necessary to intensify studies on different factors directly related to irrigation. These factors are: climate and rainfall, soil, and economic factors.

The two first factors pertain to agronomical techniques and their applications are thus not repeated here. By economic factors we mean studies such as efficiency and productivity indices, production costs, market demands and potentials. Many costly projects have failed as a result of faulty or improper evaluation of benefits and costs.

Northern areas with cattle raising predominant, and with low percentages of consumption of vegetables and fruits, could develop production of mixed-farm products, balancing cattle and land cultivates, and thus reducing risks during times of drought.

7. Mechanization.

Although Uruguay has a high percentage of per-capita agricultural equipment, not all this equipment is good enough according to modern techniques.

A big percentage of ploughs are walking ploughs. Not all establishments have applied motorized machinery to all the processes of production.

Some main reasons why mechanization must be implemented are:

- To increase production.
- Scarcity of rural labor forces.
- Low costs of production (within a reasonable scale of operation).
- Improvement in techniques with consequently increased production.

-The challenge to create cooperative farming by co-ownership of costly machinery.

The State can contribute in development programs related to mechanization through local or regional Stations for Agricultural Machinery (they could be located in the proposed agricultural stations to avoid waste and dispersion).

8. Agronomic Stations.

For the attainment of rural and regional development plans it is necessary to distribute, throughout the country, the necessary technical assistance to producers.

Presently there are regional agricultural services, but these are limited in their functions and financial means.

It should be required that Agricultural Stations coordinate different services, practical training, and experimentation. They should perform the following tasks:

- 1) Experimental fields: with different agricultural cultivars, agrology, irrigation, kitchen gardens, vegetable beds, etc.
- 2) Seed bed and plots - for improvement and movation (crossing) with native and foreign seeds.
- 3) Experimental poultry farming - for selection and exchange.
- 4) Machinery section - for practical services and training in the area.
- 5) Forestry beds and nursery.
- 6) Fruit nursery.

This could be installed in State lands (M.G.A. or I. de C.) and its distribution could be based on balance of distances and density of population and production.

Results of these types of research training and experiment should be published by M.G.A. for the public benefit.

Chapter III

Part 3.-Transportation.

A-Conditions.

- Transportation and physical factors.
- Transportation and natural resources.

B-Problems.

- a-Regional problems.
- b-Urban problems.

C-Orientations.

- I-Advantage of coordination.
- II-Transportation and decentralization and concentration policies.
- III-Conclusions.
 - a-Regional and State level.
 - b-Local and city level.

3. Transportation Pattern

A. Conditions

Transportation
and physical
factors.

3-1. We have said that topography is not an obstacle to easy access throughout the country. In earlier centuries, tops of hilly areas were utilized as the natural roads because floods could not reach those heights. The rail and paved road systems have followed in close contiguity that early pattern in many parts of the country.

Transportation
and natural
resources. Geogra-
phic distribution
North.-

3-2. In the north and north-east probably the rural circulation pattern is directly based on sheep and cattle raising economy, which are basic to the area. Roads are located along highest areas. Pastures are not necessarily located in low-lands, specially in sheep raising, for many high-lands provide good grazing areas. The geomorphology of the north of the country (flat-hills) helps this pattern.

Even urban concentrations - although smaller than those of the south and south-west - are generally located on top of hills, at cross-roads.

South.-

Contrarily, the transportation pattern in the south and south-east seems to be completely reversed. Roads and rails do not necessarily follow highest topographic points.

Some factors appear to be as the major reasons:

1st.) The first settlements - and consequently trade and commerce - were located near the first discoveries as early settlers searched for natural harbors for port facilities.

2nd.) Location of agriculture centers was determined more by fertility of land for crop raising rather than for exclusively cattle raising. Generally better quality of soils are located from sea-level to approximately 150 feet above.^{1/}

3rd.) Attraction of coastal facilities brought industrial development, commerce and consequently transportation development to those places where populations were concentrated.

(Labor, power and foreign trade available).

4th.) Finally, a greater development of services and recreational facilities in the coastal areas (beaches and parks) has encouraged and intensified these circulation networks.

B. Problems

a) Regional

3-3. Some important problems in the regional transportation pattern can be determined:

- 1) Lack of adequate transportation facilities, land, water and air, within extensive areas of the territory brings out some important consequences: time and distance relationships are notably different in different areas; lack of geographic and horizontal mobility results from poor roads poorly located; and lack of economic and cultural opportunities in the isolated areas.

1/ According to studies of Soils Department. M.G.A.

- 2)-The quality of services and transport facilities in rail and roads, where they exist, is markedly different in the south and west of the country and in the north and center. They are relatively good in the south - although in need of improvements - and poor to very poor in the rest of the country.
- 3)-The circulation pattern converging fan-shaped toward Montevideo tends to increase transport costs, thus aggravating economic and social isolation.
- 4)-Lack of adequate port and navigation facilities. The economic possibilities of water transportation have not been developed to their full extent in all navigable streams. Geographic conditions are favorable. The Uruguay and Plata Rivers both have deep, navigable waters and latent port facilities.
- 5)-Unhealthy competition between different carriers, rail and road, in rural areas results in duplication, and a waste of energy and of money in the services rendered.
- 6)-Lack of coordination and concord between different means of transportation in the performance of services and of facilities.
- 7)-Lack of coordination and price agreements on transport rates between different companies performing the same type of service.
- 8)-Lack of coordination between transport systems with the industrial and agricultural requirements, and with population problems.

Summarizing:

b) Urban

Uruguayan cities, when founded, had a gridiron street pattern - traditional heritage from Spanish colonizations. Present cities still have the same circulation pattern corresponding to the 18th and 19th centuries. Railroads, street-cars, automobile roads and other technological changes are overlaid upon old cities structures.

Urbanization has brought congestion to an already complicated circulation system. Increasing numbers of street accidents and fatalities, traffic delays in city services, congestion in public transportation and in industrial services are some of the resulting symptoms affecting both the safety and efficiency of city life. The following are some major problems related to urban transportation:

Inadequacies of present circulation systems. Streets widths are inadequate for the volume of traffic flow. Inadequate parking space increases the problem, further restricting already limited space for moving traffic.

Unrestricted circulation system. Some streets are wider than others and traffic consequently tends to concentrate in those arteries; this flow, however, is not restricted by volume, type or destination.

Traffic hazards. Residential areas are crossed by main arteries to the consequent detriment of safety of life and limb. Industrial encroachment, furthermore, upon residential areas, with a few exceptions, results from the lack of a residential development

concept. Mixed land uses, or lack of adequate zoning laws, tend to aggravate even more the traffic congestion.

Lack of adequate location of transportation terminals. Inter-city and intra-city traffic movements are not coordinated. The problem of adequate terminals is directly related to this coordination. Present conditions, duplicating inter- and intra-city services within same areas, tend to encourage waste of money and services, thus further aggravating congestion.

Public transportation facilities are not either coordinated at the city level. The possibilities of public transportation as an effective tool for furthering desirable developments, and redevelopment of residential, industrial or other areas have not been utilized to their full extent.

In Uruguay, conditions are favorable for such coordination. Presently, public transportation - buses and street-cars - are operated by a city corporation (AMDET). Railroads belong to the State (AFE). Thus there is a great chance to utilize existing but unused right-of-ways for rapid transit developments. Nevertheless - as far as I know - no comprehensive plans or policies have been prepared contemplating or encouraging such coordination.

G. Coordination of transportation - Orientations

I-Advantages of coordination

Coordination of transport systems has two major advantages: one is the reduction of unnecessary facilities and services, and the unification of the remaining to reduce costs, which may also mean

improvement of service; the other is the provision for each type of transportation to do the work for which it is inherently and economically best fitted, and for the interchange of traffic between the different modes to provide a more extensive service.

Throughout the world there are tendencies among leading nations to coordinate at national level the different agencies of transportation. In the case of Uruguay, the policy of government in the past decades has been to encourage competition between rail and road system. The physical pattern of both systems proves it. But this policy was probably more directed toward (particularly in the case of bus companies) encouragement of one of the two major means of transportation rather than improvement of services and reduction of costs through fair competitive practices.

Presently the case is different. Railroads belong to the State. (Before they were run by a British firm). Operation costs are higher than revenues. Equipment and facilities have reduced efficiency and have passed their amortization period. Further deterioration now contributes to capital losses. Solutions are not easy ones. Such conditions make urgent the need for new capital investments to replace equipment and facilities, and to coordinate rail, highways, waterways and other transport facilities. Especially with regard to industrial development and population distribution, a sound transportation system provides accessibility, and encourages efficiency and economic progress.

II-Transportation
and centraliza-
tion or decentral-
ization policies.

As important as improvements to facilities, is the coordination pertaining to transport rates and general price levels. If a similar and parallel policy of industrial decentralization is required or seems to be necessary, transport rates can encourage this policy. In increasing transport rates, concentration of productions can be affected to the extent to make production on a large scale unprofitable.

At the same time, changes in the general price levels of goods and services may have the same effect on decentralization policies, even with unchanged transport rates. With falling prices, transportation costs become more expensive compared with other prices and costs, and decentralization is encouraged.

If the general price level rises, transportation costs represents a minor proportion of total costs and helps concentration. All these considerations serve as a single example of mutual interdependence of different factors. These factors, as well as others stated above, should be taken into account in evaluating the coordination of transportation systems with the rest of natural and human resources, land use, population and institutional patterns.

A certain number of basic studies are necessary to determine economic limitations, scale, and area of operation of different carriers.

III-Conclusions:

It is imperative to gather all means of transportation according to some general principles conducive toward more specific policies, plans, and programs. A general orientation can be stated as follows:

a) At Regional and State Level:

- 1) -Development of a comprehensive policy covering the different ways and meanings of transportation - namely land, water, and airways - emphasizing their decisive interrelation with the general land use pattern, sources of natural resources and location and character of settlements and industrial developments.
- 2) -This coordinated transportation system should be directed toward an economically more effective and socially more desirable distribution of economic activities and settlement of the population.
- 3) -The development at national level of a main road system, so necessary to effect, should be related to potential growths, developments, and concentration or decentralization policies - whichever necessary - of population, industry and other natural and human resources.
- 4) -To make a proper evaluation of the detrimental influence of the converging circulation system into metropolitan Montevideo on the interrelations and developments between other regions of the country, and related to possible policies of decentralization of industries and population away from the capital city.
- 5) -To undertake basic inter-cities and regional studies on movements of goods and people, transportation costs and revenues, by types of carriers in order to establish a more sound basis for policy decisions - under these last orientations - toward the establishment of transportation facilities and improvements, namely: highways; rail, truck and bus terminals and garages; air terminals and facilities; port facilities and navigation conditions in our major streams.

The coordination of water with rail and truck transportation may help to alleviate the congestion of Montevideo's foreign trade both in export and import movements.

Development of port and terminal facilities may help to foster economic development in other ports of the country, thus encouraging decentralization from Montevideo and developing new centers of population, industry and commerce.

- 6)-Promote safe, adequate, economical and efficient service and foster sound economic conditions between different types of carriers and different locations throughout the country.
- 7)-Establishment and maintenance of reasonable rates for transport services, encouraging regional economic development and working conditions without discrimination or advantages derived from non-competitive practices, whether in governmental or private companies.

b) At local and city level:

- 1)-The coordination of inter-city and intra-city transportation systems, both routes and carriers. The location and character of transport terminals should deserve special consideration.
- 2)-The development of an integrated and hierarchical circulation pattern, routing heavy traffic away from residential areas, and channeling different kinds of traffic movements into separate streams and arteries.
- 3)-Full consideration to the increasing importance of public transportation system as an effective tool for planning, not only in helping

decongestion but fostering or balancing residential, industrial, and other land use developments, affecting also land values, taxation and revenues from land.

4)-In the specific case of Montevideo, the possibility of establishment of a regional transportation authority should be contemplated.

Some advantages can be described:

I - A broader geographic area, organizing more effectively the transports services for the metropolitan growth.

II - The opportunity to coordinate different forms of transportation in performing services (rail, bus, rapid transit).

III - The financial benefits, derived from the fact that there would be more freedom in the establishment of rates, location and re-arrangement of services^{1/} and debt limits, as well as exemption in taxes.

However problems of encroaching departmental boundaries may complicate and adversely affect efficiency of services. The establishment of agencies of joint-administration (Inter-Departmental Commission) may help to solve these problems.

5)-The development, widening and improvement of roads and highway systems should be undertaken to solve present congestion and inadequacies within the city. This development should be coordinated with present and potential industrial land uses, residential, commercial and recreational areas, as well as future programs of housing

^{1/} The degree of autonomy may vary whether it is a city agency or a State corporation operating Departmental services.

development and redevelopment. Related to this point, methods whereby transportation and circulation improvements may help to solve congestion of down-town Montevideo should deserve special consideration. Down-town still is the center of the economic and social life of the city.

Its physical restoration and redevelopment will undoubtedly help the whole economy of the surrounding region and the country.

Chapter IV

1-Organization for planning.

A-Conditions.

B-Problems.

C-Orientations.

I-State level.

II-Departmental level.

III-Organization for planning.

a-Legislative aspects.

b-Administrative aspects.

c-Financial aspects.

d-Summary.

IV-Organization for planning.

We have described the major orientations in planning plans and policies.

Now we will try to relate these observations to the general institutional framework and see how planning can be put into effect, in its different levels of operation.

A) Conditions.

State Planning.

There is no over-all planning agency at State level. The National Council has advisers in specific-fields (Economy and Finance groups are the most active ones) but generally the advice comes through each branch of the Executive's departments (Ministries).

Coordination-and-review functions are not performed by any particular agency of central government.

National Resources Development.

The development of natural resources are carried out through different degrees of administrative and financial autonomy.

Soil conservation.

Forestry (conservation and tree planting.)

Irrigation and water control.

Ministry of Agriculture (M.G.A.)

	Credits and loans for Agricultural development.
National Institute of Colonization (I.N.C.)	Rural housing Rural cooperatives.
State Electricity and Telephone Co.(U.T.E.)	Power and Hydroelectric power.
Agricultural Resources Administration. (AREA)	Economic Development of Agricultural Products.
National Tourism Commission (C.N.T.)	Tourism and Recreation.
National Parks Commission	National Parks and Forest.
Bank of Republic (B.R.)	Loans for industrial development
Hypotecary Bank (B.H.U.)	Loans and credits for urban and rural housing.
National Institute Subsistence (I.N.S.C.P.)	Food Control.
Fishery Service (SOYP)	Fisheries and sea products.
National Ports Administration (A.N.P.)	Ports Development.
State Highway Department Ministry of Public Works (M.O.P.)	Highways and national roads.

State Railroads Assoc.
(A.F.E.) Railroads.

State Sanitary Works.
(O.S.E.) Public sewerage System and water
supply

Many of these state agencies have divided the country into different regions and districts.

Departmental Planning.

Planning at Departmental level, are performed by the Planning Board of Montevideo, which exercises control over the whole departmental area.

City Planning.

At city level there are some city planning boards located in the capital cities of the Departments, which are extend 1/ing planning controls and regulations over rural areas.

One observation : In Uruguay police powers have integrated the natural powers that municipalities have to act in the name of welfare, safety and morals, of the people.

Consequently zoning and subdivision controls do not need State enabling legislation to be exercised.

Housing, building and health codes are approved and performed by municipal governments.

1/Although departmental powers-especially taxation-have been widely extended after 1952 Constitutional amendments Department Governments are not clearly oriented toward planning plans and policies.

B) Evaluation of Problems.

In implementing plans and policies Uruguayan government is affected by some major conditions:

Advantages:

- The country has a Democratic government.
- There is political stability so necessary to perform and develop democratic planning.
- It is a traditionally welfare-oriented country.

Disadvantages.

- Although it is a democratic government, people do not effectively intervene in state affairs.
- Public opinion is more directed by propaganda through mass communication, rather than inverse processes of information. Results: disillusionments and apathy in the political life of the country.
- Lack of comprehensive approach to government actions and policies. Different State agencies and corporations doing different jobs, without coordination between their different policies, programs and actions.
- Overlapping functions and areas of jurisdictions between different government agencies. (This is a direct consequence of lack of coordination.)
- Lack of physical improvements programming at different levels of government action, as well as coordination of pu-

blic works programs with the rest of economic and social measures.

-Lack of implementation of social welfare laws. Laws remain in some cases more as an aspiration, without financial means and administrative set up to implement desired objectives.

-Limited information among the public and administrative officials about government plans. Results: Inefficiency in public administration by ignorance about the relationship of general objectives of programs and daily work activities.

C) Orientations toward solutions.

All these conditions, both advantages and disadvantages, help the idea of planning and coordination. Consequently the next question is what kind of organization can be settled to fill up this need of planning. These problems will be discussed in the following pages.

1) At State level:

- a) Related to the type of agency involved.
- b) Relation of the agency with Executive Branch.-Powers and Functions.
- c) Location of the agency.

2) At Departmental level:

- a) Type of agency involved -Powers.

- b) Urban planning functions. Extension of powers to local levels.
- 3) Organization for planning.
 - a) Legislative aspects.
 - b) Administrative aspects.
 - c) Financial aspects.
 - d) Summary.

I) State level.

a) Related to the type of agency involved.

In organizing planning functions at State level, Solutions are not mutually exclusive - one solution might be an advisory planning board and at the same time, an empowered authority developing a multi-purpose program for natural and human resources, in a particular region of the country. The increasing tendency in the nationalization of services and industrial activities in Uruguay has created a favorable public attitude toward this type of enterprise.

The administration of this multi-purpose agency could 1/ be headed by a new agency, but execution of works could be performed by other corporations and authorities, each of them working in their specific fields (like UTE hidroelectric power, MOP and INC).

1/ It might be related to hidroelectric programs now under construction in Río Negro area (Baigorria and Rincón del Bonete).

Nevertheless, considering the small size of the country, the high number of institutions already created and the limitations of financial means, it seems preferable to concentrate effort instead of spread administrative organizations to perform similar functions, with consequent duplication of duties and personnel, which was precisely one of the disadvantages that we had pretended to eliminate.

b) Relation of the planning agency with the State Executive Power: Power and functions.

The possibility of locating a planning agency at State level has been suggested as a good solution in a proposed reorganization of the Executive Branch of the Uruguan Government.

Actually many of the disadvantages and problems related to organization for planning - stated in last pages could be solved by an agency with advisory, research coordinating and review powers, and covering the following functions:

1st.-Undertake studies in cooperation with other State, Departmental and local agencies and institutions about the physical, social and economic conditions of the country, as a base for: 1/

L/ J. Hall Reorganization of the central government.-

Montevideo 1953.-

2nd.-The preparation of a comprehensive long-range plan for the more adequate use of the natural, economic and social resources of the country, in coordination with State and Departmental agencies.

3rd.-To evaluate, coordinate and review different plans of the Ministries, Autonomous Entities and Decentralized services.

4th.-To analyze the national economy and its various segments; to advise the National Council on economic developments, to appraise economic programs and policies of the Uruguayan Government; to recommend to the Executive policies for economic growth and stability, to prepare and submit to the National Council a five year financial plan after consultation with all government agencies involved.

5th.-To prepare and submit the capital improvement program for Public Works, to the National Council in close cooperation with the Bureau of the Budget.

6th.-To consult and cooperate with other agencies and institutions at all levels of the Administration - in matter of information, research and training related to physical, social and economic planning.

7th.-To promote the development of public opinion and civic education on planning objectives, policies, plans and

programs, encouraging citizen participation in planning processes.

Related to the comprehensive long-range plan, and in close coordination with State Agencies and Departmental Planning Boards., the following aspects should be especially considered:

- Population Settlements and resettlements. Location size and character of settlements and resettlements, after consultation and in coordination with INC. (Colonization Institute) MGA. and MOP.
- Industrial Location Location and character of industrial developments (in coordination with Area Development office to be create in Ministry of Industries).
- Agricultural Uses. Major Agricultural land uses, - according with land classification after consultation with MGA and MOP.
- National Parks and Recreational uses. National Parks and recreational areas in coordination with ONT. (Tourism Development).
- Education Location of Schools and Secondary education establishments including site facilities, (in cooperation with CNEPN.-Elementary Education Board, and CNESP.-Secondary Education Board). 1/
-Study possibilities for the location of a University center, for high education in the capital city.
- Public Health Location of Public Health services throughout the Republic in coordination with MSP. (State Health Department)

2/

1/ and 2/. In Uruguay Education and Public Health are performed by State Agencies with jurisdiction over the whole country.

Both studies and plans will be developed through close cooperation with State Departmental and local agencies to a better estimation of needs and resource.

c) Location of the agency. Evaluation of different solutions.

1) Related to the Executive Office of the National Council along with, but independent of the budget office.

The reasons supporting this position are simple: the functions that the planning agency has to perform are closely related to the Executive problems and functions. U.S. experience shows that it has been successful planning in those places where there was a close relationship between the Head of the Executive branch and the planning agency. 1/

At the same time, a planning service with interdepartmental review functions should not be located within one of the departments. It soon would adopt the coloration of the department and become a partisan rather than an impartial judge.

2) Separate Board or Commission.

Not so clearly accepted is the idea that the planning service ought not to be located within a separate board

1/ According with, R.Walker "Planning functions in urban government".-Chicago 1950.-

or commission, related but not subordinated to the chief Executive. This was the general trend in U.S. experience. The major argument defending this position is that a planning agency should be out of political pressures.

An independent Board or Commission is more likely to maintain its continuity and impartiality against the political movements.

Even recognizing the validity of the argument, again the U.S. experience of the last 20 years shows that "a loca-tion away from the center of decision has led planning boards to isolation and lack of use", or to a limitation in the planning functions. 1/

Location of planning services in the executive office permits a continuous contact between the agency and decision makers in the formation of policy at the highest level.

3) Planning as a Department of the central Administration.

Another alternative solution would be to locate the plan-ning services within a new Department of Administration serving as over-all staff agencies for the National Coun-cil.

This is not substantially different from the first solu-tion, although it requires a major degree of specialized functions integrated in this new department such as Bud-geting, Accounting, Statistics, Personnel, Management,

1/ R.Walker-op.cit.

and central purchasing as well as planning.

Solutions in this direction should be especially considered.

II) Departmental level.

Departmental Planning Boards should be created in all Departments. They should be located within the Executive Branch, its area of jurisdiction should include the whole Department and perform the following functions:

- a) To develop necessary studies on natural, social and economic conditions of the Department to the best use of natural resources.
- b) To prepare a Land use map of the Department in coordination with State Planning Board and M.G.A. agencies.
- c) Master plan for the Department in coordination with the National comprehensive plan performed by State Planning Board.

Included in this plan should be:

- Future best use of agriculture land.
- Future and existing location of settlements.
- Location and character of industrial developments, in coordination with Area Development Office to be created and ANCAP.
- Transportation Plan relating departmental roads with national highways, railroads, water and air systems,

in cooperation with MOP. and its related agencies, PLUNA and ANP).

-Parks and recreational land uses - in coordination with State Agencies. (CNT, Nat. Parks, etc).

-Reservation of land for forestation or conservation after consultation with MGA related agencies.

-Planning Health and Educational Services, after consultation with State Planning Board and related agencies to determine general location, in relation with national comprehensive plan.

-Capital improvement program for the Department, in coordination with local planning boards - where existing- after consultation with State Planning Board.

-Zoning and subdivision controls.

To consult and cooperate with other governmental agencies and local boards and institutions in coordinating planning information and research.

-To consult and coordinate planning operations with other Departmental Boards, related to encroaching boundaries or overlapping problems.

To define problem areas in coordination with Housing authorities, both State (INVE) and Departmental, related to redevelopment programs for blighted (residential commercial and industrial) areas.

d) - Urban planning functions.-Extension of powers to local levels.

Departmental Planning Board probably will have to prepare urban master plans for the different towns and cities of the Department. This brings out the problem of centralization or decentralization of functions and powers

The degree in which other local boards can perform planning powers and services depends on many factors such as economic importance of the city, available trained personnel or financial means of each specific town in-volved.

Solutions may be different according to different De - partmental situations:

- a - Departmental Planning Boards may perform planning func-tions for a group of cities, added the total rural area of the Departmental.
- b - Department Planning Board may, (as in the Montevideo case) control the whole Departmental area, establishing zoning and subdivision controls, housing and building codes for the whole area.
- c - Department Planning Board may delegate functions deem-ed necessary on local Boards, for specific towns or cities.

- d)- A group or cluster of small cities and towns can organize common planning services and powers together.

III) - Organization for planning.

In this respect, it is highly desirable before the establishment of the State Planning Board, to create an Advisory Commission at National level and Departmental Committees, composed of citizens, lawyers, administrative officials, other professions and institutions, etc., in order to undertake:

a) Legislative aspects.

-Studies for creating needed coordinated legislative, financial and administrative devices, at National Departmental and local levels.

-Review existing and proposed legislation, particularly laws or ordinances pertaining to planning agencies and their powers and functions at different levels of government. 1/

-Establish legislation in order to coordinate planning functions and powers at the three levels of government, including delimitation of areas of jurisdiction for those powers.

-To study the integration of rural urban areas, checking possible interferences of spheres of actions in

1/ Particularly INC. Law (Colonization) and Urban Centers Law.

State, departmental and local planning boards.

b) Administrative aspects.

- To study administrative changes to bring more effective and economical programs and actions at local levels, considering the following possibilities:
- Coordinating planning operations of separate agencies even at different level of government, such as housing authority (municipal or INVE.), school Board and Park Commission, for especif development programs.
- Changing agencies duties to simplify operations covering common or overlapping activities.
- Establishing the type of cooperation that State Planning Board can offer to Departments and localities - and from Departmental Planning Board to localities as well-related to technical assistance (staff-advisory service, training personnel, etc.) in developing planning functions.
- To study these possible changes on the basis of a close citizen participation in planning process.

c) Financial aspects.

1) Land taxation.- Land tax structure should be studied and reviewed in the following aspects:

- a) Coordination of jurisdiction between State, Departmental and local (if necessary) tax land systems, along with the

rest of excise taxes, tolls, license fees and direct payments for services and uses.

- b) To determine the real sources of revenues from taxes and fees on land.
 - c) To determine the areas of tax delinquency and instability of land values. (speculation and inflation on land costs).
 - d) To study the effect of tax base on those areas encroaching boundaries of Departments (case Montevideo and Canelones) where people and industries have moved outside the city limits but still utilize city services and facilities, representing a heavy burden to Departmental Government expenses.
- 2) To investigate forms of taxation other than land taxes and determine what source of revenue can be obtained, related to financial means for State aid in - existing, proposed or possible - natural resources development programs.
- a) Direct actions. - Through national government agencies and corporations in agricultural, industrial and physical developments.
 - b) Loans and grants-in-aid-for local or departmental agencies or institutions, in programs for advance planning studies in localities or Departments - if needed -; for land acquisition on planned developments; for planning and constructing public improvements; for redevelopment and

clearance - rural and urban - and low rent housing.

National aid as a return to departments - or localities - of revenues obtained through state tax collection to spread costs over form of wealth other than real property.

Thus:

- 3) The extension or diminution (according to the areas) of State contributions, in order to achieve a more equitable distribution of total tax returns and regulations needed to foster local developments where it is deemed necessary.
- 4) Thus it is clear to infer that the effectiveness of tax system could be better achieved if it is coordinated with total development programs, both state, departmental and local levels, contemplating simultaneously the implications of the tax base with the cost of operation and maintenance of continuing and planned services, specifically in their relation with capital improvements through public works program, costs of debt service and estimation of industrial potential, as well other land uses and revenues.

D)- Summary.

In organizing planning functions centralization or decentralization policies should be uniformly carried out at all government levels through different agencies, plans and programs. The degree in which planning functions and powers

can -or cannot- be decentralized depends upon the administrative knowledge, technical training, -civic education and financial ability that lower levels of government have, in order to rule their needs and resources.

Legislation undoubtedly helps to accelerate processes of change toward desired situations and it is an indispensable tool in administering the justice of planning operations. Nevertheless planning cannot be only developed through extension of planning powers granted by legislative changes. It basically requires parallel measures on civic education in democratic planning, through citizen participation in planning programs; administrative changes to perform continued coordination, evaluation and review; availability of technical knowledge and financial means for effectuation and implementation of plans and programs.

A consistent policy at government levels and a simultaneous attack on all these factors may help the attainment of desired objectives of human progress.

APPENDIX AND BIBLIOGRAPHY.

Common abbreviations of Uruguayan Institutions.

I.de C.	-Institute of Colonization.
M.O.P.	-Ministry of Public Works.
M.G.A.	-Ministry of Agriculture.
M.I.P.	-Ministry of Education & Social Welfare.
M.S.P.	-Ministry of Public Health.
M.I.	-Ministry of Interior.
M.I.T.	-Ministry of Industries and Work.
M.R.E.	-Ministry of Foreign Relations.
M.H.	-Ministry of Finance.
A.N.C.A.P.	-National Administration for Combustibles, Alcohols and Portlands.
A.N.P.	-National Port Administration.
S.O.Y.P.	-Official Service of Fisheries & Ocean facilities.
B.H.U.	-Hypothecary Bank of Uruguay.
B.R.	-Republic Bank.
B.S.E.	-Insurance Bank of the State.
S.O.D.R.E.	-Official Broadcasting Service.
U.T.E.	-Electric and Power Services of the State.
PLUNA.	-Uruguayan Airlines.
O.S.E.	-State Sanitary Services and Water Supply.
AMDET.	-Montevideo Transit Administration.
CONAPROLE.	-National Cooperatives of Milk Production.
FRIGONAL.	-National Frigorific (Meat processing and supply).
A.F.E.	-State Railroads Administration.
CNSCP.	-National Council for Prime Necessities and Price Control.
U.R.	-University of the Republic. (High education).
E.S.P.	-Secondary and Preparatory Board (Middle education).
U.T.U.	-Labor University of Uruguay.

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- 33-José Salgado.- "Evolution of Uruguayan People" -Anales de Instruccion Primaria -1941.
These two last deals with origins of Uruguayan settlements and life. The last one put the emphasis on educa-

tional problems.

- 34-J. Quinteros Delgado.- "Situation, fomento y coordinacion de las industrias". Montevideo-1946.
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- 39-Roberto Graña.- "Encuesta continental sobre el consumo de alimentacion y vestido y sobre vivienda popular" 1945.
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- 40-Alfredo L. Weiss.- "La despoblacion de nuestra campaña y la fijacion a la tierra del joven rural" -Revista de la Federacion Rural -1941.
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C) Field studies.

49-Missions of teachers and social students to rural slum settlements areas. 12 missions from 1949 up to day. Studies on statistics, land economics, medical assistance low-cost housing, education and entertainment.

50-National Institute of Low-Cost Housing. -INVE- Basic studies for potential housing development, in diverse areas of the country.

51-Seminary of Social Economy in the Faculty of Law and Social Sciences from 1944 to 1949.- Economic and social studies directed by A. Ruano Fournier, on different rural and sub-urban settlements.

52-Amigos del Niño del Campo.- Now profit organization that developed in 1949 a pilot plan on the development of a sub-standard rural area in Polanco del Yí, preceded by a comprehensive field study covering several technical disciplines.

53-School of Architecture.- ITU. -Census on Cerro Cható, Manga and San Bautista, covering population, housing and major social and economic conditions.

54-Institute of Colonization.- Area studies including geologic, soil, economic social conditions of some areas neighboring or within fiscal properties.

- Related to chapter III and IV.

Legislation in Uruguay

55-Instituto Nacional de Viviendas Economicas- Memoria 1938-1942. and Memoria 1947.
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