

PEDRO SISNANDO LEITE

# THE STRUGGLE FOR REGIONAL AND RURAL DEVELOPMENT IN THE WORLD

AN ACCOUNT OF POLICIES AND RESULTS IN COUNTRIES  
VISITED BY THE AUTHOR



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Fortaleza  
2007

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*In memory of the unforgettable João  
Gonçalves de Souza, the cearense  
from Lavras da Mangabeira,  
inspiration of this book.*





**PEDRO SISNANDO LEITE** is an economist graduated from *Universidade Federal do Ceará*, Brazil, with a postgraduate course in Rural Economics and Regional Planning in Israel. He served as an expert in economic development at *Banco do Nordeste* and for many years he was head of the Agricultural Studies Division of that bank. As a professor at *Universidade Federal do Ceará*, he taught economic development as an Assistant Professor and later as Full Professor in the undergraduate and master's degree courses of Economic Theory and Rural Economics (CAEN). As member of the university administration, he was Dean of Planning for two terms of office—from 1983 to 1987 and from 1991 to 1995. He dedicated a good part of his academic and professional life to studying development experiments in developed and emerging nations, visiting more than twenty countries around the world with that objective. He has published thirty books on problems of economic development, regional planning and development. A highlight of his scientific contribution is the book *New Economic Development Approach and the Conventional Theories*, adopted by many economics schools in Brazil. Another well-known work by Professor Sisnando, published by HUCITEC of São Paulo, is "*Scandinavia: A model of development, democracy and well-being*." Regarding this book, the stern critic Jânio Quadros wrote a note to the author: "Your book is a long and solid lesson of democratic economy. Chapter 9, for example, is a model. I have never read anything with greater pedagogic clarity." The book,



which addresses “Strategy and Planning of Integrated Regional Rural Economic Development” and was published jointly by *Banco do Nordeste*, *Universidade Federal do Ceará*, and the Center for Rural-Urban Studies of Rehovot-Israel, is an international reference. Prof. Sisnando has written many articles and essays for newspapers and reviews. He is a permanent member of the Ceará Academy of Sciences (*Academia Cearense de Ciências*) and the Ceará Academy of Social Sciences (*Academia de Ciências Sociais do Ceará*). He was Vice-President of the Brazilian Society of Economy and Rural Sociology and, as a member of the International Society of Rural Economy, he has participated as guest speaker at several international meetings. He was recipient of a research fellowship from Brazil’s National Research Council [*Conselho Nacional de Pesquisa*] (1988-1992). He held the position of Ceará State Secretary of Rural Development for two terms under Governor Tasso Jereissati—from 1995 to 1998 and from 1999 to 2002. During that period of time, he carried out several programs to combat poverty in Ceará, which became a national reference. The latest book by Prof. Sisnando, *Fighting Rural Poverty*, is about that issue, from both the doctrinal viewpoint and the practical solutions adopted to overcome such a serious and challenging problem to policy-makers of Brazil and other underdeveloped countries in the 21<sup>st</sup> century.

## ACKNOWLEDGEMENTS

This book is dedicated to my patron at the Ceará Academy of Sciences (*Academia Cearense de Ciências*), João Gonçalves de Souza. I took the liberty of recognizing him (*in memoriam*) as a co-author of this book, accepting the responsibility for any failures or conclusions that, in life, the prominent friend would not admit. I had no other alternative, because Mr. João Gonçalves was the one who encouraged me to elaborate this unpretentious testimony about countries that we both know. We have partaken in the exchange of information on educational lessons, which we have learned around the world about regional and rural development. Such experiences might eventually be useful to the planners and governors of our country.

Other reasons have also prevailed so that I could justify my great admiration for this brilliant *cearense* who dedicated himself completely to the cause of economic development. I owe him my first opportunity for training abroad as a scholarship recipient of the Organization of American States, where Mr. João Gonçalves held the position of director. That happened in the mid-1960s. Many years later, in 1977, as a technician for *Banco do Nordeste do Brasil*, and appointed by the Technical Office of Economic Studies for the Northeast (*Etene*), I had the opportunity to help him in the final organization of an important book about the Brazilian

Northeast. At that time, Dr. João Gonçalves was retired from the Organization of American States (OAS). By request from *Banco do Nordeste*, he was writing about life as a technician and public figure which he had experienced as Superintendent of the Northeastern Development Office (*Sudene*) from 1964 to 1966, from where he was invited to become Minister of Coordination of Regional Agencies during President Castelo Branco's administration.

The idea to write this book came to my mind on that occasion. Dr. João Gonçalves intended to include, in his work about the Northeast of Brazil, observations based on visits to several developed countries, with stories of success regarding regional development. Lacking the time to finish his work, plus my advice to him to write some exclusive document later on about international experiences, made him change his mind.

It was on that opportunity, therefore, that João Gonçalves—knowing of my wanderings around the world—suggested that I write such a report. He then said: We cannot refrain from sharing our observations and conclusions to the benefit of those who might be interested in understanding them and using solutions already proven as valid in other countries.” In order to encourage me on this project, he provided me with some important notes he had taken during his study trips as ambassador to the OAS.

More than twenty years have gone by since then. I continued to walk upon the paths followed by Dr. João Gonçalves before, always keeping in mind the project suggested very sincerely by the friend whom God has taken from us to depart on the longest journey in his life: eternity.

Years went by and I was always waiting for an opportunity to dedicate myself to the task of writing the stories lived in the past and at each opportunity of our travels. Thus it was that I recently made the decision to review my files and set out to work.

I could not refrain from thanking the Ford Foundation for sponsoring a long trip around the world to know all of the projects on the Green Revolution in the 1970s. As Head of Division of Agricultural Studies of the office of Economic Studies (*Etene*) at *Banco do Nordeste*, I participated in programs of study trips and training in several countries of the developed and underdeveloped world. The Federal University of Ceará (*Universidade Federal do Ceará*) has offered me support for study missions abroad in the capacity of Full University Professor of Economic Development in the Post-Graduate Program of the Master's Course of Economics (CAEN). I also traveled extensively on my own. I say that to justify the diligence and satisfaction that I have in reporting such a valuable set of information to those who wish to know and take advantage of what the history of development offers.

I thank my dear wife and economist Mirna for her understanding and resignation, who so affectionately accompanied me on so many trips and also retired to her bedroom at home while I devoted myself to changing notes and remembrances into this modest book.

I also owe an inestimable debt of gratitude to *Banco do Nordeste*, an education school for my personality and knowledge of economy and the world that surrounds us. The consolidation of my character, spirit of teamwork and feelings of institutional commitment are other values that

have helped me in a decisive way in my lifestyle and in my responsibilities in the public offices that I have held through these many years.

To Professor Roberto Smith, President of *Banco do Nordeste*, I extend my embrace of friendship and sincere esteem for his kindness in preparing the presentation of this book and making its publication possible. As academicians, we have had the opportunity to work together for many years as professors at the Master's Course of Economics (CAEN) at *Universidade Federal do Ceará*.

The support of my collaborator, Dr. Eveline Maria Lins Teixeira, who formatted and typed the original manuscripts of this work, was decisive in making the organization of this book possible.

## PREFACE

My original intellectual upbringing was positivist and based on the conviction that science is the source of knowledge. At *Universidade Federal do Ceará* I joined the Department of Economic Theory, where I taught disciplines within this context. Through my parallel experience of being an expert on economic development at *Banco do Nordeste do Brasil*, I began to understand that the practice of the economic process was indeed what provided a foundation to the formulation of principles and the laws of economics, which I professed and taught at the academy. In other words, economic theory, differently from the exact sciences, is subject to the changes that rule the social sciences.

This book, therefore, is not about theory. It tries to explore and rationalize the experiences of regional and rural economic development under the historical and geopolitical conditions of countries selected for that purpose. The experiences and specific conditions of each case, however, provide a network of principles and guidelines that can serve as guidance and are adapted to universal practical application. Even so, we must be careful not to fall into economic determinism, which simplifies the real world to the detriment of specific realities of each historical situation and geographical space.

Regional disparities represent a worrisome factor in the history of the economic development of many countries. In different forms, low incomes, high unemployment rates and poverty represent external expressions of economic stagnation in several regions of those countries. According to the peculiar conditions of each case, there are different problems demanding a solution as well as different instruments to solve them.

Of course, development issues in the semi-arid zones of Australia or Israel do not appear similar at all to those of the occupation of the new frontiers of Canada or the semi-arid areas in the Northeast of Brazil. The problems that originated from industrial concentration in England or Japan are completely different than those related to urban concentration in Paris or the underdeveloped region in southern Italy.

By visiting and observing many such experiences up close, I thought that the examination of some of them could be of interest to the Northeast of Brazil. I found that, in many cases, the deficiencies arising from the geographical remoteness of such regions or the excess labor available is used in the regional development strategy. In that case, depending on the conditions of each country, the most immediate objective of development-based politics can be that of increasing job opportunities, balancing regions, decongesting the industrialization process, or recovering semi-arid areas through irrigation. Whatever force or motivating cause of the regional plan a country adopts, there has prevailed the idea that it is not about helping problem regions through resources, but rather about making them

grow through resourceful processes of collaboration among the interested parties. Usually such plans are continuous and lack a great amount of resources. Some are of a regional nature, like those of Brazil and Italy; others are vast programs of irrigation, like the experiences of Israel or the state of California in the United States.

There are no universal models to define the regional development strategies. According to renowned Prof. Stefan H. Robock of Columbia University and former chief economist of the Tennessee Valley Authority: “National policies vary according to the level of development of each country” (ROBOCK, 1959). In other words, the regional development programs depend on the political system, social values and targets, geographical conditions, resources and potentialities.

By and large, the regional development targets try to reduce regional disparities of income, achieve balanced regional development, and provide economic help to the most backward and insufficiently developed regions. The inevitability of regional disparities has been a theme for many debates among specialists on the subject.

Political reasons and social justice indeed determine regional development activities and priorities. Disparities among regions can generate unbearable tensions and slow down the maximization of the national growth rate. There is also the argument of national defense in border zones and the search for the well-being of population as a gesture of patriotic solidarity.

For a better clarity of ideas and facts to be presented in this book about the experiences of regional development around the world, it is worthy to clarify that disparities of



development differ from country to country. The low income levels of a region can be motivated by gaps in the growth rates, because they are historically depressed regions, pioneer regions, or because they are predominantly overcrowded agriculture regions or demographically less densely-populated regions.

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## PRESENTATION

*The Struggle for Regional and Rural Development in the World* is yet another publication of an economic and social nature by the renowned Professor Pedro Sisnando Leite.

It results from study travels to several countries around the world during the second half of the twentieth century. Through his developmental view, the author analyzes the behavior of more advanced countries as well as regions in the process of industrialization, such as: Australia, Canada, United States, France, Great Britain, Israel, Italy, and Japan, in addition to Scandinavia and the European Union.

For each of those places, he reports on regional and rural development, showing the actions aimed at reducing the economic gaps among regions and between the rural and urban environments.

The objective of this study is to make it possible to use these experiences for the Northeast of Brazil by taking into account the positive lessons and limitations in the transfer process through the region's own characteristics.

Even though the regional gaps have been seen historically as a normal stage within the development process, actions have been taken to reduce the gaps in social indicators such as education and health, in order to subsequently achieve a more equitable distribution of income.

The author focuses on rural development with the implementation of policies that promote a substantial increase in the productivity of land and labor so that the evolution of agriculture occurs simultaneously with the industrial and services sectors.

Overcoming the backwardness of the Northeast in relation to the other Brazilian regions must take into account the historical, cultural, social, economical, international and political factors, as well as the inappropriate allocation of resources that are characteristic of the region.

Certainly his work will contribute towards subsidizing the elaboration of policies and programs aimed at the process of regional development, especially in the Northeast of Brazil, through the observation of successes and errors verified in more-advanced societies.

**Prof. Roberto Smith**

PRESIDENT OF BANCO DO NORDESTE DO BRASIL

## REGIONAL DEVELOPMENT IN THE WORLD ECONOMY

### The International Economic Inequalities

Industrialized countries with high standards of living are very few in number. However, around 70% of the world population lives in the underdeveloped countries in Africa, Asia, the Middle and Far East, and Latin America.

The first-world countries are in continuous economic growth while in the majority of underdeveloped countries, the economic and social progress has been, on average, slow or tending towards stagnation.

As a result of that situation, the international economic inequalities between the wealthy nations and those from the third world have continuously increased.

Another peculiar characteristic between these two blocs of countries occurs internally. The developed countries have presented, in recent decades, a reduction in their regional and social inequalities, while in the underdeveloped countries, gaps between these areas widen and the huge social differences continue.

Lawmakers and people from the underdeveloped countries are aware of such tremendous international and internal disparities, which may increase in the future unless political measures are adopted to neutralize such tendencies.



## The Regional Problems in the Developed Countries

In many industrialized countries, however, enormous disparities are still recorded between less favored areas and the rest of the economy, especially in regards to the standard of living and the prospect of technological advance.

According to Myrdal (1968), even in countries like the United States and Sweden, where several advantageous conditions for economic growth were present, economic development has not occurred in the same way and simultaneously in all regions. Existing studies show the subsistence of great regional problems during the process of economic growth in those countries. In the United States, for example, the Southern region was backward in relation to other regions until a few years ago. The same thing happened with large areas of New England, which until now have not managed to emerge with the same plenitude of other regions in the North. The disparities between the backward South and the developed North of Italy are very much known internationally.

## Challenges in the Underdeveloped Countries

The countries currently classified as “underdeveloped” have greater difficulties in terms of regional development than those countries today classified as “developed” had at the moment they began to advance economically.

The level of economic advance of the current underdeveloped countries is relatively lower. The relation

between natural resources is also much more unfavorable. They do not have international free markets of goods and capital and do not count on an outlet to the emigration of excess population as happened with the majority of the European countries during their industrial revolution. They have not inherited traditions of rationality so important in the economic history. Nor do they have opportunities to expand as industrialized centers, as happened in the past.

The only advantage, which the current underdeveloped countries count on, is the possible access to technical and scientific knowledge produced in the developed countries. Very often, however, such scientific patrimony is not suitable for use by the backward countries, which need to produce their own knowledge that is adapted to their values and economic conditions.

The adoption of regional development programs in the underdeveloped countries increased in importance in the 1960s. Among the most well-known of the extensive list of programs for that purpose, in addition to those in the Northeast of Brazil, are the following: the development plans for the Cauca Valley in Columbia; several projects located in the Domar Valley in India; in Puebla, in Mexico; in the Jordan Valley, in the Middle East, in Larisch, in Israel and in the Mezzogiorno Region in Italy.

The technical debate and the political interest in regional development, however, have cooled off lately in Brazil, especially within the academic scope of universities. Once again are in fashion Prof. Albert Hirschman's ideas that "the growth inequality is an inevitable condition and concomitant to growth itself" (HIRSCHMAN, 1980). The late Prof. Roberto

de Oliveira Campos, as well as Delfim Neto, in turn, resumed the argument that the greatest possible amount of investments must be concentrated in the most advanced areas, and according to Delfim Neto, so that such resources multiply rapidly in order to allow for more abundant distribution in the future. Professor J.G. Williamson in his work *Regional Inequality and the Process of National Development* also helps to reinforce that opinion. He thinks that instead of divergences at the development inter-regional levels “divergence becomes the rule, with backward regions closing the development gap that exists between them and the already developed regions.” (WILLIAMSON, 1995).

According to studies by the Organization for Cooperation and Economic Development (OCED), all countries of this community have regions, which have not fully participated in the national development, sub-utilizing resources, especially the labor force.

In view of that, the OCED countries in the last decade have started to consider regional development as one of the indispensable elements in their economic development policies. The renewed attention to this problem is aimed at neutralizing the centripetal forces inherent to economic and technological development, which tend to widen differences between parts of a same country, between cities and the rural areas, among cities themselves, creating tensions and distortions in the process of harmonic growth.

Many negative factors have contributed for this phenomenon to happen in the aforementioned countries, most mention-worthy among which are the shortage of natural resources, the unfavorable climate and other

geographical and historical elements. Such adverse factors have caused the appearance of other negative conditions, such as the inadequacy of social and infrastructure services.

It is also a good idea to point out that the regional development policies in the industrialized countries concern other issues besides the problems of the depressed areas or areas of great economic concentration.

In many cases, in fact, there has been a change in emphasis of policies. Such policies have started being stated more in terms of economic development than in terms of aid to depressed areas.

## **Rural Issues in Economic Development**

Western Europe had undergone generations of slow growth between traditional agricultural economy until it reached the industrialization and capital-intensive agricultural phase.

England was the leading country in technological modernization and change in the institutions and conditions of the rural economy. Agriculture, at its initial stage, provided plenty of capital for the industrial revolution and the economic development of England, as well as for its own growth and the increase in productivity. With its growing and more efficient agriculture, it became possible for England to provide inexpensive food for the growing population that was becoming rapidly urbanized, with advances in medicine as well.

During their growth periods, the European countries were usually favored by the complementary importation of

food and raw materials from the colonial areas. That is not valid nowadays for Brazil nor for other underdeveloped countries in Latin America, which have a foreign currency deficit and are forced to export their essential raw materials, usually at depressed prices.

In recent decades, with the increase of efficiency in agriculture and greater advances in industry and services, there has been a relative reduction of agricultural sector in the increase of total income of those countries. In the same manner, with the increase of capital intensity and technological innovation, labor in agriculture has fallen drastically, while production and productivity have increased.

Differently from what happened in Europe, the United States, Canada and Australia (for example), the prevailing conditions during the initial periods of development were very different. These countries were relatively young and had small populations with low food demands and a great expansion of the producing areas, which generated an excess of agricultural products. In addition, they have inherited many advantages of the European culture, without being subject to restrictions of the historical traditions of slavery, burdensome land-leasing systems and traditionalism in the productive processes. At the same time, they had the benefit of counting on market for exporting their products and raw materials.

According to the experience in the development process of the countries studied in this book, several common characteristics occurring in the rural sector can be highlighted. A great problem, which all these countries faced, for example, was the adjustment of human resources

released for agriculture, vis-à-vis the rapid rural advance, and their allocation to other activities. On the other hand, the key to success in the agriculture of those countries was the production per worker, rate of increase in competitiveness, and increase in profits. The best results achieved in this particular point are explained on account of the producers having used more arable land per worker and the application of more capital. Exceptionally, Japan and Israel were the ones that obtained a high value of the production per worker, in spite of being the countries of the lowest relation of arable land per capita. In compensation, they were the countries with the highest rate of investment in agricultural activities. The resources used in those two countries in technology and training of human resources are among the highest in the world.

A high value of the agriculture production was associated with the high levels of development in other sectors. In other words, rural growth occurred in parallel with industry and services. That is an indication of the existence of an interdependence function between the economic sectors, each one contributing to the growth of the other. The growth of the non-agricultural sectors has provided greater markets for the agricultural products well as services for agriculture. In general, countries with better performance in agriculture counted on better roads and transportation facilities, electric power, schools, hospitals and research and technical assistance institutions. Such services appear both as needs and products of development.

The production performance and advance in the rural sector are also associated to changes in the quantity and

quality of human resources, land, capital, market facilities, adequate credit supply, technical knowledge and offering of incentives. The best performance of one country in relation to another or in relation to the past is due to an improvement in this complex whole. Another important factor for better results is the will of their leaders and their people to make a greater effort and sacrifice for this objective. In some cases, a modality of effective support was through the pricing system, leasing system and programs of a fiscal nature.

When the issue is profits from agricultural activity, opinions say that this has originated from the use of fertilizers, better varieties, pest control, improvement in the crop lands and scientific use of water when dealing with irrigation. In some countries, profitability has been achieved through small cost improvement, such as better crop lands, control of noxious weeds, technical support or educational and training programs.

The lessons from such experiences for Brazil and for the Northeast are that there is a need of quality extension personnel and technicians trained in research who can help in the application of resources to accelerate growth and profitability of agriculture. The essential conditions of infrastructure and supporting services to producers cannot fall short, nor can the will of the government to prioritize the agricultural sector within the general policy of economic development of the nation or the region.

The rural issue gets special attention throughout this entire book. This emphasis is due mainly to two reasons. As Myrdal (1968) says, "it is in agriculture where the battle for long-term economic development will be won or lost."

Economic history also shows that the agricultural revolution in most of the developed countries today, as has already been commented, preceded the industrial revolution. What happened in England is proof of that. Another motivation for the concern for agriculture is the search for the original causes of poverty in the underdeveloped countries today.

I have no doubt that the great obstacle to the general development of the Third World Nations is the backwardness in agriculture. It is also in this sector where the majority of the poor in these nations are found. The industrial sector is a dynamic, accelerating, and transforming factor of the economic growth structures, but it is also the main source of concentration of income and only slightly elevated cost per job created.

In view of that, the knowledge of the pitfalls and strategies used by the countries studied in this book to modernize and transform the rural sector into the process of regional development has become one of the targets of this book.





## AUSTRALIA: ECONOMIC USE OF SEMI-ARID REGIONS

### Main Characteristics

The Commonwealth of Australia is located in southeastern Oceania. Its total area is 7,682 km<sup>2</sup>. It is the sixth largest country in the world in size. Australia's area is five times larger than the Northeast of Brazil and is equal to that of the United States, excluding Alaska.

Average annual rainfall in Australia is 420 mm and it has one of the highest evaporation rates in the world. More than 20% of Australian lands are desert, but together with the neighboring areas of arid characteristics, that proportion rises to more than 66% of the continent. In those areas, rainfall is low or non-existent. Just 6% of the total area of the country is arable, i.e. 46 million hectares. The territory is made up of plateaus, snow-covered mountains, deep plain basins, rainforests, and innumerable beaches.

The population of Australia has grown significantly since the arrival of the first vessels in Sidney in 1788 with 1,487 Europeans. At that time, the aboriginal population was around 800,000. At present, about 19 million people live in Australia, with 1.7 % native populations. In the last 20 years, the population in Australia has grown by four million. About 88% of that population is urban, considering

cities with over 100,000 people. Demographic density is 2 persons per km<sup>2</sup>, compared to 85 in neighboring Asia.

The Gross Domestic Product (GDP) was US\$ 310 billion in 2000. Per capita income was US\$ 20,000 for the same year. It is ranked ninth in the world, being close to the levels of Germany and France.

Australia is a parliamentary monarchy organized into six States and Three Territories. Since 1901 it has been part of the Commonwealth. It became independent in 1942, but its Republic continues to have England's sovereign—currently Elizabeth II—as its formal Head of State.

The economic history of the continent began in 1770 with the arrival of the English explorer James Cook. The establishment of agriculture was the main concern of colonizers in that initial phase, because the entire food supply came from England. Another economic interest was the sheep herding for the production of wool. Then there was an expansion of pasture land for extensive cattle raising for the production of meat. However, it was in the second half of the 19<sup>th</sup> century that the Australian economic growth took-off with the gold rush. Production of this noble mineral was 255,000 tons in 2000, followed by the production of iron, oil and diamonds as a support to the industrial sector.

The main agricultural products are sugarcane (33 million tons), wheat (6 million tons), barley (5 million tons) and other cereals and fruits. Australia's main strength, however, is livestock, with a national herd of around 135 million sheep, 26 million beef and dairy cattle, and the production of 218,000 tons of fish. There are nearly 146,000 farming and livestock breeding establishments, employing

about 400,000 people, corresponding to 2% of the employed persons. As can be inferred, the size of the ranches is rather large, but the prevailing exploration modality is the family agriculture model. The contribution of the primary sector to the national income is around 3%.

Regarding industry, the main fields are iron works, food products, chemicals, transportation equipment, and a wide range of products for internal consumption. Industry employs around one million people.

On average, Australia's exports amount to US\$ 75 billion annually. Historically, agricultural products have contributed to 80% of this total, even though recently, industrial products are gaining ground. Australia is among the world's largest exporters of red meat and wheat. The destinations for these products are Japan, Korea, New Zealand and other countries of Southeast Asia.

## **The Work of Government and Private Industry**

In Australia there is no national or regional development plan. The Government's work is, however, rather active in certain sectors, without a concentration of efforts around specific situations. Even so, the country presents a solid experience as to the preservation and economic use of the vast arid and semi-arid zones of its territory.

By and large, Australia is the driest continent in the world, and the few water resources it has are affected by the intense evaporation, which exceeds the amount of annual rainfall. With more than 80% of its Northern territory

located in the tropics, its driest region is located around Lake Eyre and to the south, with annual rainfall of only 130 mm. Thus, the agricultural and livestock-raising activities have been affected by droughts and by erratic rainfall conditions ever since the beginning of European colonization.

Over the last one hundred years, many droughts have castigated the country, including the droughts of 1967, 1971-1972, 1982-1983, 1994-1995 and 1998, which has led the Australian government to ration the use of water for irrigation, for industries and even for domestic use. Water deposits in crystalline soils, as in Brazilian Northeast, are limited and controlled for animals and domestic usage. But there is a large artesian basin of fresh water, which has been used for different economic purposes including almost half of the island, from the Center to the East. There are more than 300 multi-purpose reservoirs, with a storage capacity greater than 55 billion cubic meters, and the largest reservoirs are part of the Snowy Mountains Hydroelectric Scheme, to the East.

The Australian continent has two million, four hundred thousand hectares of irrigated land, mainly by overhead and sprinkler irrigation, two thirds of which are located along the banks of the Murray River and its tributaries. The main irrigated products are rice, sugarcane, wheat, fruit, and fodder.

In comparison to Brazil, Australia has ten times more irrigated land than our country, covered by an immense green quilt of grazing lands, fruit crops, horticulture, rice, wheat and sugarcane. New experiments are currently being conducted to irrigate corn, sorghum, soybean and tropical

fruit crops. With vast irrigated grazing lands, Australia has managed to become the world's largest breeder of sheep, with the highest density of animals per area, mainly in the semi-arid areas of the states New South Wales, Victoria, and South Australia.

Some scholars of economics in Australia have the opinion that intensive agriculture is anti-economic and needs to be subsidized. The controversy is the same one that has been discussed in the Brazilian Northeast for decades. That is, whether irrigated agriculture is a profitable economic activity here or not. Nonetheless, Australian irrigated agriculture is gradually occupying the semi-desert regions in the North, by means of controlled and increasingly reduced production costs.

Even though such costs tend to increase, as the exploration of subtropical areas moves from the eastern portion to more remote parts in the tropical North, the thesis is that subtropical areas must be developed in the first place. The government, however, works simultaneously in all regions of potential, led by political as well as economic considerations. At present, technicians and politicians from all tendencies defend that Australia must not neglect its efforts to incorporate the semi-arid North into the national economy. Using water for electrical power generation, irrigation, regularization of rivers and other purposes is part of the official policy of fostering national wealth. Water resources are what Australians search for underground, in reservoirs, and in the thawing of Snowy Mountains.

Near the East coast of Australia stands a huge mountain range, with altitudes reaching up to 7,000 meters,

the higher altitudes of which are snow-covered. Several rivers flow out of these mountains towards the Mid-West, traversing dry regions and fertile plains. Before trickling through the desert towards the West, these waters are first captured and transformed into hydroelectric energy to supply cities and rural areas. Then they are used for irrigation through the Snowy Mountains Hydroelectric Authority, with objectives similar to those of our Sao Francisco River Hydroelectric Company (CHESF). Created in 1949, it is now an integrated system covering an area greater than 3,200 km<sup>2</sup> of mountainous terrain, across which run 60 aqueducts, 200 km of tunnels, 25 large reservoirs/pumping stations and 10 major hydroelectric plants. The power generating capacity is 4,500,000 kW. The system also permits irrigation of 200,000 hectares of previously dry land, able to produce around 600 million dollars a year, besides favoring the installation of industries and the creation of thousands of direct and indirect jobs.

The main responsibility regarding the use of water for economic purposes belongs to the states. There are several cooperation schemes between the federal and state governments. The structure of the irrational program is supported by the specialized sector of the Commonwealth Scientific and Industrial Research Organization (CSIRO). A kind of National Research Council, which is a national organization dedicated to pure and applied research. CSIRO owns 120 laboratories and employs 3,000 scientists and researchers who carry out investigations in the fields of genetics, health, atmospheric physics, animal physiology, applied chemistry and physics, oceanography, irrigation,

land management, mechanical engineering, soils, tropical agronomy, and several others.

Another outstanding sector is the one relating to city planning. Close to the agro-industry program, the Australian government has since the 1970s been actively present in the realm of urban and regional development, with decisive influence on the territory occupation policy. It is worth remembering that 95% of its 19 million inhabitants live in urban centers, with this criterion varying from towns with one thousand inhabitants to metropolitan urban centers such as Sidney, Melbourne, and Canberra. The occupation policy of empty space is basic. The program attempts to solve social, economic and environmental problems in the large cities. Actions have been adopted to tackle problems relating to the distribution of social and recreational facilities, job opportunities, mass transportation, and environmental deterioration.

The regional policy plans new cities, for which the experience from the construction of Canberra has been very valid. Another fundamental instrument of this policy is the financial assistance to the state governments for the acquisition and development of residential areas located in the periphery of the large urban centers or in outlying areas, in order to endow them with school facilities, employment opportunities and social services. These major projects of integrated regional planning count on a Secretariat of Regional and Urban Development. This government body is in charge of implementing measures aimed at ridding the large cities of congestion and reinforcing non-metropolitan centers. The financial



assistance of this federal department requires a counterpart of the states.

In synthesis, through specific policies and extremely simple and functional mechanisms, the Australian government, has been successfully confronting two of its biggest internal problems: the occupation of vast semi-arid and arid areas with irrigation projects technically conceived and assisted; and urban and regional planning of its new cities.

There are profitable lessons here for the Northeast of Brazil with more than 800,000 km<sup>2</sup> of semi-arid areas and where large urban and metropolitan centers are expanding without adequate planning.

The study visit that I made to Australia in 1999 helped me confront *in loco* the information and knowledge of the economy and regional development of that country that had been provided to me by Dr. João Gonçalves de Souza many years before.

## CANADA: INCENTIVE TO REGIONAL DEVELOPMENT

### Introduction

Canada is a developed economy with the third highest Human Development Index (HDI) in the world. In terms of territory, it is the world's second largest country, with 9,970,000 km<sup>2</sup> and its population totals 31.3 million people. The greatest concentration of inhabitants in Canada is along its 6,000-kilometer border with the United States. Around 80% of these people are located in cities and their life expectancy is 82 years. In the South are the Great Lakes with dazzling landscapes. In the North are the rocky mountainous regions. The main cities are located in the East. The frozen region is almost desert with lakes and vast forests.

Canada's Gross Domestic Product (GDP) was US\$ 700 billion in 2001. The per capita income was around US\$ 22,000 in the same year. The Gini Index was 31, against 60 for Brazil. The 10% richest people concentrated just 23% of the total income, much below Brazil, with 48%. On the other hand, the 10% poorest people apportion 2.8%; in Brazil this figure is only 0.9%. The labor force is comprised of 17 million people, out of which only 400,000 work in agriculture—which is highly mechanized and modernized—employing only 2.4% of the total population. The irrigated area is relatively small,

about 1.5 million hectares, against 5 million hectares in Brazil. The structure of income is comprised of 3% agriculture, 33% industrial sector, and 64% services.

Politically, Canada is a Parliamentary Monarchy, with Queen Elizabeth II as its sovereign, as well as a Governor General and a Prime Minister. Tradition holds that Canada was discovered in 1497 by Giovanni Caboto, known in English as John Cabot (an Italian at the service of the English crown). It was colonized by the French, and became part of the British Empire in the 18<sup>th</sup> century. Canada's independence occurred in 1817, subordinate to the United Kingdom.

## **Incentive to Regional Development**

Canada is a country of vast patrimony and natural wealth, endowed with rising prosperity, even though it is developing unevenly. On the one hand, the industrial and metropolitan centers grow and become more powerful. On the other hand, the smaller towns and more remote regions feel the impoverishment of their best resource—the young population—through the rural-urban migration. In that aspect, the situation is equal to that of the Brazilian Northeast in regard to the rural areas and the metropolitan cities of the same region.

The late and deeply-missed Dr. João Gonçalves provided me with some valuable information about the regional development experience of Canada, which I tried to incorporate into my own observations.

The 1950s and 1960s assured unto Canada a period of unprecedented advancement. From 1960 on, the

population increased rapidly and private investments increased, predominantly in industry. At the same time, the regional economic disparities became more severe with regions advancing unevenly. To confront these problems, the Canadian government created new instruments in 1969 through the Law of Regional Development Incentives and the executive agency of that Law—the Department of Regional Economic Expansion (DREE), which was first headquartered in Ottawa, with offices in Montreal, Toronto and other cities.

The department functions based on general agreements forged with the provinces to carry out development projects through what are called “action pacts.” Practical formulas to give assistance to industrial, forestry, highway and fishing sectors, as well as to community services such as water, sewage, etc. The DREE has been reviewed along the years by Canadian Parliament, which has extended the validity of its provisions to the present day. The subsidies assured by the DREE have reached billions of dollars in favor of industrial and commercial companies of all types and sizes from the private sector. Investments have created thousands of new jobs in strategic areas of the country. Depending on the type of project and the number of jobs, which the company may create, the government offers three types of subsidies: reimbursable, non-reimbursable, and conditionally reimbursable.

Through an agreement with the provinces, the DREE—by means of coordination— took over certain federal programs concerned with the fomentation of industrial and

agricultural companies, rehabilitation of areas, assistance to indigenous populations, and conduction of applied research. Since the needs of the country vary due to the large regions, the DREE stimulates initiatives directed to the distribution of wealth, relocation of part of the population and opening of job opportunities throughout the country. Such programs search for one more type of assistance in the Atlantic Provinces, where Quebec is located. It takes the form of human relocation in the Western region, where the urban-rural imbalances become accentuated, and the form of income distribution in Ontario's periphery, around which there has been greater concentration of wealth. Although the agreements entered into by the DREE with the provinces are guided by similar reference terms, they take into account the needs and the potential of each region or zone as well as the investment opportunities.

This is the way in which federal resources are applied in each province, based on a well-defined program, established disbursement timetables and mutually specified federal and provincial commitments.

The agreement defines a development strategy based on an analysis of the economic and social situation of the province and explains the norms and ways to vitalize the potential of each one. The different federal ministries seek to work based on the provincial and regional plans, making them compatible to policies and resources. In Newfoundland, the fishing industry is stimulated. On Prince Edward Island, the Agreement tries to stimulate the improvement of planning techniques as such. Nova Scotia's concern is the urban expansion and the setting up of a

network of infrastructure works in nearly all regions. The Atlantic region has advanced very quickly. Agreements are reviewed periodically, in light of the specific and changing needs of each region.

As has been explained before, the DREE works in a decentralized manner in four regions: Atlantic, Quebec, Ontario and the Western Zone. Each one has one office, headed by someone in charge of planning, carrying out and managing policies and activities in the respective region. More than 70% of technicians and public servants in the above-mentioned department are placed in the provinces and in rural areas. The provincial directors of this regional agency of development have the authorization to approve projects up to a certain financial level. They have concluded dozens of agreements between the Federal government and the provinces, earmarking resources for application within a five-year period. The agreements also include other federal, provincial and private funds. This program in cooperation with regions and provinces is causing a positive impact on the fomentation of industry, agriculture and fishing.

## A New Agency for Development

In the last few years, the Development Agency of Canada has directed its actions towards two fronts of activities; one of the objectives is to stimulate business development. Another one is to increase the development of the more backward regions, especially Quebec Province, where there are thirteen of the Agency's offices. As to the

first objective, the Agency's work strategy is to increase the amount of information and prioritize the installation of undertakings that have a multiplying effect. With the aim of obtaining greater diffusion of growth and employment, the Agency supports small enterprises of local initiative in all possible ways.

The strategies of economic development are focused on new activities and undertakings and an increase of regional projects. There is a great concentration of resources and technical support in the strengthening of comparative advantages of less- developed regions based on the production and dissemination of technological and market information.

The Economic Development Agency of Canada is a public institution with funds originating in the Canadian National Treasury. The seven main guidelines of action are put into practice through specific programs, aimed at concentrating efforts and resources.

Professors Alexandre Barros and Isabel Raposo of *Universidade de Pernambuco*, in a study on regional development in Canada, highlight the following programs: 1) Support to small and micro enterprises; 2) Support to strategic initiatives to generate impact on the regional economy; 3) Assistance to communities aimed at helping them in their own development; 4) Financing to fishing communities that have been affected by the restructuring of the fishing industry; 5) A program aimed at the economic development of fishing the economy of Gaspé and Madeleine Island; 6) Financing of infrastructure works in the region of Quebec; and 7) A program aimed at stimulating the participation of credit institutions

to expand available funds for creating small enterprises (BARROS; RAPOSO, 2002).

As an example of the results achieved by the regional development agency, it can be mentioned that in 2000 and 2001, 94 enterprises were created in the technological sector and 1,168 projects were financed to create and expand small enterprises. An additional 1,219 small and medium enterprises have expanded their competitiveness with the support of that Agency, as well as 162 projects for the development of new products, services and processes—all this in relation to the development of enterprises. As to regional development initiatives, around US\$ 400 million were financed in the two years mentioned above, aimed especially at increasing regional assets as well as production and dissemination of studies and information to strengthen the local comparative advantages.

In summary, Canada has been adopting a flexible regional development policy, which, in practice, translates into agreements forged with regions and provinces, aimed at stimulating wealth according to the needs, vocations and potentialities of each one. The agreements vary from area to area and have favored strong development in that country, by creating thousands of new jobs, considering one specific economic sector or a group of sectors within the setting of a particular region.



## THE UNITED STATES OF AMERICA: REGIONAL DEVELOPMENT AND MODERN AGRICULTURE

### The U.S. Economy

Many programs of a social and regional nature are being implemented in the United States. These are initiatives aimed at correcting economic imbalances, using under-utilized natural resources, or decentralizing industrial activities and excessive urban concentrations in the large megalopolises.

In this chapter, two of the main programs in the United States will be discussed, according to criteria for selecting regional development experiences in comparison with other countries with similar initiatives, and which have been visited and studied by the author. The observations below about the United States economy are aimed at contextualizing the regional and social policies approached. The references and comments about American agriculture, especially about agriculture in California, are part of the purpose of this book of highlighting international experiences relative to this sector, which serve as reference to the challenges that the Northeast of Brazil will have to face in the coming years.

Since World War II, the accelerated growth of the U.S. economy has helped the country to become the world's

foremost economic power. With the fourth largest territory of the planet, the United States had around 280 million inhabitants in 2000, out of which 140 million were working. Demographically, it is an urban country, because just 6,325,000 people lived in rural areas, where only 2% of the economically active population works. They are 3 million people occupied in the agricultural sector (8.6 million people work in agriculture in the Brazilian Northeast alone).

In 2003, the Gross National Product (GNP) was around US\$ 10 trillion, greater than that of Japan and Germany combined, amounting to  $\frac{1}{4}$  of worldwide production. Per capita income is US\$ 34,200, comparable only to Switzerland, Japan and Norway. From a life quality point of view, the Human Development Index (HDI) reached 0.940, rivaling only Canada, Australia and Norway. The United States is the absolute leader in the world production of food, even though agriculture only accounts for 1% of the total income. In its foreign trade, the US presents an export volume of one trillion dollars, of which US\$ 950 billion is merchandise.

The United States is administratively divided into 50 states, being the Eastern seaboard the most populated and industrialized, while the largest agricultural areas are in the Central Plains and South, and the lowest economic development rates as well.

It was after the Civil War (1861-1865) that slavery was abolished and the beginning of the industrial development as well as the construction of railways began linking the states from coast to coast. The spatial map of the economic development of the United States began to be designed

during this stage of territorial occupation and of the market forces on which the growing society was based.

In the course of development of the United States, there were periods in which the forces of economic expansion were relatively weak. During the 1930s, for example, when conditions were fragile, the governmental policies tried to stimulate the economic development process. In the following decades, when the positive expansion factors and the market expectations were strong, the public policies were quite efficient. The rapid growth of the American economy has continued during recent decades, motivating the substantial improvement of the standard of living of the majority of middle class across the country.

Although the situation of those people was satisfactory according to international standards, 30 million people currently live below the poverty line in the United States, mostly residing in the less developed regions or working in low-paying activities. Also in this group are also the unemployed, people of color, the physically impaired, and the elderly. These people reside in both rural and urban areas. Around a half century ago, in 1956, approximately 4.6 million or 12 per cent of all non-agricultural families had a total income lower than US\$ 2,000 (at 1956 prices). In addition, around 1.1 million, or 22 per cent of all agricultural families had an income lower than US\$ 1,000. At that time, the per capita income of the United States was US\$ 6,380 and the population was 165 million people.

The poverty problem in the United States is old, but the situation of people in that condition is currently quite different than what it was in the past. Until the last three

decades, approximately, the wages of most manual workers was inadequate for a desirable level of life. At present, the average income of those under the poverty line is well above the subsistence level, and families usually count on more than one person with income in the family unit. Now the residual or marginal poverty is found in special situations. In this case, the most prominent are sub-marginal farmers, residents of chronically poor areas, certain groups of elderly people, and families whose heads are physically unfit to work full time or with full pay. Of the heads of family in the segment classified as poor, 35% were over 65 years of age or were widows/divorcées with children to raise. Recent immigrants from underdeveloped countries, including Puerto Rico, make up a high number of urban families with low income and who do not have the qualification required for better wages on the job market.

Through the experience of the United States, isolated economic growth was not enough to solve the social problems and the universal conditions of poverty. In view of that, the U.S. federal and state governments adopted positive measures through tax policies and the adoption of social work programs. Those initiatives designed to improve abilities were prioritized so that people were able to get better jobs and achieve better standards of living. Other political measures were adopted to improve the distribution of income and reduce poverty in the United States.

During the last decades, strict tax policies and progressive tax rates for the wealthy have been adopted to earmark those resources to social programs and investments, which could reduce the income gaps among

families and social groups. Studies carried out by economists Gerbard Colm and Theodore Geiger, from National Planning Associations, point out that improvements in income distribution and combating poverty in the United States depend on the continued economic expansion and the provision of opportunities for productive jobs and social work to families who are in the base of the pyramid, both in urban zones and rural areas (COLM; GEIGER, 1968).

In fact, the government of the United States has developed programs for social and economic well-being aiming to obtain a form of development that reaches the entire society. For example, programs to expand full-time and part-time jobs for women have reduced income disparities by gender. The federal government has also assumed several emergency-based and permanent responsibilities to help groups of sick or elderly people, or people physically unfit for work. Not only has it expanded unemployment insurance, but has also increased pension and free medical care programs.

One of the most well-known initiatives to counterbalance unemployment and poverty problems in the United States was known as *The New Deal*. President Franklin D. Roosevelt was taking over the presidency in 1933 when the consequences of the Stock Market crash were most severe. During four successive terms of office, President Roosevelt adopted development policies based on state investments and programs of direct assistance. Outstanding among the programs considered most efficient at the time was the *Food Stamp* program. As a way to combat poverty, this program has continued until today, with improvements,

which became necessary to prevent fraud and corruption. The beneficiaries of this program are families with gross income lower than a certain percentage of the poverty level. Families receive the Stamps to buy food according to their needs and preferences. President Lula's Program "*Fome Zero*" ("Zero Hunger"), adopted at the beginning of his administration in 2002, bears some resemblance to the aforementioned U.S. policy.

The maximum value at 2002 prices provided by the U.S. Department of Agriculture is US\$ 397 for a family of four. Based on the exchange rate of the time, this corresponds to an allowance of nearly R\$1,000.00, i.e., more than 4 times the monthly minimum wage in Brazil. In 2000, the government spent US\$ 30 billion on this program.

By means of such data, it is possible to better assess the meaning of poverty in the United States in comparison with Brazil or other underdeveloped countries in Latin America. In the case of the Northeast of Brazil, when one speaks about absolute poverty, the World Bank estimates an income of US\$ 30 per month. In other words, a family in the poor category in the United States is compared, in absolute terms, to a middle class family in Brazil.

In this manner, resuming the issue of inequalities and poverty in the United States, it is worth mentioning that besides the programs previously referred to, the U.S. government has, in the last four decades, carried out economic programs to remedy that situation. Within those programs, the federal government has earmarked resources to rehabilitate marginal farms so that they acquired additional land, better seeds and fertilizers, and technical

assistance for mechanical equipment. In other cases, facilities were created so that such farmers could work, part- or full-time, in industry or in non-agricultural activities in the rural area. In the case where certain regions presented structural problems or competitive growth limitations, the government tried to stimulate the transference of families to more favorable areas or would stimulate the installation of industries and other more profitable activities to communities residing there. In the past, some of those problems were considered as local issues or of people who were qualified to be served by unemployment insurance. In some of those locations, volunteer initiatives of service or entrepreneur associations would take the lead, aimed at a humanitarian solution to those deficiencies. In cases in which local efforts were not enough, the federal or state government would start incentive programs for the industrial and social development of those regions. In addition, numerous public policies have been developed, which indirectly helps a great number of people to acquire training and skills for individual progress. It includes free or subsidized services in general education, professional training, public income, hygiene, recreation and many other benefits for the improvement of life quality of the poorer population.

One of the special characteristics of American society is their individual and community philanthropic spirit. Virtually, financial conditions and enterprises contribute to finance programs to improve the well-being of needy populations. Such donations, which count on tax incentives, go to hospitals, schools, scholarship funds, cultural activities

and research institutions of natural resources and social sciences.

In spite of all the advancements and improvements in the standard of living of the poorer population segments of the United States, American society does not find the still-existent situation acceptable, in view of the social objectives intended by the capitalist organization followed since its independence. In fact, the economic system of the United States has tried to provide targets and maximum opportunities for individuals in view of the dignity and value that humans must have. Another national aspiration is to provide a standard of living to the whole population. The history of the United States has been marked by respect to these values: education for all, universal voting, emancipation of slaves, increase of women's rights.

For a people who believe in equality of rights, it is very difficult to coexist with still subsistent disparities and relative poverty. In fact, the United States has traditionally tried to solve its problems by increasing wealth in general, instead of redistributing the already existing wealth.

The American economy has, however, been a unique system, which used the means of private property, tax incentives and free market, combined with governmental regulation and control in the distribution of wealth and by means of taxation in a democratic system.

All comments of general character made until now regarding the United States have been for the purpose of trying to clarify the role of the public sector of that country within the regional and social development policies. There is lot of discussion, for example, about the influence of



planning on the American economy. Conceptually, a planned economy is one in which the major decisions relative to production, investment and consumption are made by a central authority.

From this point of view, the American economy is not a planned economy. The absence of a Federal Department of Planning or of Global Planning does not mean, however, that a planning process is not practiced in that economy.

In the United States, planning is not considered a centralized monopoly of the public sector. It is recognized as an essential factor for the good functioning of free enterprise of an economy founded on democratic institutions. The indicative centralized planning has been of great help to guide the public sector and free enterprise in the use of the existing potential of economic growth. The planning techniques used in a free enterprise economy like the American one are multifold.

Finally, it is appropriate to highlight that the political economy of the United States has been a search for the fusion of the Hamiltonian ideal (Alexander Hamilton) of power and wealth and the Jeffersonian ideal (Thomas Jefferson) of personal independence and self fulfillment.

## **The Tennessee Valley Regional Development Program**

The United States presents two major regional development projects, of historical scope and of some use to the Northeast of Brazil. The more important one is the well-known project: the Tennessee Valley Authority

Development Program (TVA). In order to understand well the historical reasons for these projects, Dr. João Gonçalves used to remind us that there was an old problem of extreme poverty in the southern region of the United States. According to him, a reflection of that situation could be observed by the intensity of migratory movements from the South to the Northeast and to the Midwest towards the large cities, since the 1930s and more intensely in the period from 1940 to 1970.

As it is known, the United States possessed a wide geographic area in the South and Southeast whose general characteristics were similar to those of the Brazilian Northeast. The soil was poor, degraded by a century-old rural civilization based on cotton, sugarcane and rice under the form of a plantation system. The usually-absent landowner used slave labor, by the origin and general treatment given thereunto. In that region, a rural civilization was organized marked by the exhaustion of agricultural lands and the exploitation of slave labor of African origin. A problem with characteristics and proportions that were more difficult than that which prevailed in the Brazilian Northeast (which also used slave labor) was established.

In fact, grave was the problem of that vast area of the nation in the South—poor, underdeveloped, exploited and black, within another nation to the North and Mid-West—rich, prosperous, white and uniform. At that time, many historians thought that it would be difficult to believe that the integrity and safety of the country could resist this dualistic, almost divided, society. Communications have facilitated migrations derived from that poor and exhausted

region towards the prosperous agricultural and industrial centers in the West and North. In 1910, according to T. Lynn Smith, 83% of the entire black population was concentrated in the rural areas in the twelve Southern states, from Virginia to Texas. It is appropriate to remember that around 1930, the occupation movement of the Western frontier by the pioneers had already practically finished. The country was completely colonized and conquered. The North and the Midwest marched at the accelerated pace of agricultural and industrial growth, while the belt that ran from Tennessee to the whole peninsula of Florida continued poor and underdeveloped. It was in the context of that situation that the regional development ideas thrived in the United States.

The regional development program of that region was based on the concept of unified use of all resources from an immense valley for the well-being of its population. Established by a Congressional Law of 1933, the Tennessee Valley Authority (TVA) represented the first world practice of integral planning of an underdeveloped region inhabited by poor people. The vigorous action of that institution completely changed the geographical image, the income levels, the work structure and the very standard of living. It became an example of world repercussion, of unique value for the United States and other regions in the world.

In 1933, manual agriculture comprised the subsistence base in the American South. Industry was an aspiration, and just as in the Northeast of Brazil, the per capita income of the population was measured as half of the national income. It was not a question of creating another bureaucratic agency,

nor a program of sectoral guidance. The government tried to found an autonomous regional entity, headquartered in the area, whose resources would be scheduled aiming at attracting people's participation and the mobilization of resources from the states and communities, from farmers, industries and rural leaders. It was not an operation of technical or financial assistance, but total efforts of cooperation aimed at putting into use the resources of a river, its tributaries and respective watersheds, awaking activities of a people who seemed to be hopeless and powerless.

The main characteristic of this program was that the very population of the valley participated in the process of its economic advance and social change. On this point, Dr. João Gonçalves thought that therein lay the most important lesson for the Brazilian Northeast from that foreign experience. Lilienthal (1955), then-head of the TVA, describes in a classical book, the origin, deployment and results of that extraordinary human achievement of regional development. Dr. Stefan Robock, with whom I worked when I provided technical assistance to *Banco do Nordeste*, expresses his opinion in a paper he prepared for The National Science Association in 1955, saying that TVA was not really a plan in and of itself, but rather part of a vast process of rejuvenescence of an entire dormant and delayed area. Robock, who also served as president of TVA, stated it thusly:

Instead of directing its efforts towards the preparation of the plan, TVA concentrated on the creation of a continuous and decentralized planning process. The emphasis lies more in the implementation of the planning than in the

practical adoption of a planning doctrine  
(ROBOCK, 1955).

Seventy years later after it was initiated, the results of that work have exceeded all expectations. Since it was about a global and integrated development work—the first one of its kind carried out in the world—its fruits were felt in all sectors of the economic and social life of the area covered by it. Examples of that are the industrialization of the region, the modernization of agriculture and agricultural productivity, the increase in the per capita income of the population, the distribution and the increase in the consumption of electric power, the covering of eroded zones by modern forestry methods, the control of rivers and tributaries against erosion and flooding, the creation of amusement parks for the enjoyment of millions of Americans, also the installation of a reactor unit to produce atomic energy for peaceful purposes. These are just some of the fruits of that unique American experience.

Industrialization was a landmark to be reached. Robock (1959), in a book published by *Banco do Nordeste*, highlights that “the main characteristic of the economic development in the experience of the Tennessee Valley has been rapid industrialization.” He adds that during the first three decades, the valley basin, which before was overrun by a predominant and backward agriculture, has changed into an important industrial region. As a result, the per capita income, which at the beginning of the work was only 45% of the national average income, nowadays has multiplied and has reached the high per capita income of the average American citizen.

With the objective of regularizing the river flow and to create facilities for the economic and social development of its population, TVA inaugurated a system of construction of multiple-use reservoirs, including the objective of preventing flooding of cities, as had happened before. Damming has allowed not only for the prevention of destruction, but also the addition of 150 million dollars to the value of properties used by the Ohio and Mississippi rivers. The regularized and multiple use of water came to influence the country in such a way that, at present, hundreds of communities have adopted an attitude about the best use of their water.

Agricultural properties, which before produced an annual average yield of only US\$ 300 per family, at present are producing more than US\$ 50,000 on average. It has enabled an annual income of agricultural products from the region of more than US\$ 5 billion. As to reforestation, the vast area—which was eroded and devastated before—now has many more forests, which cover an area of 700,000 hectares and favor a rich timber industry, offering thousands of direct jobs. The tracts of land between the different reservoirs built were the object of a careful program for recreation purposes. They are visited annually by millions of people who use them for rest and leisure and to observe or study the wide-ranging opportunities created by this program. One can easily have an idea of the amount of resources put there by this huge volume of tourists.

The greatest lesson can be learned from the electrical power supply in the urban and rural areas. The region now generates around 150 billion kWh annually (entirely consumed by industry and agriculture), whereas in 1933 it

produced just 1.5 billion kWh per year. At that time, very few farms used electric power. Through cooperatives of rural electrification, this huge amount of energy captured started to be sold to all, at very reduced prices, permitting the use of energy by all farms now.

The regional development has not ceased. It continues to unfold in various programs located at different points of the valley, with an active participation of communities and the people. Two new and modern cities have been founded. Several communities do work with the objective of providing rural style to previously decadent urban centers.

All this work has derived from a cooperative effort between the government and the people who searched for balanced, sustained and democratic economic development.

Another aspect derived from the American experience and for eventual use in the Northeast of Brazil refers to irrigated agriculture. Irrigation has been used intensely and extensively to develop agriculture in semi-arid zones of the U.S.. Immense areas in the South and Southeast regions, including several parts of Texas, California, Utah, Arizona, etc. have been treated for decades with irrigation for cultivation of fruits, vegetables and cereal grains, with several systems and methods. Notwithstanding the environmental aggressiveness and dryness, the irrigation techniques adapted to the ecological conditions of the new habitat have been introduced there and disseminated by the settlers who descended from European farmers. At present, around 20 million hectares are irrigated, out of the 176 million arable hectares in the United States.

## Modern American Agriculture

American agriculture is the most modern and productive in the world. The living conditions of the American farmers are similar to that of city dwellers. Practically, all households in the rural area have electric power, running water, telephone communications, and good highways. In recent years, there has been a return of many families from cities to the country, looking for new job opportunities. However, American agriculture needed a century to evolve and become the most modern in the world.

While at the beginning of the century, one American farmer produced enough to support only four people, today, this ratio is one producer to every 50 consumers. Agricultural output per capita is over twenty thousand dollars, enough to provide an enviable standard of living for the inhabitants of rural areas.

A more objective answer to the question asked is that the North American continent has some of the most fertile agricultural areas in the world. At the onset of the settlement of America, settlers had the advantage of having new frontiers available, with rich soils that had never been farmed before. However, it is necessary to remember that American agriculture extends from the subtropical zone in the South to the temperate areas in the North; from humid regions to the arid zones needing irrigation, as in California, Arizona and Nebraska. While fruit growing predominates in certain states, the production of corn, cattle, cotton and sheep is most prominent in the central plains.



Another vital force for the advance of American agriculture, not to digress from the previous question, was private investment, seeking to use new market opportunities, accepting risks naturally. The American people, especially farmers, have also distinguished themselves by being ambitious and hard working, even under adverse conditions.

Many studies today hold true that the reason for American leadership in agriculture is the application of agronomic science with the support of rural extension. Another reason for the great success in the use of new knowledge in the U.S. is due to the educational system and professionalism of the producer. As a result, farmers were forced to keep up-to-date, if they wanted to maintain their income level.

It must not be forgotten that the beginning of the agricultural revolution happened at the historical moment in which new ideas were emerging in the United States about science and experimentation. This was the Enlightenment. There was then a great belief in the power of the mind and of knowledge.

A key instrument that turned the advancement of agriculture into reality was the federal-state network of research and education agencies called *Land-Grant Agricultural Colleges*, created at the beginning of the 19<sup>th</sup> century.

The revolutionary leaders and founders of America such as Thomas Jefferson and Benjamin Franklin believed in progress and agricultural education as the fuel for transformation in the rural environment. Politically, they put such conceptions into practice.

## The Economic Development of California

The state of California is one of the most developed in the United States, with a per capita income considered enviable by international standards. Such outstanding position in the prosperity scenario of the U.S. was not a circumstantial revelation, but the product of a vast action program of the state and federal government and private businesses, which responded to the incentives provided by the public sector with organization and investments.

California's base for development was an initiative of regional and rural character, structured in the usage of the abundant availability of water resources in the Northern portions of the state for the fertile lands in the Central and Southern portions. Within this context were created the conditions of sustainability of cities that grew rapidly with the increase of the water supply for the human and industrial consumption through grand projects of water transfer.

The history and experience of this saga of successful entrepreneurship and public administration has through the years become a special example of regional development in the United States and a reason for the whole world's curiosity.

It was Dr. João Gonçalves who greatly encouraged me to study and see *in loco* what was happening in California as an example for what is being done in the Northeast. It is fair to mention that throughout the description and analysis of rural development in California, I incorporated original information from that extraordinary observer of international economic and social phenomena.

However, for a better knowledge of the situation and experiences of regional and rural development in California, I embarked upon a long trip of observation to the foremost locations and projects of the state. Such a travel itinerary was organized and sponsored by the National Secretariat of Water Resources and National Department of Works against Droughts (DNOCS), within the scope of *Projeto Nordeste I*, with financial support from the World Bank. Along with other members, I participated in this mission in the capacity of Ceará State Secretary of Rural Development. The visits occurred in July of 1997.

The observations of this mission targeted mainly the knowledge of technologies and systems of irrigated production and of the new ideas applied by the farmers themselves to achieve the highest competitiveness and profit. With this objective, most outstanding were the activities of crop management, standardized packaging and the use of Packing Houses, refrigeration and commercialization processes. Another aspect of interest is the producers' organization modes in the irrigation districts and in district associations.

The main institutional contacts occurred with the representatives from the Bureau of Reclamation, U.S. Department of Agriculture, Fresno State University, Keorney Agriculture Center of the University of California, and the Center for Research and Training in Irrigation of Polytechnic University, and ten other California state and county organizations.

It is also worth mentioning the information provided by the Natural Resources Conservation Services of the U.S. Department of Agriculture regarding incentives and

environmental preservation programs. That department also carries out a program of technical and financial assistance to California farmers and ranchers to oversee important aspects of natural resources and conservation of the quality of water at farms and the watersheds.

We made noteworthy visits to the King River Conservation District, the University of California's Kearney Agriculture Center, and California State Polytechnic University's Irrigation Training and Research Center. Our stay at the Shafter Cotton Field Station, of the U.S. Department of Agriculture with excellent works in southern San Joaquin Valley was of great usefulness. From the contact with professors and technicians from that center originated the idea for a new cotton program in Ceará, with the use of new technologies of improved seeds and combating pests such as boll weevils.

Within scope of water management for urban supply and for agriculture, our visit and the information obtained at the Edmuston pumping complex, which supplies Southern California, were very important. Water is transported through the state aqueduct from Northern California. In this specific aspect, the projects for using underground water south of Bakersfield, in the Arvir-Edson Water Storage District, are outstanding.

Regarding the activities of the private sector, I had the opportunity to get to know in detail the functioning of the vegetable packing houses on large-scale family farms. They are integrated with the operations of other businesses, such as production of fertilizer, production of pellets and automated operation of plant nurseries.

Among other counties, local visits extended to the south of Sacramento in San Joaquin and Stanislaus, in addition to Fresno, San Luis Obispo, Merced, Santa Barbara/Ventura and the environs of Los Angeles.

With this itinerary, it was possible to see and know the functioning of the farms owned by large corporations, which use efficient on-farm irrigation systems. Likewise, I observed how the technical and cooperative system worked under the responsibility of the University of California and the federal and county agencies.

It is worth mentioning that I had visited California before, seeing and examining experiences that could be useful for the Northeast of Brazil. This first visit to that state was in the capacity of Professor of Economic Development of *Universidade Federal do Ceará*, to participate at an event in San Francisco sponsored by the Latin American Studies Association, of which I was a member at that time. The second visit was on a technological mission, as was commented on previously. That visit had a more political aspect; as the Ceará State Secretary of Rural Development, we were looking for ideas and solutions to our state's semi-arid regions.

## Contextualizing

The state of California is located on the west coast of the United States. It is bordered by Oregon to the north, by the Sierra Nevada Mountains and Arizona to the east, by Mexico and Baja California to the south, and by the Pacific Ocean to the west.

It is the third largest state of the Union, with 411,000 km<sup>2</sup>, as well as the most populous, with 30 million inhabitants in 2002. The climate is hot and dry. It is formed by a great plain bounded by 4,600 meter-high Sierra Nevada to the east and by mountains to the west, that drop to the coast where the main cities of Los Angeles and San Francisco are located. The state capital is Sacramento.

By and large, California is characterized by tremendous physical diversity, with the predominance of high lands circulating the Central Valley, separating the desert from the fertile lands. The urban areas and areas of agricultural and industrial production are concentrated in the valleys and low lands, such a great metropolitan region of Los Angeles, which is the second largest agglomeration of population in the United States. With record population growth rates and long-term income, it has become the most advanced U.S. state.

Even so, through the years, many problems emerged in the development process of California. The main difficulties, however, exist in the southern regions of the state, where there is shortage of water to meet the production demands and human consumption. In order to avoid that situation, water transfer projects were set up in the northern region, as will be detailed in this chapter.

Here it would be appropriate to mention beforehand that the Great Central Valley is a vast depression that extends northeast to southeast for around 720 km, around 80 km wide. The valley is surrounded by mountains, characterizing a landscape that left me dazzled when I saw it and covered it from end to end. This valley, with its rich

alluvium lands, is considered one of the most productive regions in the world. The southern part of the valley is called Sacramento Valley and the northern part is called San Joaquin Valley. Formed by the erosion of mountains over millions of years, these soils kept accumulating in the lower areas of the valleys. At present, such areas are intensively cultivated with irrigation.

In contrast to that natural wealth, the soils in the desert are poor in organic matter, even if they can be used through irrigation. Since there is not enough water available for that purpose, those lands are entirely utilized for the cultivation of fodder. Other areas of the state are not suitable for agricultural use because they are rocky and mountainous, which do not allow for the use of mechanization. Coniferous forests are located in other areas.

The state of California has a hydrological system formed by lakes and the Sacramento and San Joaquin Rivers. The Sacramento River, California's longest, runs northwards over 615 km, with its source at the base of Mount Shasta. As to the San Joaquin River, it springs from Sierra Nevada near the National Park and runs 560 km until flowing into the Sacramento River. However, the longest river in southern California is the Colorado River. It runs from the California-Arizona border all the way to the Gulf of Mexico.

California has thousands of lakes, most of which are small. The largest one is Salton Sea, a salt water lake located 72 meters below the sea level and covering 943 km<sup>2</sup>. Lake Tahoe, atop Sierra Nevada, is the deepest lake in the United States.

California is a land of contrasts, with a climate and geographical formation varying from alpine to desert to subtropical. In a normal year, some areas can receive less than 25 mm rainfall, while others receive up to 2,500 mm.

Even so, as occurred in Northeast of Brazil, during the colonization of the state, the population settled across most of its territory, despite differences in rainfall. As a result, California has, throughout its history, faced the problem of how to better care for the water, how to manage it and how to transport it from one area to another. The economic development of California and its agriculture is closely related to this problem, which has motivated the federal and state government to undertake policies and programs that today are examples for the United States and the entire world. This chapter intends to focus on the experience of the political will of a determined and understanding people in the construction of a developed and prosperous state.

## The Economy of California

In the first decades of the twentieth century, California grew in terms of population and income, continuing an already prevailing trend in the previous years. The state population, which was 1.5 million in 1900, grew to 5.7 million by the middle of the twentieth century. However, the economy has not evolved in a balanced way, but rather was most intense in southern California, around Los Angeles.

During that period, grand projects of irrigated agriculture, mechanization and exportation of agricultural products was greatly accelerated. The industrialization



process pushed economic growth. Oil production exceeded the amount of gold production, which until then was the state's economic base. In a short time, California became one of the greatest oil producers in the country, along with Texas. In 1914, with the opening of Panama Canal and the reduction of the route from California to the eastern U.S. seaboard, trade of agricultural and industrial products increased tremendously. It was also at that time that the construction of a deep-draft port began, giving access to large ships, especially freighters and oil tankers.

It is worthy of mention here that the great earthquake of San Francisco happened in 1906, which caused fires lasting more than three days that destroyed many residential and commercial areas. However, reconstruction was rapid, with benefits to many neighborhoods, and the port area was also modernized.

In the 1920s, the state and federal government, providing conditions for the expansion of agriculture and industry, built numerous highways. Even so, industrial concentration continued near San Francisco and Los Angeles, where many auto assembly plants were installed. That trend was followed by the aeronautics industry and movie industry.

That process of growth and prosperity was interrupted due to the stock market crash of 1929 and the Great Depression that struck the U.S. economy. Many companies went bankrupt and a wave of unemployment fell over cities and agricultural regions. The economic and social situation was expanded with the increase of emigration from the dry areas of Texas, Oklahoma, and Arkansas to California's major cities.

Historians, who have analyzed the economy of California of that time, say that the crisis of the 1930s was significantly reduced in that state by the execution of large water transfer projects. Outstanding among those infrastructures are the Hoover Dam (also called Boulder Dam) and Parker Dam on the lower Colorado River, as well as the channels linking the dams with the area of Los Angeles and the Imperial Valley. The constitution of the federal government's Great Central Valley Project also began during that phase.

The California economy only started booming again during World War II (1939-1945). The active participation of the United States in that conflict generated a great demand for agricultural and manufactured products, which California could supply with the use of its idle capacity. The creation of jobs in the aircraft industry, munitions, and ports/ naval bases on the Pacific Coast revitalized California's entire economy.

With the recovery of the U.S. economy, California also maintained a high per capita income growth rate, especially in the industrial centers. Since the end of the World War II, California also started to have an accelerated demographic and urbanization increase. In 1970, it exceeded that of New York and became the most populated state in the United States. By the end of 1990s, California had reached 38 million inhabitants, out of which 80% lived in cities.

The main reasons were the job opportunities offered by the state prosperity and the attractive conditions of its mild climate. The spatial distribution of the rising population was directed towards southern California and especially the

San Francisco Bay area and the Central Valley. Despite the importance of the agricultural sector, California became the most urbanized state in the United States, with more than 95% of the population living in urban areas today.

Different than what happens in the Northeast of Brazil, where the population that works in agriculture lives in the country, often in great isolation, in California they live in towns and urban agglomerates from where they commute to perform their rural activities. There are many small towns close to one another, including public services and regional trade. But most of the population is located in 13 cities with over 300,000 inhabitants, and mainly in the metropolitan areas of Los Angeles—with 50% of the state population—Long Beach, San Francisco and San Diego, on the coast. In contrast, however, the state also has mountainous areas with desert conditions with very low populations.

In the last decades, California has kept its primacy in continued development among the main states in the United States. The constant improvements in highways, airports, new industries and the educational sector are outstanding. It can be said that during the last fifty years, California, which was an agricultural society, has become a developed economy with many elements of the so-called post-industrial era.

According to the sectors that contribute for the formation of income and employment, the structure of the economy is similar to that of the wealthiest countries. From a state marked by the predominance of agriculture and traditional industries, California now has the base of its powerful economy in the tertiary sector. By and large, the

participation of employment and income are quite balanced. Agriculture for example, accounts for just 3% of jobs, while transformation and concentration industries and mining represent 32%. The other 65% of occupation is in commerce and various export services, governmental activities, finance, transportation, and military services.

California is the most industrialized state in the United States. Industry was the sector that invigorated and transformed California's economy. The income generated by the state's industry in recent years has been double that of New York state, which is second on the list of the most industrialized states. Even based on capital-intensive industries, it still employs more than two million people.

The most important industrial activity is that of electronic products and electric equipment. According to the Register of Industries, the lines of business that employ the highest number of people are factories of semi-conductors, radio and television, telephones, plus other electric equipment. Another important group is that of machinery and equipment, especially computers and related products, including turbines and machines for industrial services. Most of these industries are located in the so-called Silicon Valley, in San José–Palo Alto.

The third industrial group is comprised of food processing, especially fruits and vegetables, fish and meats. In this sector are also the beverage and bottling industry, which is the fifth largest industry in the United States. California has also a tradition in the production of medical, photographic and research equipment. Another sector with a long history in the state is that of transportation

equipment, with highlights to aeronautics products (civilian and military aircraft), missiles and vehicles used in space exploration. Additionally there are the activities of ship recovery and automobile manufacturing.

Industry is concentrated in southern California and spread throughout the San Francisco Bay area. In Los Angeles and San Diego are automotive, shipbuilding and aircraft industries as well as military activities of the federal government. The food industries are located in the agricultural regions of Sacramento, Stockton, Fresno, Bakersfield, and the Central Valley.

The approach I am adopting for the case of California is worth explaining and has the purpose of identifying the main sources of state development, which usually are little highlighted in references about the exceptional development of the state of California. Besides very specialized studies, I have not managed to find literature in a less technical language that objectively dealt with this issue. Even during my travels in California, I did not find any such material in bookstores of the major cities. Thus, based on fractioned information, which I got along my travels, it became possible to structure the modest analysis contained in this chapter.

## The Role of Agriculture in the Development of California

In the last decades, California has occupied the foremost position in agricultural production in the United States. The state's agricultural product has been on average

US\$ 20 billion in the last years, with the generation of another US\$ 70 billion in agribusiness. The second most important state in agricultural production is Texas, with US \$12.8 billion, followed by (in decreasing order) Iowa, Nebraska, Illinois, Kansas, Minnesota, Florida, North Carolina and Wisconsin, the latter with US\$ 5.2 billion in agricultural production.

The total area of California is 40.7 million hectares, out of which 30% are arable lands. Out of those 12.0 million hectares, 3.2 million hectares are irrigated, and 8.8 million are fully used with other dry-land crops, especially fodder. For the sake of comparison, California has 3% of arable area in the United States, but it participates in 60% of the production of fruit, nuts and vegetables. California agriculture is one of the most diversified in the United States, with 250 different crops and livestock breeds. Due to climatic conditions, the following products are produced nearly exclusively in this state: almonds, artichokes, dates, figs, kiwi, olives, pistachios, pomegranates, dry plums, raisins, and walnuts. But the main farming and livestock products of California are milk, grapes (whole fruit, juice, and wine), oranges, beef, cotton, almonds, flowers, herbs, lettuce, iron, strawberries, tomatoes, walnuts, poultry, peaches, and broccoli.

California's farmers are among those with the highest productivity in the world. In large part, the high production originates from the high fertility of soils, long growing season, and the generalized use of technology and availability of water. It is worth mentioning that most farmers are in the dry region of the Central Valley and in the

southeastern areas of the state. By and large, with the exception of livestock-raising areas (sheep and goat) and a few products such as barley and sorghum, agricultural production depends on irrigation, including dairy production. The greatest concentration of farms in the dry land area is in the sparsely populated lands to the east of Sierra Nevada. It is worth remembering that California occupies the 6<sup>th</sup> position in the United States in salmon, anchovy and shrimp production.

There are 76,000 farms in California. About half of them are the family-type with an annual income of more than US\$ 10,000. The others are commercial and operate based on hired employees. The average size of properties is 158 hectares in California, while the United States average is 191 hectares. Around 250,000 people are employed in these establishments.

It is worth pointing out that both family producers and large corporations have constantly adopted the new technological knowledge to increase benefits and profitability of the agricultural activity. One of the great concerns of agricultural policy-makers in the state at present is saving water. In recent years, California's agriculture managed to increase production 50%, maintaining the same water consumption. In that period, surface irrigation decreased 20% with the increase of overhead irrigation by 8% and the localized irrigation by 12%.

At present, 50% of California's vineyards use localized irrigation. However, on the whole, surface irrigation represent 70%, while overhead irrigation represents 25% and the localized-irrigation, 5%. Farmers argue that even

by consuming more water, surface irrigation is still the most economical type. The other alternatives for changing the irrigation infrastructure would be very expensive, especially with the abandonment of efficient drainage systems, which have prevented salination of the alluvial lands.

We visited during our travels, for example, a major company that produced and exported vegetables, located in Fresno with an area of 4,000 hectares Teixeira Farm Inc. uses the drip-irrigation system, done by means of flexible tubes placed on the surface of the cultivated areas. At harvest time, the tubes are removed to allow better movement of tractors, trucks and workers. According to technicians who assist this farm, the water savings by the adopted system, regarding the overhead and furrow irrigation methods, have been around 30%. There also occur fewer diseases. The water used on this property comes from semi-artesian and artesian wells. The workforce is hired through labor co-ops, with wages of 4-5 dollars an hour. Teixeira Farm has a large structure of cooling, acclimation, classification and packing. Most of the production is exported, especially to Japan.

Exports of agricultural products from California represent 15% of all external sales from this sector in the United States. They amount to US\$ 10 billion a year, especially beef, cotton, fruit, nuts, vegetables and dairy products. The main destinations are Japan, Canada, Mexico, Hong Kong, and various developing countries.

By and large, the commercialization system is very organized, efficient and carried out by private companies and cooperatives. From producer to consumer, the



distribution system is notable for offering a quality product in view of the market requirements.

## Water Projects for the Regional Development of California

California's growth process occurred simultaneously with the execution of the state and federal government water projects. The origin of that situation is related to the process of occupation of the state territory. Historically, the colonization of California was carried out in all areas of the state with due availability of water to supply human and agricultural needs. Over time, this problematic situation became characteristic. The population centers, attracted by other circumstances, were located where there was no water available to meet demands of human consumption. The fertile lands adequate for irrigated agriculture existing in the wide valleys also lacked sufficient water available.

As a result of that, California has always been facing the challenge of solving this difficult situation: how to better conserve water, control it and bring it wherever it is needed. According to historians, the Native Americans already worried about water for irrigation. With the arrival of Spanish settlers, such situation continued with such limitations of water resources. Ruins of dams located near the historical missions, as well as aqueducts and channels for the transportation of water to the villages and for irrigation, are remembrances of that time. New needs for water arose with the discovery of gold in the mid-19<sup>th</sup> century. In the following years, aqueducts were built to bring water in from

Sierra Nevada and from the Colorado River to meet the shortage of water in the growing cities, especially Los Angeles and San Francisco. It is worth stating that at present, water for irrigated agriculture is also supplied by other underground water sources of excellent quality. The average annual rainfall of the state is 610 mm, but 70% of rainfall occurs in the north, in contrast to the water demand predominantly in the south. The average annual evapotranspiration is 1,270 mm.

In the last few years, the water supply in California was estimated. Rainfall provides about 238 billion m<sup>3</sup> annually, out of which 45 billion m<sup>3</sup> are effectively made available for annual use. Around 60% derive from river and lake supplements, and 40% are pumped from underground reserves. Out of that total, 80% are destined to agricultural purposes, and 20% for human and industrial consumption in the urban areas.

Surface water runs through the Sacramento and San Joaquin channels, via the State Water Project and the federal Central Valley Project. These two projects provide drinking water for two thirds of California's population and half the water is used by the state's agriculture. The State Water Project is the responsibility of the Department of Water Resources and the Federal Project is carried out by the U.S. Bureau of Reclamations, an Agency of the U.S. Department of the Interior.

In summary, the State Water Project controls a system of dams and reservoirs and makes available 2.8 billion m<sup>3</sup>, out of which 30% is for agriculture and 70% for urban needs. As to the federal government's Central Valley Project, it

provides about 8.5 billion m<sup>3</sup>. Out of that total is included water for irrigation of 1.2 million hectares and 740 million m<sup>3</sup> to meet the municipal needs and those of the industrial sector, and finally 987 million m<sup>3</sup> for fishing and wildlife.

Studies have pointed out future needs of water to allow for continued economic development of California in the coming years. It is estimated that around the year 2020, nearly 50 million people will be living in the state, compared to today's population of 30 million. The additional demand for water for human consumption alone will be more than 167%, jumping from 9.6 billion m<sup>3</sup> up to 25.6 billion m<sup>3</sup> in the next 20 years.

The development experience of California offers an important example of how to face problems of shortages of water resources, similarly to what occurs in the semi-arid Northeast of Brazil. The gradual solutions, which were being adopted for the construction of water infrastructure, were preceded by many debates and traumatic political solutions. Many leaders and interest groups from the entire country have participated in the controversies about options of use of public resources aimed at favoring regional projects in a state.

Since many years ago, the same problems have marked the issues on the works of transferring water from the São Francisco River or Tocantins River for the benefit of several states where periodic droughts occur and which lack water sources for human and agriculture supply. The state projects of dam-building and transfer of basins, like those of the state of Ceará, are also suitable as initiatives of the same purpose as those that have been carried out in California. It

is obvious that there are major differences between the two situations, but the policies, strategies and objectives are very similar.

Because of that, and since there is no objective information about the water projects of California available in the Portuguese language, we will next attempt to provide some essential information about that issue.

## The Water Project of the State of California

As has already been mentioned, California has enough water for its needs, but such resources are in the northern region of the state. However, the largest urban centers and arable lands are in the region of the central coast and in the southern region of the state. Around 70% of the resources are to the north of Sacramento, but 80% of the water demand occurs to the south. According to Professor Mike Cahn of the University of California, people want water where they live, and in California, most of them do not live near the adequate supply. Californians are stocking water when and where it is available and transporting it where it is needed.

In 1951, after many years of discussions and studies, the state legislature authorized resources for the studies of construction of a water impoundment and supply system of water-deprived areas for the San Francisco and San Joaquin basin. Several years later, with the conclusion of studies, the state legislature passed the Burns-Ponter Act, which determined the mechanisms to obtain the necessary resources for construction of the initial works. In 1960, through a state referendum, voters approved the issue of

US\$ 1.75 billion in Public Debt Security Bonds for the construction of the “State Water Project,” effective getting under way in 1960. By 2002, US\$ 5.0 billion had been earmarked for the project. In order to complement the initial resources, long-term agreements were made with 29 public and private entities with the objective of supplying water according to needs. The federal government has participated with US\$ 17 million for the construction of the Del Valle and Oreville dams, aimed at flood control. On the part of the state government, other US\$ 188 million were destined to protect fisheries and wildlife. Finally, the California Department of Water Resources, which has the mission of managing California’s water, also issued debt securities to cover other investments for hydroelectric plants.

This information gives us a notion of the alternatives that can be used in the elaboration of projects like that of the transfer of waters for the São Francisco River in the Northeast of Brazil. In the Brazilian case, the federal government has been proposed as the single source of funding for the entire infrastructure, with little or no contribution from the benefited states nor from the private sector, which could enter the water market as has occurred in California. The issuing of federal debt security bonds could be one way to further bankroll expenses through long-term amortization schemes.

The California Water Project is comprised of a complex system of dams and reservoirs, hydroelectric power plants, pumping stations, canals and aqueducts. Although water distribution was started in 1973, other works are still being carried out or are in the planning stages.

At present, the system is made up of 29 dams, lakes and reservoirs, 18 water-pumping units, 5 hydroelectric units. The project extends for over 965 km from northern to southern California. Water is first stored in Lake Orville, where it passes through the hydroelectric plant and returns to the natural channel of the Feather River. From here, it follows its course to the San Joaquin delta, where it is impounded and transported to the needed areas of the San Francisco Bay area, San Joaquin Valley, Southern California and the Central Coast.

The energy necessary to operate the state Water Project of California is provided by different sources: hydroelectric, coal, and the acquisition of energy from other suppliers. The project itself now has eight power-generating plants, besides three self-generating plants. These sources provide 2/3 of the project's needs.

### Central Valley Project—Mid Pacific Region

The Central Valley Project is the responsibility of the Bureau of Reclamations of the U.S. Department of the Interior. The Project is a system of 20 dams and reservoirs, canals, power-generating plants and pumping stations. The system has 11 hydroelectric plants, with 38 generators producing renewable energy at around 5.3 kWh per year. Approximately 25% of that energy is used in the pumping process of the system. The remaining part is used in eight cities, rural energy and underground water pumping. The system has permitted the state to carry out flood control, saving no less than US\$ 5 billion after its construction.

Transportation of goods takes place on some of the wider canals.

Construction of this system started in 1938, having been previously authorized by President Theodore Roosevelt, together with Coast Canal that began operating in 1944. The second stage was the construction of Shasta Dam, with a 4-billion m<sup>3</sup> capacity (which is the heart of the system). The second largest project of the system was the New Metones Dam, inaugurated in 1950. The Central Valley Project has contributed to the prosperity of the state and the country. With this project, Central Valley became one of the world's foremost agricultural producers, providing water for the irrigation of 1.2 million hectares. Out of all the jobs in the Central Valley, 30% correspond to agricultural activities and products. In addition to that, the project supplies 740 million m<sup>3</sup> for human and industrial consumption, complementing the State Water Project.

Considering the overall situation of the water needs for the continued economic development of California through 2020, it will have to face new challenges. Even with an extensive conservation program, the annual net supply of water will have to grow in order to serve a projected population of 50 million people. It will be necessary to increase efficiency in the use of water in agriculture, associated with the reduction of planted areas and changes to crops with high market value, as well as the priority for crops that require a low use of water. Crop-fallow rotations and water bank programs are foreseen for use during the drought periods, as well as abandonment of lands that are unsuited or have drainage problems, more efficient use of

underground water basins, and treatment of used water for reuse.

The organization of water in California should serve as a model for the Northeast of Brazil. In fact, one of the great limitations for the development of the Northeast will be the supply of water for human consumption, agriculture and industry. Such deficiencies are even more serious in the semi-arid region.





## FRANCE: THE PROGRAM REGIONS

### Background

France is among the most developed countries in Europe, with an economic, political and social history of universal importance. It is impossible to speak of pioneering economic development experiences in the last two centuries without highlighting the rich contribution of this country. A major part of general economic theory itself has France as its origin.

At present, France has an area of 543,000 km<sup>2</sup> and a population of 59.7 million people (2001). The Gross Domestic Product (GDP) is US\$ 1.4 trillion, resulting in a per capita income of US\$ 24,000. The Human Development Index (HDI) is 928, surpassed by only two or three other countries. The economically active population totaled 30 million people in 2001, out of which 67% worked in the services sector, 35% in industry and 2.5% in agriculture. The income structure is very similar, with 71% from services, 26% from industry and 3% from the agricultural sector.

Thirty or forty years ago, however, that situation was very different, with sectoral and regional imbalances, which were reason for concerns by the French government. The regional problem in France could be characterized by disparities in the standard of living among the northern and

eastern, southern and western regions. It is difficult to define the delimitation of those areas, but there is no doubt about the real difference between the rich northern region and the poor eastern region, considering a line of Mont-Saint-Michel to Arles, and the poor southern and western regions of France.

The most important factor of economic differentiation in France is the high concentration of population and economic activities in the Paris region. At present, there are about 10 million inhabitants, and 40 million tourists stimulate this area's economy annually.

France's regional issue has been considered within a perspective between Paris and the rest of the country and the different problems of economic and social backwardness in the different provinces. While in some regions, the problem is modernization of the traditional industry, in others the challenges are for the installation and development of new industries or the modernization of agriculture. In this case (for example) was the Languedoc region, which was one of the poorest in France, with high rate of unemployment and under-employment. There was a concentration of grape production in that region, mostly cultivated in areas of low-quality land.

The evolution of the mindset and ideas regarding the regional problems in France began after World War II. The first effective measures occurred in the 1950s, aimed at stimulating the development of other regions. In the following phase, the prevailing policy aimed to control industrial decentralization in the Paris region. Several investments were adopted with the purpose of expanding

the less prosperous regions. In the decades that followed, regional development gradually started to increasingly prioritize the growth of the national economy within the context of long-term targets. The regional planning system started to integrate the national planning scheme. In turn, planners were encouraged to engage in the identification of possibilities for development of the poorer regions.

In the last few years, the preoccupation of the French government has been to carry out improvements in the institutional scheme with the objective of meeting the country's needs for regional development.

Under the patronage of the Organization of American States, the Ford Foundation and *Banco do Nordeste*, I had the opportunity to visit France several times together with some study groups over a period of 20 years. I also made several vacation trips on my own, together with my wife, Mirna, who is also an economist. The main purpose of those trips was to try to reveal the experiences and aspects of the French economy and society, which could serve as guidance for the Northeast of Brazil. That knowledge was also useful and enriched my classes on economic development, which I taught in undergraduate and post-graduate courses at *Universidade Federal do Ceará* and at *Banco do Nordeste*.

For the purpose of this book, however, the focus is exclusively on issues of regional and rural development, and not relevant to the rich lessons of general economic development of that country.

## Regional Planning and Administration

The origin of regional planning in France is due to a package of measures introduced at the end of the 1950s, aiming to implement national integration policies being adopted at that time by other European countries.

By and large, the regional policy aimed to accelerate the growth of income and to carry out structural changes in the industrial sector, with special emphasis on the economic decentralization of the Paris metropolitan region. The long-term Economic Development Plan aimed to activate the contribution that each region could give toward the national expansion of the economy and the actions required to improve the situation of the region itself. Another purpose was to work as a coordinating network in the allocation of public investments in each region. The plan served as a reference for the regional authorities and for the private sector to articulate with the governmental sector.

In the following years, planning started to consider both economic issues and infrastructure and was called *Plan Regionale de Development Économique et social d'Aménagement du Territoire*, covering a period of 20 years, to be updated in the mid-term thereof. In order to ensure the coordination of such actions within the national context, and the objectives of the regional policy, a special committee (*Comité des Plans Régionaux*) was set up in the Ministry of Planning.

France was divided into 21 regions known as “planning regions,” each one covering from two to eight departments, with an average population of 1.5 million per area.

In 1963, a new Agency was created (*Délégation à l'aménagement du Territoire*—DATAR) directly linked to the Office of the Prime Minister. In practice, DATAR had two types of functions. The first one was to coordinate the activities of the different local institutions working in the area, responsible for the development of the region. Specifically, responsibilities were attributed to work on the development of tourism along the Languedoc-Roussillon coast; a new urban industrial area was created in the Gulf of Fos, near Marseilles and a development scheme of agriculture in Corsica. The second function of DATAR was to coordinate and control the incentive programs, which were introduced in 1955 to encourage industry and commerce to leave the region of Paris for other regions.

The same law that created DATAR established the National Committee of Regional Development (*Comission Nationale d'Aménagement du Territoire*—CNAT). CNAT had fifty members appointed according to interest and technical competence on regional issues. The role of CNAT was to carry out regional development studies, whose conclusions were destined to subsidize the National Plan.

There was the consensus that regional development is a problem of national interest and that it was impossible to discuss the future of economic and social development without taking into account the consequences of the decisions made for the regions. CNAT's work was carried out by six subcommittees, which dealt with demographic trends, industrialization problems in certain regions, rural development, regional development standards of the service sector, urban development and communications.

Professors Kevin Allen and M.C. Maclellan of the University of Glasgow, based on studies they carried out on that issue, have the opinion that the mindset and organization of regional policies of France are the most well-structured in all of Europe. Therefore, France is seen as a model for other countries, especially the United Kingdom, which has tried to adopt many aspects of the French experience. Without a doubt, one of the most remarkable success stories in this regard has been the integration of policies and national programs with regional programs. The discussion of challenges and the shortage of resources led French planners to consider the reach of the long-term objectives at successive stages. That is, done through the regionalization of the national plan. A pre-requisite of this focus of regional development is the coordination and compatibility of targets of each region by the National Agency responsible for medium-term regional development policies.

Another important characteristic of the French experience applicable in other countries is the intercommunication between regional and urban planning. One of the most obvious changes towards regional policies in that country has been the promotion of selected areas based essentially on an integrated system of regional cities. These are the “balancing cities.”

Even recognizing the merits of the French regional planning, it is necessary to look at the remodeling of public administration. The French policies of regional development have undergone continued adaptations and adjustments. This has occurred according to the results obtained and the

changes of tendencies of the national economy and the reflexes of what occurred in neighboring Europe. Generally speaking, it can be said that during many years, regional policy drew a distinction between regions. There were those whose development required a “follow-up” strategy and ongoing monitoring, and the others where policies were a “thrust.” One of the important conclusions that the government reached in order to adopt this guidance, was that regional policy was becoming inefficient and extravagant with the dispersion of resources applied. In order for the regional intervention to be more efficient, it was necessary to expend efforts on well-chosen areas.

In the new guidance of regional policy, priorities were given to infrastructure development and the creation of educational programs and training aimed at encouraging large corporations to expand in those areas. The growth of those main centers stimulated the appearance of secondary centers with the support of their own economic vocation.

Arguments to prioritize growth in preferential areas were easily accepted. The National Development Plan indicated the areas where such development centers should be developed. So, France was divided into seven regions. By and large, the areas of selected growth were those that were part of a region where the economic growth was already on course and in which there were the basic requirements of natural resources and entrepreneurship for future growth.

Examples of such priorities are the Tourism Project of the Languedoc-Roussillon Coast, the irrigation areas of Bas-Rhône-Languedoc, and the exploration of deposits of natural gas of Locq, in the Southeast of France. The plan emphasized



the construction of means of communication within and among those regions. Cities were selected which would be reinforced to serve as supporting development centers of such regions. Also, schemes were defined to create universities and research centers in compliance with the characteristics and potentialities of each area.

The strategy of strengthening such centers makes it clear that a good infrastructure is the key to regional development and more important to industries than financial incentives.

## Organization of the Territory

France is a country formed by regions with differentiated characteristics. The nation has adopted specific policies of regional development for its 60 million inhabitants, out of which practically half represents the active employed population. An outstanding aspect of the regional programming of France consists of measures destined to transfer—to rural regions generally with fewer people—masses of workers concentrated near the large urban centers, especially in the environs of Paris.

According to studies by the Organization for Economic Co-Operation and Development (OECD), the regional problems of France revolve around three main needs: the decrease of employment in agriculture; the decline of some base industries, especially the mining industry; the expansion of the Parisian region. The plan tries to meet these three needs. Employment in agriculture has decreased, as of 1955, at an annual rate of 3.5%. The problem is greater

in the western region, where two thirds of the rural population is concentrated. In the second case, the decline of the mining industry, as a result of the use of other sources of energy such as petroleum and nuclear energy, caused a great reduction of labor occupied in that industry. Out of the 370,000 miners employed in the 1960s, there remained only 100,000 in 2000. The problem was felt mainly in the mining zones of Saint-Etienne, Alès, la Mure and l'Auvergne. In the third case, it has been discovered that the region of Paris, which in 1980 occupied only 2.2% of the country's territory, sheltered around 25% of the total population. In order have an idea of the demographic growth level, it can be verified that in the period of 1901-1980, the Parisian region increased its population sixfold, while the overall national population increased by 70% in the same period. The urban concentration of the Paris region, as a result of the better opportunities it offered, was caused by the expansion of the industrial and tertiary sector (infrastructure). This has caused economic and social imbalance in other parts of the country.

France's regional policy was, therefore, an integral part of the national policy, being included in the successive Five-Year Plans. For the purposes of regional planning, the country is divided into 22 "program regions," based especially on demographic, climatic and economic criteria. Searching for better balance among regions, the country adopted several measures with the objective of reducing the demographic and industrial growth of the Paris region and centralizing the economic activities, through the creation of new industrial jobs in the provinces.

The development of the West of France, where abundant contingents of labor are gathered in a compact group, emphasized industrial and service fomentation with the objective of expanding the supply of new jobs. On the other hand, it adopted measures for the economic improvement of the borderline zones to the north and east, in order to compensate the decline of the extractive, metal and textile industries and to reduce the attraction exercised by the regions bordering Germany and Switzerland, which offer high salaries. In the rural environment, the objectives of the plan are focused on the modernization of agriculture, expansion of secondary activities, tourism, and the tertiary sector in general, as well as preservation of the environment. The regions of industrial attraction are the ones that present a greater decrease in the rural population.

There are several mechanisms used by the French plan of regional development: some tried to open new job opportunities in the problem zones selected; others carried out urbanization programs in the rural zones, depleted by emigration. Others, still, re-directed the investments policies, in order to encourage the attraction to certain zones, or to discourage the growth of other overcrowded zones, like the one centered around Paris. One such discouraging measure is the one that limits areas for each industrial enterprise, which can only be expanded through special permission. Incentives are translated by grants to enterprises, which follow official policies to the letter, i.e., those that stimulate the removal of people from the most decadent areas. There are, therefore, several modalities of financial assistance, according to the needs of each region

and the priorities of the governmental actions performed for each one of them. For example, the western region, since it is the least developed, has the most incentives in its favor.

The urban development policies tried to change the medium-sized cities, either in isolation or inter-linked by a type of “urban cord” in what the plan referred to as “balancing metropolises.” That is, new programs fomented new industries with the capacity to absorb greater contingents of the labor force and activities from the tertiary sector. The existing infrastructure there was reinforced, along with measures to modernize urban services.

The favorable results, fruit of that regional policy in its different aspects, are worthy of mentioning. The inter-regional balance of the supply and demand of jobs has been emphasized and the industrial decentralization of the Paris region has been visible. On the other hand, the number of industrial jobs increased in other regions. The western region, for example, was the main beneficiary of incentives. In the areas of mining and ironworks, around 100,000 jobs were created. In the agricultural regions, rural-urban migration and the abandonment of the countryside diminished.

All these re-urbanization policies, the creation of jobs, industrial decentralization and improvement of rural activities, would not have been carried out without two fundamental measures that were seen as an integral part of the plan. The first one regards the close inter-ministry coordination, which allows that the sectoral resources be obligatorily directed to the common plan, according to priorities established in it. The second measure regards the

existence of two special funds, which were created as part of the plan. One was earmarked for financing activities related to the administration of new areas, and the other one to facilitate those regions. Those two measures formed what the plan called “collective equipment.”

In this manner, France prepared and executed a policy that allows guiding development in favor of previously less-favored regions, within a concept of inter-regional balance. The bordering zones experienced an economic “renewal” through the re-establishment of the old migratory and demographic balance. Certainly, those bordering zones have developed less rapidly than those where population density was strong enough, in which case the labor resources and space were factors of considerable importance, allowing the re-establishment of a regional balance necessary to the country.

The organization and work mechanisms of techno-centers are another initiative of support to regional development in the South of France. Created in 1986 in the Languedoc-Roussillon region, it coordinates and promotes different specific activities in support to Mediterranean and tropical agriculture. At present, that system unites 19 research and training institutions and has more than 2,000 researchers. The techno-centers, which are similar to the “*agropolos*” of Ceará and Paraná, work as research scientific platforms directed to economic development through innovation. It has partnerships between the science and technology sector and the private sector, guided by a decentralization policy. The work of the techno-centers is associated to differentiation policies of products by region

and to the characteristics of products and organization of producers. Another function is of socio-economic nature of the transformation processes of agricultural products, especially fruit crops. Dr. Gerard Chuzel, of the International Cooperation Agricultural Research Center for the Development of France, informs that there are more than 30 techno-centers (or scientific parks) in the agro-food sector, aimed at generating and facilitating the technology transfer operations, participating in the process of inversions, and formatting strategic alliances between the public agencies, research centers and the productive sector. The performance of techno-centers, in that sense, occurred through specialized networks, supply of services, technological parks, incubators of enterprises, research programs, development, and capacity-building.

In summary, it can be said that France followed a State model of republican centralism during its development history, despite the regional development initiatives. According to Professor Gilbert Benhoyun of the university of Aix-Marseille, within that context, the decentralization laws of 1982-1985 represent a revolution. The new law establishes a new distribution of powers, allowing decision-making freedom to local communities to define the norms of their actions and modalities of intervention. Another objective is to seek better efficacy of public action. Finally, decentralization ensures the conditions for a local, solidarity-based democracy.

New concepts have been made explicit within the law texts in 2002-2003. The first article of the constitution was changed in order to explicitly state that the territorial

organization of the republic is decentralized. Financial and fiscal autonomy: fiscal return and other revenues must represent a determining part of the resources of local communities. Another recent innovation was the *ad referendum* right. A local assembly can submit, to their constituents, the important projects under their competence. The result of the voting will have the effects of a decision.

## **GREAT BRITAIN: THE DEVELOPMENT OF CITIES AND THE COUNTRYSIDE**

### **Background on Economic Development**

**T**he United Kingdom is comprised primarily of England, Scotland and Wales, located on the Island of Great Britain. England occupies the central and southern portions of the isle. Scotland is to the north, in the highlands; the economic base of this country is the electronics industry as well as the production of textiles and quality beverages. Wales is located to the west of England, also in a mountainous region. It was annexed by England in the 16<sup>th</sup> century, obtaining some autonomy in 1997, similarly to what occurred in Scotland. Its main industrial activity is steel and also has an important coal-mining center. The province of Northern Ireland is also part of the United Kingdom, but the Republic of Ireland has been independent since 1949.

The United Kingdom joined the European Economic Community (EEC) in 1973, now known as the European Union.

The total area of the UK is 244,000 km<sup>2</sup> and in 2002 it had 60 million inhabitants, out of which 80% lived in England, 10% are Scottish, and the remainder live in the other regions. Its Gross Domestic Product (GDP) was US\$ 1.5 trillion, losing in importance only to the United States and Japan. The per



capita income at that time was US\$ 25,000 and the Human Development Index (HDI) 0.926, among the five best in the world. The economic structure of the UK is made up of 70% from the services sector, 29% from industry, and 1% from farming and livestock raising. Regarding employment, 30 million people are employed, distributed in an approximate manner with the weight of the aforementioned economic activities.

The system of government is a parliamentary monarchy, administratively divided into 8 regions in England, subdivided into counties. Scotland has 9 regions and Wales has 8 counties.

The economic process that occurred initially in Western Europe and later in North America and in Asia did not occur in the same manner in the whole space occupied by those countries. According to studies by Professors François Perroux (1955) and Jacques Boudeville (1966), the economic growth started in certain centers or regions, from where it gradually continued to expand to the neighboring areas or to other regions. The spatial concentration of the economy of countries has been a characteristic standard of the economic process. American economist Albert Hirshman (1980) also analyzes that phenomenon, highlighting the dissemination and regressive effects of those centers of economic growth.

Regional development policies and strategies aim to correct such distortions in the most backward areas or are aimed at a more balanced and harmonious manner of economic development. The determining causes of this trend of the economy derive from, or are associated to, an entire complex of problems. They are of historical nature,

also entailing the existence of natural resources, the availability of capital, and educational and technological standards, just to mention the most universal factors.

Since the United Kingdom, especially England, has been the cradle of economic development in the last two hundred years, we consider it appropriate to focus on some historical aspects, which marked the appearance of this movement that became universal.

The United Kingdom was the most important center of the world economy in the 19<sup>th</sup> century. That leadership began to decline in the second half of the 20<sup>th</sup> century, with the appearance of a group of countries that became industrialized during and following the two world wars. The pioneering industrial revolution of Great Britain started a century before other nations. It marked the transition into modernity and the formation of Nation States and the new phenomenon of fast economic growth. This was a result of the increase in work productivity in industry and agriculture, stimulated by exports to an expanding international market.

## The Industrial and Agricultural Revolution

The first stage of industrialization occurred in the period from 1760 to 1850, restricted to England with the production of consumer goods, especially textiles. This was the phase of the productive use of steam power. Since then, the industrial revolution spread throughout Europe, North America and Asia (primarily Japan). The manufacturing of production goods grew in parallel with railways and the appearance of hydroelectric power and energy derived from

petroleum. The third stage started in the first decades of the 1900s and continues up to this day. Production began to be in series. Industrial conglomerates appear, as well as the diffusion of media and the chemical, electronics and robotics industries.

After capital, natural resources and the market, the fourth element of the industrial revolution was the transformation of agrarian structure. The land-division laws, authorized by Parliament, with the splitting up of collective lands, encouraged capital investment in agriculture. As a result, there occurred the specialization of production, technical improvements, and the increase of productivity in labor and the land. The growth of the population stimulated the expansion of consumer markets and the release of labor from the country to industrial centers.

All specialists and historians agree that the role of agricultural evolution, which occurred in England under different aspects, was a key element towards the industrial revolution of that country. According to economist J. P. Rioux, in his book about the origins of industry in Europe, there is no country that after 1780 has carried out an industrial revolution “without agriculture having undergone almost total transformations, at least in some regions” (RIOUX, 1975). Rostow’s analyses (1970) reinforce that thesis, by saying that agricultural advance is a *sine qua non* for industrial advancement. Adam Smith (1975) in his work *An Inquiry into the Nature and Causes of the Wealth of Nations*, addressing this issue, defended that surplus income from land property should be transferred to other sectors of the economy. In this manner, modernized agriculture would be

not only a previous requirement indispensable from the supply side but would also play a decisive roll in the demand for tools and consumer goods.

Thus we can conclude that without a previous revolution in agriculture, the industrial development and an English-like economic take-off would not be feasible.

During the 1960s-1970s, many countries forgot those lessons and neglected agriculture, giving great priority to industrialization. From those policies came many of the present problems of concentration of the economic growth and the grave problems of regional imbalances, which are the main focus of this book.

Many more recent studies have retaken the role of agriculture in the policies to fight poverty and those concerning regional development. In the case of the World Bank, the opinion of its technicians on the work *Brazil: Strategies for Poverty Reduction in Ceará* (WORLD BANK, 2003) is important. In three of the books I have written, mentioned in the bibliographic references of this book, I deal very specifically with the rich role of agriculture in economic development. The very title of this book: *The Struggle for Regional and Rural Development in the World* shows that concern quite clearly.

For sure, the agricultural revolution is not exportable from one country to another, but it must be carried out based on capital and on the country's natural and human resources. But it must be conducted previously and in parallel with industrialization so that the regional and economic imbalances, which are so common in the modern processes of economic growth, do not come about.

The Industrial Revolution has altered the demographic and economic occupation of the British territory. One of the most remarkable manifestations was urban development, with the displacement of rural population by force of agricultural mechanization and the increase of productivity in that sector. The city of London reached one million inhabitants in 1880. Industry and commerce began to be concentrated in the North, with Manchester leading prosperity of the few to the detriment of working masses who lived in terrible conditions of poverty. In order to alleviate that situation, the ruling class and the government activated the Speenhamland Law, which tried to offer a guarantee of minimum subsistence to unemployed and poorer people. That program was financed by taxes paid by the entire community. With the appearance of trade unions, prohibition of child labor and the limitation of work for women were gradually conquered, as well as the right to strike.

Until the beginning of the 20<sup>th</sup> century, the distribution of income continued being very unequal, mainly in England, as a consequence of the industrialization model historically adopted. In the years following World War II, and most predominantly in recent decades, Great Britain began to present fewer inequalities than most European countries. It is worth noting that the income of the British evolved steadily, even if at a slower rhythm than its European neighbors. Even though the better regional leveling has also occurred, there still subsist problems caused by certain social class structure, arising out of cultural factors.

In order to counterbalance such vestiges of social exclusion of some tiers of the population, a state healthcare

and social security system was adopted based on the principles of the well-fare state. Since 1948, the National Health Program was established which offers medical care, hospitalization to all British citizens, and free medicine to the poor. Social security is very developed. It provides pensions and unemployment insurance, besides housing on minimal conditions or grants to those living in rented housing on resources of the state or county. There are practically no illiterate people. Education is free and mandatory between 5 and 6 years of age.

During the industrial revolution, the so-called classical economists created the doctrine of free competition, which condemned the State's intervention in the economy. The main role of the State was to ensure the functioning of private property. Adam Smith (1723-1790) in his book *An Inquiry into the Nature and Causes of the Wealth of Nations* (SMITH, 1975) provided the theoretical foundations to guide the consolidation of capitalism as a dominant economic system in Europe. It is worth remembering that those conceptualizations were opposed by Karl Marx, who identified great distortions in the process of economic growth generated by the industrial revolution. I believe that Karl Marx's work *Capital* as well as *Communist Manifesto* (1818) by Marx and Engels, produced a complete reversal of position in the public policies to fight poverty and the struggle for the reduction of shocking regional inequalities then existent. That issue, by the way, was perceived by the very Adam Smith who, before his death in 1790, expressed in one of his writings: "No society can certainly be flourishing and happy if the majority of its inhabitants are poor and destitute."

Someone who gave a decisive contribution towards the re-orientation of policies of government intervention in the economy was another British economist, John Maynard Keynes (1883-1946). The United States was the first country to utilize the new anti-recession guidelines and to counterbalance unemployment. After the economic crisis following the 1929 stock market crash, President Franklin Roosevelt implemented a wide-ranging program called the New Deal, destined to implement public works as an anti-unemployment initiative. The government also sponsored food subsidies and other social needs. Keynesian ideas and other socialist doctrines have provided the elements on the occasion of social welfare policies, especially in Scandinavian countries, as well as in England, France and Germany. This was the appearance of social democracy.

## **The Planning of Cities and the Interior**

Since long ago, Great Britain has worried about the need to organize regional development plans. Already in the 18<sup>th</sup> and 19<sup>th</sup> centuries, with the accelerated industrialization process, the government realized that it was indispensable to adopt policies aimed the dispersion of industries throughout the country and to help solve the unemployment problem, which had become serious. The regional plans, therefore, aimed to establish a better balance between supply and demand of labor and to promote the elevation of the standard of living of the Britons. Legislation already approved in 1909 and reinforced through the decades foresaw the need of coordinating the regional

plans. With the UK's entry into the European Community, there was a need to review the regional plan. The policy of industrial decentralization is directly linked to the problem of employment, i.e., the absorption of labor necessary to decongest the urban sector.

Britain adopted measures to accelerate regional development based on non-reimbursable funds destined to attract private initiative and unemployed labor to certain depressed areas. The Secretariat of State for Economic Affairs was in charge of planning, both regional and national. For that purpose, the country was divided into regions, each one endowed with a regional headquarters, with local authority defined in relation to the execution of the plan.

Official subsidies to regional plan aimed at the construction of industries and buildings, purchase of machinery and wages at the assisted companies. The concern was to always establish those industries in outlying areas of the cities in the northern region and in the belt around London. Dispersion and industrial diversification were, therefore, the core objective of the regional development policy. It was for that reason that the automobile companies located their new factories in Scotland and Wales. A chemical complex was established in Tees Side and the electronics industry in the northeastern region and in Scotland. The industry of scientific instruments was located primarily in Scotland and Wales. The industry of non-ferrous metals, originally centered in Midlands, was later relocated to other areas. On par with this decentralization of industrial units, the government also relocated its offices and official executive instruments,



locating them in the very areas that were the object of action plan.

As part of that regional policy, there is also an integrated rural development program to foment rural industries, which are dispersedly distributed. It is steered by a committee whose main purpose is to ensure financial and technical assistance to those small rural industries and to enterprises geared toward tourism. The Department of Employment usually responds for the efficient use of labor and for the political aspects of regional development. Employment is the fundamental part of the plan and all of its projects.

A special aspect of the regional development policy derived from the Law of Development of Cities of 1952. That law established attractive conditions to decongest the great industrial cities like London and Birmingham, encouraging the transfer of masses of people from those centers to more distant regions. That work was done through a volunteer agreement between local authorities, which were eager for labor, and the large cities.

The development program of tourism—the country's second largest industry—in favor of areas of internal immigration was approved in 1969 and offers advantages to the hotel industry, not only in the form of loans at favorable terms, but also loans for the construction of new hotels and the expansion of those already existing. In like manner, the government fosters the installation of sports facilities for children and young people. The regional development program in the UK and in other European countries is evolving as a result of the new political realities in the Continent.

England's adhesion to the European Economic Community entailed a review of the regional development policy in the national plan. Not to deny it, but to reaffirm it in terms of this great market that had opened itself to England. It was known that both the Treaty of Paris and the Treaty of Rome—the former having established the coal community (in 1950) and the latter, the steel community—foresaw the possibility of reorganization of Europe and its total development, due to the major regional plans. In October 1972, on the occasion of a summit held in Paris with nine Heads of State, the regional development policy expanded to the European Community was discussed and it was decided to correct the imbalances existing among its different regions. The member states assumed commitments to coordinate their national and regional development policies with the whole European Community, whereby resulted the creation of the European Fund of Regional Development, which funds activities in a style not unlike the one I just described for England. For the projects located at greater distances from the large cities, there are no limits as to the amount of assistance given, while projects located in central areas receive assistance corresponding to just 20% of the investment cost.

A fundamental aspect of Britain's law of regional planning is the one regarding the role that local authorities play in the planning and execution of the programs. At the local level, municipal planning is a responsibility delegated by the national government through local planning authorities. In the periphery of London, there are 45 such local entities of planning of larger areas, out of which six

are metropolitan communities within which there are 332 administrative districts. While the municipal councils are in charge of planning and the administration of are larger areas (which require the support of substantial resources), the District Councils manage functions of more local significance.

Usually, the development plan delineates and maps out the objectives linked to the use of soil and resources, based on a certain period of time. The plan does not directly control the acquisition of land, but establishes the tracts reserved to construction of highways, public buildings, parks, open spaces and other services of public use.

In summary, Britain plans its development through regional plans. These plans include renewal measures, creation of new cities, decongestion of industries to areas located farther away with the respective relocation of labor, etc. It is therefore a whole plan whose policies are established from the top down and carried out from the bottom up. This means, at the municipal and district level, the policies are established by local entities, which have an active voice in the formulation of the plan.

From that experience at the beginning of 1970s, new legislation started to appear towards an integrated planning policy. In recent years, the planning entity prepared a strategic plan with the definition of actions of a certain priority area and of neighboring locations where it is found. Such local plans can be general-purpose, in order to meet the urgent needs of intervention, and district plans of interest of the economic development. Naturally, all such initiatives must be supported by the Regional Structural Plan,

in which priorities and availability of resources are specified. It can be said, therefore, that Britain practically doesn't have a National Planning System as occurs in Brazil. The last British plan of a national character was elaborated in 1965.

In this manner, the Regional Planning Councils that still exist are in charge of studies and structural plans *ad hoc*. As to local plans, they deal with physical planning and the new cities. In other words, the British Economic Planning is very systemic, even though it has never been wholly structured.



## ITALY: PLANNING AND ECONOMY OF THE SOUTH REGION

### Economic Overview

Italy is now the world's fifth largest economic power, but prior to World War II, the country was predominantly agricultural. Italy's Gross Domestic Product (GDP) was US\$1.1 trillion in 2002, with a per capita income of US\$ 20,000. The total population is 57.4 million, with an annual growth rate of 0.6%. The country's overall territory covers an area of 301,000 km<sup>2</sup>.

Italy has a long history of opulence, political conflicts and recessions, which has left traces in its geographical and social configuration. With respect to my studies and observations about Italian regional development, the greatest interest is in the more recent period of its economic history.

Following World War II, Italy received aid from the Marshall Plan, an initiative for the economic recovery of Europe sponsored by the United States. So, in the 1950s and 1960s, with the orientation of economic policies toward incentives to industrial processes, Italy experienced a period of accelerated economic growth. The nation participated in the foundation of the European Common Market in 1957, later transformed into the present European Union (EU).

With the economic boom motivated by an industrial growth rate of 6% a year, in the period of 1950-1963, an intense migratory flow took place from the southern regions to the more progressive Northern regions. This is when the aggravation of economic disparities originated between North and South, which will be the focus of the regional issues dealt with in this chapter.

In the following decades, (1964-1984), periods of growth and recession alternated with the expansion of State participation in the economy of the industrialized areas. In order to tackle inflation and unemployment, by force of the increase of oil prices, the Italian State encouraged and participated in the creation of many enterprises in different economic sectors. As of the end of the 1980s, Italy started to present a continued evolution of its development, however, without solving regional inequalities, which continue to be a complex economic and political problem.

In a sectoral panorama of the economic structure of that country, we found out that agriculture has lost its relative position in comparison with economic growth, maintaining a participation of 4% to 5% at present. The industrial sector has raised its participation from 20% to 35% in the last 30 years, but it is the services sector, which responds to 60% of everything produced in Italy. As occurs in the developed countries, that country has a corresponding balance with the structure of the occupied population, because around 7% work in agriculture, 33% in industry and 60% in services.

With respect to the secondary sector, mechanical industry is the base of the national productive system. Most

outstanding in this field are the automotive sector, manufacture of utensils, household appliances, electronic machinery, precision instruments, with greatest highlight on the sector of industrial machinery production. The textile industry is the oldest industry, having undergone several crises. At present, products with synthetic fibers are in full development, occupying 15% of worldwide production, placing second in that field. The ironworks sector has played an important role in the Italian industrial development, but in recent years has presented a phase of stagnation. The food industry is very diffuse in terms of territory, pointing out the medium and small sized enterprises. In the same standard is the furniture industry as well as the leather and rubber industries. Also prominent are the paper industry and similar materials. With governmental participation, the pharmaceutical-chemical industry is characterized by large groups (Montedison, Liquichimica). There is a large number of small private enterprises. The civil construction sector is very developed with work in many parts of the world. Finally, it is worth highlighting the aeronautics industry, with broad spatial technology that has already put several satellites into orbit (together with NASA). Aircraft for military transportation and combat airplanes and helicopters are also manufactured.

Agriculture has played an important role in Italian history, despite the territorial formation not being very favorable to mechanization. Around 80% of the arable lands are in the mountainous and hilly regions. However, 10% of the territory is not adequate for agriculture. The most developed regions in terms of agriculture are the Po River



plains, Lombardia, Emilia Romana and Veneto. In Italy there are 2,700 hectares of irrigated farmland, corresponding to 30% of the total tilled area.

The main agricultural products are wheat, vegetables, fruits, flowers, tobacco, beets (for sugar), oilseed plants, and grapes; Italy is one of the world's foremost wine producers.

In the tertiary sector, commerce represents one the base activities of the economy, followed in second place by banking, insurance and other financial activities. Foreign trade with EU countries is very developed; complemented by imports of raw materials and exports of industrialized products from the other countries. Oil importation is huge and strategic for the production of 75 billion kWh, out of the 80 billion kWh/h of the Italian energy balance.

## Two Italies

The experience of regional development carried out in the South of Italy in the last half century has been among the most important in the world economic history. It was from this initiative that emerged the world interest in the deliberate action of the government in search for greater balance of economic development.

The program adopted in the Northeast of Brazil, also in the 1950s, certainly represents another policy of significant importance in international terms. The establishment of "Superintendency for the Development of the Northeast" (*Sudene*) in 1959 was institutionally designed based on the *Cassa per il Mezzogiorno* model. The tax incentive programs

of *Sudene*, known as Articles 18/34 and later the Northeast Investment Fund (*Finor*), also derived from what happened in southern Italy, with a few adaptations.

Many politicians, authorities and technicians from *Banco do Nordeste*, *Sudene* and the state governments of the Northeast have visited the region of southern Italy, where great enthusiasm has occurred for the initial results of that regional development program.

*Banco do Nordeste* (BNB), with support of the Organization of American States (OAS), sponsored a special capacity-building program in Italy for technicians from Banco do Nordeste's Office of Economic Studies (*Etene*). As an economist from BNB, I participated in that study program in the South of Italy from April to May 1969. At that time, the most important organization for supporting national and regional development in Italy was the Institute for Industrial Reconstruction (IRI). The work of that institution was carried out in coordination with *Cassa per il Mezzogiorno*, the staff of which included many technicians from IRI. According to Dr. Antonio Teraldo di Francia, who assisted us during our visit to the Institution headquarters in Rome, IRI was founded in 1933 and, at that time, was the most important entity in Italy, also working abroad. Around 200 people work at IRI headquarters, but in the entire industrial complex, of which it was majority stockholder, there were about 300,000 people.

The government's contribution to the southern region of the country was prioritarily for infrastructure services, 25% subvention to new enterprises in the investments of industries, and 65% in the case of agricultural jobs; agriculture represented 25% of total income in southern Italy.

The banking network of the country is 80% official and offers loans to underdeveloped regions at lower interest rates and longer payback terms. A committee from *Banca d'Italia* (Central Bank of Italy) supervises credit operations.

An example of IRI's work was given to us in Toronto. An ironworks center that exists there is a private and public joint stock company in which controls IRI 62% of the capital stock. The total investment then was US\$ 800 million, with a production of three million tons/year. Italy's total production was around 15 million tons. This company employed 5,800 people, out of which 1,000 were technicians.

In Toronto province, we also visited the rural area to know the regional agrarian reform programs. In this case, the government expropriated lands at the amount registered with the Municipal Property Tax authorities and payment was made through 25-year savings bonds at 5% annual interest. Five years after the issue date, the bonds could be traded. In the agrarian reform plans, farmers received large subsidies with financing, including productive financing, at 30-year terms and 1% annual interest. By 1989 in Italy, especially in the southern region, the agrarian reform program had reached 400,000 hectares, out of which 200,000 hectares in Toronto. We visited the property of a farmer assisted by the reform who grew oranges and olives. The property area was 4.5 hectares, entirely planted. That farmer, together with his wife and one son, were the entire labor force of the company. In this case, agriculture was mechanized, with the use of a tractor. The gross family income was US\$ 10,000 annually.

Another region studied by our mission was the Metaponto province. This area was very backward, and until 1958 had no governmental support program for its development. The results of the agrarian reform program in that area were really impressive by the time of our visit. The fields were entirely tilled with state-of-the-art technology, through irrigation. In parallel, industries were being installed, employing labor released by agriculture. We went to agrarian reform co-ops, which worked with milk pasteurization and agricultural trade. We visited a city founded just 15 years earlier that was growing in a startling manner, with the support of agriculture services. There were modern buildings, industrial constructions and commercial centers invading the rural area as sign of economic development. We got to know other 2<sup>nd</sup> level co-ops, as intermediaries in the trade of fruits and vegetables: they owned the installations and machinery for packing and preservation of produce. Most of the employees were women. Another innovating initiative of that region was San Giulino Dam with reservoir capacity of 100 million m<sup>3</sup> and which supplied water for the irrigated zone. Its canals extend for over 600 km. That dam belongs to a consortium of farmers associated to the agrarian reform plans.

Bari province is one of the industrial areas prioritized by *Cassa per il Mezzogiorno*. An experiment of industrial development consortiums was being executed in that region, similarly to what was organized in agriculture. For the creation of such entities, *Cassa's* technicians tried to arouse the community's interest in the development advantages. Once motivated, they would request the government to set

up a consortium. Those consortiums are public corporations responsible for the administration of the industrial or agricultural center. They participate in 15% of the resources applied in infrastructure services and land expropriation, being later refunded by the investors themselves. The remaining 85% are subsidies granted by *Cassa*. The evaluation of the *Banco do Nordeste* missions at that time was that the regional development program of *Mezzogiorno* was attaining positive results in regard to all sectors of the economy of southern Italy.

Finally, the delegation of which I was part participated in an “internship” at *Cassa per il Mezzogiorno* in Rome, where an overview was provided of all policies and development programs in progress in Italy.

The interest in what occurred in that program continued in the following years, at the time when in the Brazilian Northeast, the Superintendency for the Development of the Northeast was being organized and increasing its field of operations. So, I had the opportunity during the 1970s, to revisit southern Italy twice. These trips were sponsored by the Ford Foundation and by *Banco do Nordeste*. As a Professor of Economic Development at *Universidade Federal do Ceará*, my academic interest for the issue was great, and for that reason I constantly monitored the bibliographies produced by Brazilian technicians who visited that country.

When Dr. João Gonçalves was in the Organization of American States (OAS), in the Department of Capacity-Building, he paid much attention to what occurred in the South of Italy. His knowledge of that experience was useful

when he became Superintendent of *Sudene* from August 1964 to June 1966. His opinions and analyses about agrarian reform in Italy and *Mezzogiorno* served as subsidies when we prepared the Solidarity Agrarian Reform Program of the State of Ceará, created in 1997 at the Secretariat of Rural Development, under the administration of Governor Tasso Jereissati.

According to studies by Dr. João Gonçalves, there were three governmental entities with functions related to the plans of agrarian reform: the Council of Ministers in Rome, which defined the general policy and allocation of resources; the regional bodies or entities, which dealt with the execution of the agrarian reform in the eight regions selected for that purpose; and *Cassa per il Mezzogiorno*, the main financing institution of the industrial and agricultural plans selected for agrarian reform. As reported by Dr. Gonçalves, the objective of agrarian reform was economic, social and political. Its main focus was to increase production for internal consumption and exportation, to raise the standard of living of rural populations, and to lay the foundations of a democratic society.

The picture of the agricultural sector in the South of Italy was very problematic, with serious underdevelopment, low productivity, unfavorable agricultural prices and high underemployment rates. The practices of land leasing were oppressive, while the big landowners lived *la dolce vita* in the cities. Extensive and backward livestock raising damaged the poor lands with insufficient pasture. In Sardinia, the mountainous, rugged and rocky lands were overused with 3 million sheep and goats, which were the

only source of income of breeders. In other regions, malaria and lands devoid of organic matter depreciated land prices. That was the general picture of agriculture in southern Italy, with a poor and non-assisted population. A very similar picture of what occurred in the Northeast of Brazil in the 1950s, when the federal government started paying more attention to the region with the creation of *Banco do Nordeste* and *Sudene* in 1959.

It is worth noting that as a parallel of what happened in Brazil in the 1950, land was everything for the poor rural population in Italy. So, on that occasion, the landless farmers invaded properties and occupying them “by force” (as the leaders of the Landless Movement [MST] say here in Brazil). At that occasion, conflicts with the police forces were constant, due to judicial writs of possession.

The Italian Agrarian reform was carried out gradually with the establishment, in 1954, of eight priority regions, mainly located in the southern Italy. The total area of possible application of this program covers 30% of the overall agricultural area, with around eight million hectares.

By evaluating the results of the Italian agrarian reform along thirty years, many adjustments and improvements have been made in an attempt to bring economic development and better life quality to rural population. Many studies conducted on this program point out that four interconnected factors explain a large part of the success of the Italian agrarian reform. These were: the adequate financing of great infrastructure works and agricultural plans, the technical orientation of families settled, agricultural mechanization for increasing productivity of labor, and

cooperative organization. Those were the bases of almost all the success of the other factors. There are cooperatives of services, with committed members, specialized cooperatives, according to economic activities of undertakings, and second-level cooperatives or federations of cooperatives, which are usually destined to projects of general character and industrialization.

But the biggest secret to the success of the undertakings of the Italian agrarian reform was the capacity of farmers to work in a practical and objective manner as well as continuous and efficient technical supervision. For that purpose, professional institutes were created in the main regions with practical programs of rural extension and administration, including programs for children of farmers.

At the moment when Brazil is thinking about reviewing its agrarian reform policies, as President Lula da Silva announces, it is important to remember several negative aspects, which had to be overcome during the process of Italian agrarian reform. In fact, in all of Italy, after 30 years of experience of agrarian reform, 60% of families were successful, 20% continued with the same adaptation problems and improvements of living conditions, and 15% are seen as having failed or abandoned their projects.

According to the entities responsible for the program of agrarian reform, the problems that limited greater success of the program derived from the selection process of beneficiaries. Since people are poor, the main criterion was based on need and not capacity. Experience and training were not taken into account, even though the preference was for those who already worked in agriculture, and those



with higher number of offspring prevailed. The strategy of adopting an agricultural plan for each plot of land has not worked out well. Experience has proved that results were better with the specialization of one or two products. For that, it was essential to carry out previous studies on soils, potentialities and the market. The technical assistance was recognized as the participation of multi-sectoral teams: agronomists, economists, sociologists, and administrators. The production plan stopped being just agronomic in order to become integrated.

Now the target is to find the size of agricultural plots and adjusting the production plans to the so-called “Green Plan,” which encompasses the overall policy of the European Economic Community.

## **The Development of the South of Italy**

As has already been mentioned, the economic development of Italy has not occurred in the same way throughout the regions of the country. While northern and central Italy, for example, reached high levels of prosperity, the southern region has remained almost stagnated for a long time. The causes for economic backwardness of the southern region are related to factors of a physical, historical and political nature. In addition, the geographical situation of that area of the country has not enabled the advantageous contact with the rich nations of western Europe. On the other hand, that area had a centuries-old feudalistic tradition, which functioned in the past as a true barrier to the introduction of technological innovations and advancement overall.

The economic development plan of southern Italy had as its primary objective to provide the southern region with a vast network of services of the interest of the community, besides the infrastructure conditions able to allow for rapid agricultural and industrial development.

The implementation of that economic policy could not be carried out, however, through the old forms of governmental intervention supported by annual budget funds without a long-term investment plan. In order to get around that situation, it became necessary to create a new organization of a special nature whose activities would be carried out within the usual norms of control of public expenditures, but whose inspiration would be based on an overall and coordinated view of public intervention in all complex problems of regional development.

Based on those principles, *Cassa per il Mezzogiorno* was created in accordance with Law Number 646 of August 10, 1950 with the task of planning and carrying out a broad-based plan of rehabilitation and expansion of the economy of southern Italy. In order make *Cassa* work, a considerable amount of resources was allocated for application over a 10-year period.

The new radical solution for the South of Italy was based on the principle that it was necessary to remove all obstacles of a local or institutional nature that had prevented the development of agriculture in the South. Another source of action was to eliminate the negative conditions which prevailed in the past and which hampered the growth of the industrial sector. This second requirement was carried out through massive governmental investments in the

infrastructure sectors (highways, railways, drainage, water supply, etc.), without which it was impossible to start an industrial development process. At the same time, conditions were created to encourage productive investments of publicly-held enterprises.

In compliance with the law, *Cassa's* General Plan of Intervention was prepared by the Ministerial Committee formed by ministries of all sectors operated by *Cassa*. In addition, the aforementioned Committee established coordination between the special intervention targeted by the plan and the ordinary ways of actions derived from the usual activities of the governmental agencies. *Cassa* was also in charge of a long-term plan, however, which was made up of a series of annual plans, including a total view of the intervention in several sectors and reaching several districts.

The territorial scope of *Cassa's* work included the following regions: Abruzzi and Molise, Campania, Apulia, Basilicata, Calabria, Sicily, Sardinia, Lazio (bordering the provinces of Latina, Frosione, Rieti and part of the territory of the province of Rome), the Tronto River districts, as well as the islands of Elba, Giglio, and Capria.

*Cassa's* work was based on an effective policy of public intervention, aiming at a whole transformation of the social-economic structure of an underdeveloped area. Therefore, it was a public work carefully carried out in the internal sector in harmony with the external sector, aiming to increase productivity and economic development.

The orientation adopted in the South during the existence of *Cassa's* activities, since 1950, has been the cause of many controversies. Some analysts recognize that

that experience was successful, especially in comparison with the policies adopted in other countries.

In fact, the difference between primitive policies of intervention was substantial in comparison with the new plan for the South. Previously, the results achieved stemmed from a complicated legislation, while *Cassa* operated through a series of re-adjustable processes in compliance with the problems, which directly or indirectly emerged from the interventions.

The century-old Italian problem in the South required extraordinary intervention by the federal government. It was a prevailing issue that, for essentially economic reasons, threatened the division of the country into two. One to the North, extending from Rome northwards to the limits of Po River—an industrialized, rich and modern region. The other one extended from Rome southward to Calabria, in the “Boot”—backward, immobilized and poor. In summary, it was a large area, socially stratified and economically underdeveloped. The region encompassed 38% of the population of Italy and owned only 25% of national income when the government decided to intervene in the problem in a planned way in 1950.

*Cassa* began to work with the main objective of developing southern Italy, through a coordinated plan of action in the several sectors of regional development. Examples of that action are the industrial and agricultural fomentation, reforestation of mountainous regions, infrastructure works in the area of tourism, environmental and port improvement in several coastal cities (Naples, Cagliari). In the rural area, most outstanding were irrigation,

cattle-raising for beef, sheep for wool, besides the total renewal of Sardinia's economy, and of other previously depressed areas. The industrial development plan prioritized investment in order to assemble a vast infrastructure network, to create new industries outside of large cities and to establish conditions for building new industries. It also proposed to facilitate a greater interconnection of raw materials, local labor and the renewal of existing industries with possibilities to introduce new productive processes. In the 1960s, there was a highlight on the chemical, mechanical and food industries, to which the government ensured special incentives.

Decades after it began, it is now the time to inquire which situation the Center-South of Italy is presented as a result of that plan. That is, the objective results to the benefit of the economic development and advance of the population in the region covered by it. After highlighting the transformations produced by the plan, Enzo Gambino says that entire valleys—which previously were either infested with malaria or arid and uninhabited—were prepared, irrigated and transformed into crop lands, within which emerged modern agricultural exploration. Thousands of locations previously without water are today supplied by this precious liquid because of the aqueducts that were built. Thousands of kilometers of new highways traverse the old southern territory, and at the same time industrial and tourism initiatives multiply, stimulated by financial subsidies and credits and by other facilities foreseen by law.<sup>1</sup>

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<sup>1</sup> Verbal information provided by Dr. João Gonçalves.

Some of the tangible results of the plan were a wide range of grand works, such as railways, seaports, airports, modern aqueducts, industries, amusement parks, hospitals and professional capacity-building centers, as well as dam projects for irrigated agriculture, which involve more than 15,000 kilometers of irrigation canals and more than one million hectares of land plots were benefited. This network of works includes direct investments of over six billion dollars, without mentioning resources indirectly attracted to the region and applied therein.

In a whole view trying to encompass the wide and total picture resulting from that national commitment, two observations can be made. The first one is that the central-southern region of Italy has changed in its advance indicators and in its general scenario of development. Another focal-type observation, reported by Dr. João Gonçalves, was made by a young technician of *Banco do Nordeste* who studied and saw from within the Italian case—economist Renato Santos Duarte—that the basic objective of reducing disparities between the North and South of the country has not been achieved and that this huge effort has fallen far short of the planned level of overall development of southern Italy. Worse still, he says that the development standard of the southern region of Italy under *Cassa's* work has been characterized by an accentuation of regional disparities in income distribution; and he concludes by saying: the re-distributive policy has allowed for the appearance of small “*Mezzogiorno*” within the Italian *Mezzogiorno*.<sup>2</sup>

<sup>2</sup> Verbal information provided by Dr. João Gonçalves.

So, both there in the South of Italy and here in the Northeast of Brazil, the overall results achieved by both plans have not been fully satisfactory. And as to the “income” criterion as a development indicator, according to Duarte, what was discovered there was an increase in disparities.

Despite the planning and the good overall results achieved, this is another case in which the vicious circle of Swedish economist Myrdal’s theory has occurred, according to which there seems to be a circular causation that makes the richer regions of a country increasingly more prosperous and keeps the poorer regions spurred on by their poverty, unemployment, low income and lack of invigoration.

After fifty years of work, *Cassa per il Mezzogiorno* was recently extinguished by Italy’s Parliament. Many reasons have been argued for that to happen. The most severe critics point out, as the gravest causes, the existence—in most of the activities of that entity—of political clientelism, paternalism and corruption in the administration of the incentives and public grants.

I must confess that for the elaboration of this item, I counted on the help of observations formulated by Dr. João Gonçalves when he was still living. I am also grateful to Prof. Enzo Spaltro of the Department of Organization and Political Systems of *Università di Bologna* with whom I had the opportunity to talk and obtain recent information about *Cassa per il Mezzogiorno*.

## The Experience of Cassa per il Mezzogiorno Reviewed

The Brazilian government has recently re-created the Superintendency for the Development of the Northeast (*Sudene*), attributing new responsibilities to this agency with the objective of resuming programs to accelerate the development of the Northeast. The main target is the reduction of disparities of progress between that region and the Brazilian Southeast, and the elevation of the standard of living of the majority of the 30% poorest population residing in the nine states of the Northeast, and portions of the states of Minas Gerais and Espírito Santo.

Even running the risk of eventual repetition of comments already made about the development of southern Italy, I start analyzing again the policies and results obtained with the work of *Cassa per il Mezzogiorno*. As has already been shown, the problems and stages of the institutional organization of these two countries are very similar and the Northeast of Brazil can avoid committing errors and mistakes, which in Italy have damaged its development and regional policies. This presumption is even truer when I observe the proposed policies and guidelines of the new *Sudene*, which have not worked out in Italy. It is true that each country and region has its own peculiarities, but it is also known that the standards of economic development, both in theory and in practice, follow very similar rules and laws. An example of this are the studies of Nobel Prize-winner Simon Kuznets (1979) published in his book *The Modern Economy of Economic Development* in which the



aforementioned standards are scientifically showed with great precision.

The starting point of all Italian problems was that historical problems separated underdeveloped (agricultural) southern Italy from the advanced and industrialized northern region. The same equation prevailed in Brazil between the agricultural Northeast and the comparatively industrialized Southeast and South. The so-called *Mezzogiorno* encompassed 41% of the national territory and 38% of the Italian population, with around 18 million people in 1950. The per capita income was half that of the developed North, and a backward agriculture and an incipient industrial sector prevailed that were unable to absorb labor, which had abandoned the countryside because of the loss of proper conditions of survival.

As has already been mentioned, the intervention in favor of the *Mezzogiorno* region was initiated in August 1950 with an extraordinary 10-year plan. This timeframe was successively extended with important changes of the state coordination and intersectoral action entity in 1976. Initially, the main work was in the construction of an entire infrastructure complex — watershed organization works, waterways, aqueducts, irrigation — as well as industrialization, agrarian transformation, valorization of agricultural products, and tourism.

Its organization had a political committee with representation of the main ministries, and an Administration Council that evaluated and approved the projects to be benefited. Members chosen from among representatives from entities and authorities were represented on that

Council. Over time, *Cassa* adopted a modality of direct action in the industrialization sector to encourage the creation of new enterprises, following localization criteria of enterprises in the least-favored areas. In those cases, consortiums were benefited with 50% to 80% non-reimbursable investments, and enterprises with 20%.

The financial part of the program was carried out by the Regional Institute for the Development of Medium and Small Industries, of Sicily, by the Institute for the Economic Development of the Southern Region, and by the Industrial Credit Bank.

With those investment policies of the state in infrastructure and subsidies to industry, the government hoped to obtain a multiplying effect on income and employment, paving the way for new investments. With the attraction of investments from outside the *Mezzogiorno* region, aiming to supply the internal and external market, a “jump” was expected in investments and in the life quality of the southern population. The expectation was to obtain the rupture of the vicious circle of underdevelopment and the reduction of disparities between North and South.

Over time, it has been found that the regional development process was slow and complex as in any part of the world. The needs for resources are usually shown to be above the State’s capacity. Also a lack of greater will, control of authorities and commitment with the private initiative, banking sector and program beneficiaries was missing.

Many evaluations have been made about the results of the regional development program of southern Italian in

the 50 years of *Cassa per il Mezzogiorno*. The extinction of the entity a few years ago was preceded by many political and technical debates.

By and large, there is an agreement that the economic dualism between North and South today, is less stressed than what prevailed in the 1950s. There have been improvements in infrastructure, there is less illiteracy, there has been a substantial change in the productive structure, with an increase in the participation of the industrial and services sector and the appearance of a larger business class and middle class. Access to technology is not a great problem, and there has been an improvement in the general human factor. The participation of per capita income in southern Italy has risen, as well as the increase in regional consumption. Big business prevails in southern Italy today, with its vertical articulations; this is what most contributes to the formation of income.

With this, however, “industrial islands” have been created that has given rise to a new internal “dualism” in the *Mezzogiorno* economy, between the dynamic sectors and the traditional sectors linked to agriculture and services. Needs for consumer goods are not supplied by external sources, covered by financial transfers from the North of Italy. So, *Mezzogiorno* has produced little because of the lack of light industries and because it spends a lot for the benefit of more developed areas.

Research has shown that in the 1970s, investments in light industries (such as clothing, food, etc.) were only 2% of the total earmarked to the manufacturing sector. An example of the concentration of investments can be

observed in the growth of the chemical complex in Sicily and the ironworks complex in Pulia, which at the time utilized 60% of *Cassa's* total resources. Those new undertaking, which had extensive governmental participation, was carried out by using resources that before were aimed at programs of the region's social-economic network.

The destination of credits at reduced and subsidized interest rates to such activities have subtly led the government to abandon the program of credit to small enterprises. In this aspect, critics claim that the resources for those large undertakings should have been obtained in the market by the very enterprises and not deviated from the few resources of the region's industrialization program. In addition, that sector employed relatively few people, passing the issue to the State, which could not solve the absorption of the rural labor that was being released as a result of mechanization of agricultural production. On the other hand, the State's expenses kept increasing with the excessive growth in the number of public servants.

I remember a movie of that time in which Sofia Loren was arguing with someone on a street in Rome because of an accident she had in her car. She argued that she would not pay for the repair of the car because she was not an employee of *Cassa per il Mezzogiorno* who made money easily.

The studies that were the basis of the extinction of *Cassa per il Mezzogiorno* point out that the region had an increase in income, however still with stagnation of occupation and maintenance of the North-South income disparities. Indicated as reasons for the limitation of

regional development results were the lack of better planning and failures in adequately defining the objectives and modalities of intervention. A serious problem, which was highlighted in all discussions, was the practice of “machine politics” (“political clientelism”) in the public sector, relegating social interests that should be the focus of the regional development program. Another highlighted criticism was the concentration of industrial investments subsidized with high coefficients of capital and little creation of jobs, especially in the chemical and metallurgic sectors.

In other cases, the concentration of industrial investments occurred in activities not directly linked to the local economic structure, not favoring the interconnection of benefits of the undertaking. Critics referred to this as “industrial cathedrals in the desert.” At the same time, the development of small and medium industry, especially that of consumer goods, was not very expressive.

According to Dr. Michele Bagella’s analysis (1982), the economic policy of *Mezzogiorno* was guided by the Keynesian philosophy of intervention of the public sector. As a poor region, the governmental help to make the economy grow in any way possible has prevailed. Today, in comparison with the past, *Mezzogiorno* is richer, however it needs and depends on external industry and imports to maintain its growth.

In the final years of *Cassa*’s work, the public policy toward it turned to import substitution, with the expansion of the local productive basis. In fact, the ideas for re-orientation of *Cassa*’s work were identical to those of the 1950s and which were not taken into account during the years of the agency’s most active phase in the 1960s and

70s. Again, priority started to be small- and medium-size light industries to help a new industrial development to emerge, supported by a solid internal matrix.

During the extinction of *Cassa per il Mezzogiorno*, several suggestions were put forward by politicians and technicians who dealt with the issue. In that sense, much emphasis was given to the abandonment of the policy of easy credit for financing inefficient undertakings that tend to fail, as occurred in the past. The search was for easy capital with low interest rates. For that, official banks must be more business-oriented and more demanding in the application of funds. Mechanisms must be created that avoid political pressure from interest groups and groups of a corrupt nature. A share of resources must be established for the benefit of small and medium enterprises. Tax policies must offer exemptions to reinvested profits and prioritize consortiums.

The creation of a *Mezzogiorno* Ministry is proposed to facilitate the coordination of resources directed to regional development. Creation of an Institute for the Assistance of *Mezzogiorno* Development has also been recommended, to render technical assistance to enterprises and local public administrations. Finally, it has been proposed to change from a centralized regionalism policy to a model with a locally-focused, decentralized social economy.

## SVILUPPO-Italia: A New Institution of Regional Development

As previously commented, with the extinction of *Cassa per il Mezzogiorno*, a broad discussion occurred throughout

the South of Italy and in several businesses, academic and political centers about the revision of policies to reduce disparities of economic development in the country. A certain consensus prevailed about the convenience of closing the activities of *Cassa*, but it was recognized that it was necessary to create a new institution that would assume the coordination of projects already initiated and others being implemented.

The situation was very similar to what occurred in the Northeast of Brazil at the end of President Fernando Henrique Cardoso's administration, when the Superintendency for the Development of the Northeast (*Sudene*) was extinguished the Agency for the Development of the Northeast (*ADENE*) created, which unfortunately did not have the conditions to play the new role that had been attributed unto it. As it is well-known, the issue was a political platform of president-elect Lula da Silva, who took office in January 2003 with the promise to recreate *Sudene*. That compromise was worked out on July 28, with the signing of the re-creation act of *Sudene*, in a ceremony held at the headquarters of *Banco do Nordeste* in Fortaleza.

The least developed region of Italy has also deserved special attention from the Inter-ministerial Committee of the Italian Economic Planning. As has been mentioned, with the end of *Cassa's* activities, the government promoted the creation of a Regional Development Agency in 1999 with the deficiencies of the previous experience.

The New Regional Development Agency, called "SVILUPPO-Italia," is a public entity acting mainly in the *Mezzogiorno* region and in other regions that have not

managed to keep up with the advancement and development of the central and northern regions of the Italy. The main focus of that institution is the rationalization of governmental actions aimed at reducing the economic and social inequalities still existing in Italy. One of SVILLUPO-Italia's highlighted concerns is supporting and sponsoring the transfer of technology and knowledge to strengthen business sectors. This agency provides assistance to multilateral and international entities involved in local development programs, especially in cluster initiatives and technological arrangements. It is worth highlighting that in Italy, there are regional banks that play an outstanding role in the development policy, getting along well with Sviluppo-Italia.

According to studies carried out by Professors Alexandre Barros and Isabel Raposo of *Universidade de Pernambuco*, Sviluppo-Italia works mainly in supporting local authorities and territorial development services, as well as in the creation of businesses and the promotion of employment and financial incentives for the organization of enterprises from the industrial and agricultural sectors. It also provides consulting services to new and existing enterprises. The agency develops programs to attract and expand foreign investments in the country, especially in areas with growth potential and which have not yet been fully explored.

In fact, Sviluppo-Italia has a new scope for working in the different sectors of interest of economic development. The main operational area of the agency is the South of Italy, where serious problems of underdevelopment still



exist. Out of the thirteen units in operation, seven are in the *Mezzogiorno* region and the others are in territories of interest to the Italian government.

The programs are aimed both at small- and larger-size enterprises, as long as they are competitive. The important thing in the agency's philosophy is the search for equalization of social opportunities that the benefited programs can offer to society.

The important aspect to be highlighted is that Sviluppo-Italia does not provide credit, because there is a network of institutions for that purpose. The agency's developing basis is government resources aimed at regional development. The focus is to optimize the available resources. On an exceptional basis, Sviluppo-Italia participates in the venture capital of the assisted enterprises.

# ISRAEL: INTEGRATED RURAL REGIONAL DEVELOPMENT

## Introduction

In the last twenty years, Israel's economy has been radically transformed from an agricultural and low technology industry-based economy to an affluent society.

The Gross Domestic Product (GDP) was US\$ 110.5 billion for a population of 6,276,000 people in a territory covering 20,700 km<sup>2</sup>. The per capita income is US\$ 17,000, which place Israel in the eighth position internationally in terms of purchasing power (ppp). The Human Development Index (HDI) is among the ten best worldwide. The social distribution of income has a standard similar to that of Scandinavia, with populations residing in the urban and rural area in practically identical economic situations. Regional inequalities do exist, especially because of problems with the endowment of varied natural resources and for political and military motives with neighboring countries.

The present composition of the economy is made up of 44% from the services sectors—finance, transportation and communications, 32% from transformation and construction industries; and 2.3% from agriculture, in addition to other activities.

It is worth pointing out that even though it is of relatively low economic importance, Israel's agriculture is deeply rooted within the traditional and religious history of the Jewish people. The first modern Israeli settlers date back to 1880, followed by the Zionist movement. However, as of 1948—with the creation of the State of Israel—agriculture has transformed from a way of life into a modern and competitive activity. Total irrigated agricultural areas add up to 200,000 hectares, where practically all agricultural production is carried out, in addition to the dry areas used for raising livestock and desert plants.

In its formative years, Israel's export basis was of an agricultural origin. At present, 92% of Israel's US\$ 30 billion in annual trade originates from industrial products and services.

The governmental policy responsible for such significant structural change was the incentive to small enterprises and to business innovation, as well as a highly skilled labor force.

Israel's industrial sector is based on electric and electronic products and on transportation materials. In second place are motors and equipment as well as chemical and plastic products. Next come food and beverages, products for the communications industry, clothing, and textiles.

Around 45% of all jobs are in the most advanced industrial sector of technology, half of which are staffed by engineers, 40% by specialized technicians and the remainder by people with college degrees in various fields.

The Ministry of Industry and Commerce plays an important role in molding industrial activities, with the main

objective of accelerating Israel's economic growth. For this purpose, it provides financial support and tax benefits to enterprises located in regions of national priority. Another field of business assistance concerns the development of research in activities with success potential. It is worth pointing out that in Israel, 2.5% of the Gross Domestic Product is spent on research, a percentage only exceeded by Sweden and Japan. Vigorous incentives to exportation are provided by the Institute of Exportation. The attraction of investments from abroad is another field of the government's work, which also helps in the capacity-building and re-training of the labor force to meet the needs of industrial modernization.

## The Economic Development Policies

The State of Israel was a pioneer in the planning and implementation of equitable policies of land distribution, water resources and capital within the agricultural settlements. The experience of that country shows that flexible planning, a solid system of support, and the adequate development of producer organizations make dynamic, intensive and modern agriculture possible.

The agricultural development of Israel has been carried out in semi-arid regions based on a high level of modern agriculture. According to Professor S. Pohoryles, a former head of the Planning Center of the Ministry of Agriculture, the first factor necessary for the development of agriculture in semi-arid areas is sophisticated technology based on local research.

After 1948, when the State of Israel was created, in order to absorb thousands of immigrants who arrived under the form of communities, the country took advantage of the western experience, without taking into account the different cultural systems of these immigrants. Of course, the attempt failed at the beginning, as recalled Weitz (1985)—the leader who witnessed that frustrated experience and who motivated its adaptation to the victorious model of today. The failure was due to the fact of not having taken into account the living and working traditions and other cultural realities of the immigrant populations whose contingents exceeded in number the population living in the country. The internal colonization process gradually adapted to a model, which ended up becoming stable.

There are two types of planning in Israel: the one adopted in the already existing zones and the other one carried out in new zones, i.e., the rural-urban integrated planning or the frontier settlements in the desert. Weitz (1985) maintained a thesis that for certain countries or regions, grandiose industrialization is not the exclusive key to development because industrialization not only requires a great amount of money but also little labor—and this does not happen in areas undergoing development.

Rural-urban integrated planning includes projects linked to the economic, social and organizational area. Says Weitz (1985):

The objective is to reduce the distance between urban and rural advance, and the solution consists of integrating the new industries into

the rural economy and not the opposite. By doing so, a market is being created in the very rural zones for perishable products, and industries are not concentrated in the large cities, attracting greater masses of immigrants thereto.

Within that context, it is worth pointing out the victorious experience of the area centralized in Lakhish.

This is a region that is the center of a kind of constellation of villages, each one with hundreds of properties, having little capital available, enough labor and small agricultural machines. Each village has a set of services and is linked to a large center in the Lakhish area where farmers from neighboring communities go to buy and sell basic services. Planning in those cases is carried out around an urban hub. If the city already exists, they try to make it dynamic and equip it with all necessary services to producers in the rural zone. If there is no city, one is built. There is, therefore, a great concern about not allowing a pathological growth around Tel Aviv, Jerusalem and Haifa, but distributing population better throughout the entire territorial area of the country.

For purposes of rural integrated development, Israel was divided into six regions. Each one has a regional entity under the responsibility of a director. The programs are prepared within the regional context and not based on sectoral verticality. Each region produces that which experience and (usually diversified) local conditions indicate. Some *kibbutzim* produce tomatoes, apples, avocados, oranges, cotton, fish, poultry, and canned juices, giving emphasis to one product or another, according to the region.

The commercialization of that production is assured by a complex system of cooperatives, led by the Central Confederation of Workers of Israel (HISTADRUT). There is a wide range of models of family poultry farms, organized in such a way that each one owns a minimal amount of hectares, water for irrigation and capital, and with due technical assistance; these factors have allowed an Israeli farmer to enjoy an income equivalent to that of a specialized industry worker.

In a publication on that subject, Weitz (1979) says: “A rural area of major development can become an aggregate of smaller rural communities, linked to the main city. The latter works as an industrial and services center with or without intermediate rural centers.” Intrinsically he maintained the thesis that in developing countries or regions that offer characteristics for agro-industrial development, the effort of industrialization should be decentralized, and industries in the rural zone should be located close to raw materials and labor and around a major center. In that major center, farmers would only look for the basic education, healthcare and credit services, even residing (or better said, *living*) in the outskirts of those large urban constellations. Productive organization is very diversified: it goes from kibbutzim, which are collective undertakings, to family cooperatives or individual organization (*mochavim*), passing through intermediate types of cooperatives. In family organization, immigrants are getting greater productivity because they have chosen the type of exploration that pleases them best.

In synthesis, the development projects, in Israel’s already celebrated experience, present three characteristics:

a) they are integrated projects: the programs seek to integrate the agricultural sector to the industrial sector and vice versa; b) they are decentralized: they gradually occupy the outskirts of cities and the rural zone itself; and c) they utilize the major city as a constellation center for the purposes of services and nothing else.

## Israel's Lessons for the Northeast of Brazil

The Brazilian Northeast's interest for the rural regional development experience of Israel comes from the 1950s. The rapid development of arid and desert regions of that country called the attention of planners and public managers of the Northeast of Brazil who faced the great challenges of the semi-arid and without clear policies to overcome the reigning underdevelopment. With the creation of *Sudene* in 1959, this interest increased, from which appeared a program of technical assistance to the Northeast of Brazil from the Department of International Cooperation of Israel. The head of that mission was Dr. David Bruhis and the mission's objective was to support the Northeast Irrigation Program from which resulted the first project with that purpose in the low plateau, that is, the Curu-Paraipaba Project in Ceará. Over time, that project was completely de-characterized from the initial plans. Until then, the orientation of *Dnocs* (a Brazilian agency to fight droughts) towards irrigation was in alluvium regions, which today are practically condemned to irrigation of a public nature.

In the mid-1960s, the Organization of the American States (OAS), together with the government of Israel,



sponsored an important training program for technicians of Latin America in Israel, at the Settlement Study Center in Rehovot. This private Center of public interest had the participation and patronage of the Department of Colonization of Jerusalem University and the Israel Ministry of Foreign Affairs.

Several technicians from *Banco do Nordeste*, *Sudene*, and the Secretariats of Planning and Agriculture of the Northeastern Brazilian states took part in that technical and practical training on Regional Planning and Development. They were post-graduate courses of short and longer-term duration. As a scholarship recipient of the Organization of American States, I participated in several such courses. The Chairman of *Banco do Nordeste* at that time was Dr. Rubens Vaz da Costa, who visited that country in search of support to a training program on issues of integrated rural development in the Northeast of Brazil. At that time, this approach was the big news in the field of rural-urban parallel development doctrines and policies. Based on this trip, it was agreed that a mission from Israel headed by Dr. Raanan Weitz (who was director of the Department of Colonization and of the Settlement Study Center of Rehovot) would come to Brazil.

The understanding reached in Fortaleza between *Banco do Nordeste* and that mission resulted in the creation of a great capacity-building program for post-graduate level technicians under the sponsorship and responsibility of that bank with the participation of *Sudene*, *Universidade Federal do Ceará*, *Dnocs* and the Brazilian Ministry of Foreign Affairs. The program was carried out at the beginning of the 1970s

in Fortaleza, lasting six months of intensive regimen and focusing on the technical and practical part of rural development, with the elaboration of a real project in the final stage. It was called “Training on Planning and Execution of Integrated Rural Development Projects.” The academic structure was composed of professors from Israel, *Banco do Nordeste* and *Universidade Federal do Ceará*.

As head of the Division of Agricultural Studies of the Office of Economic Studies of *Banco do Nordeste (ETENE)*, I had the opportunity to be the coordinator of that initiative for ten years. In that period of time, 500 technicians from the North and Northeast of Brazil were trained, as well as 100 other specialists, in Physical Planning courses for colonization projects.

This short history contextualizes the issues that will be presented and discussed next. As part in this exchange program of professors and technicians of the Brazilian Northeast, I participated in a study mission to Israel in March 1982. Integrating the Brazilian team were BNB technicians Dr. Acúcio Alencar Araújo Filho and Professor Walder Leitão, both professors of the aforementioned training program.

In the reports and analyses that I am presenting in this book about international experiences of rural and regional development, I found that it would be valuable to include the debates that were held in Israel with the *Banco do Nordeste* team at the Rural-Urban Studies Center (formerly the Settlement Study Center) with the most outstanding academic, technical and political authorities of Israel engaged in rural development. The main personalities present were: Dr. Raanan Weitz, Director-

President of the Rural-Urban Studies Center of Rehovot and of the Department of Colonization of Israel; professor Yaakov Vidislavsky, Academic Director of the Rural-Urban Studies Center (CERUR); Dr. Arie Sheskin of the Planning Center of the Ministry of Agriculture; Raphael Bar-El, Research Director of CERUR and professor of Political Sciences of Tel Aviv University; Yehuda Dekel, member of the Directive Board of the Department of Colonization; Zeev Unger, Director of the Department of Regional Planning of Department of Colonization; Zvi Veininger, Vice-Director of the Department of Colonization, responsible for the absorption and adaptation of new immigrants at the new settlements and in charge of all social aspects in that regard; Shinon Ravid, Director-General of the Department of Colonization; Gideon Vitkon, Director of the Median Region of the Department of Colonization; Dr. Dani Freeman, and the Assistant Director and Head of Research of the Rural-Urban Studies Center of Rehovot. The people mentioned above were the best intellectual and scientific forces of Israel, both in the practical and theoretical aspect, regarding the problems of rural development.

## **Seminar in Israel with the Banco do Nordeste Team**

Opening the meeting, Dr. Raanan Weitz asked me to explain the reason for the study trip of the *Banco do Nordeste* team to Israel. Taking the floor, I said that it was a great pleasure on my part and on the part of *Banco do Nordeste* to be on this occasion in Israel to strengthen the

friendly relations between the Rural-Urban Studies Center of Rehovot and *Banco do Nordeste*.

I took the opportunity provided to me to explain to those present that the Northeast of Brazil has a long history of economic policies and programs to develop and reduce the regional, economic and social gaps. But it was in the 1950s when more important institutions were created with the objective of establishing political guidelines, organically well-conceived and supported on updated foundations of an economic order. However, until that date, many of those programs had not yet achieved the expected success.

The industrialization program of the urban centers of the Brazilian Northeast, I pointed out, has been considered as one of the biggest and most important programs in the underdeveloped world. But that process caused several difficulties to the economy of the Northeast: income concentration, acceleration of urbanization in the metropolitan regions; sub-employment in the rural area, while stagnation of productivity in the agricultural sector continued.

Therefore, the Northeast needed a political-economic revision, which allowed a frontal attack against those central problems of the regional economy and identified what the new policy would be, based on international experience from different parts of the world. Based on Dr. Raanan Weitz's ideas, the regional development model of Israel was considered by BNB as one of the adequate approaches to tackle the central problem of rural poverty in the Northeast of Brazil.

With respect to the maintenance of those relations of technical cooperation with Israel, the interest of *Banco do*

*Nordeste* cling to the need for support in that decisive phase of demonstration of viability of the integrated rural development conception and how those things should function in practice, according to the reality of the Northeast of Brazil.

The first difficulty we had, I continued to explain, is that economic development requires a structural transformation in which industry begins to have an important position. The central issue, however, is how to obtain such industrialization in a decentralized manner, and how to match it with agriculture in order to prevent the great rural exodus that exists in the Brazilian Northeast.

The integrated rural development conception, included in Rehovot's ideology, is that we must integrate industry with agriculture in the rural area itself in order to allow such structural transformations without that outflow of activities from the rural area. We share in the ideological context of this idea, so that we must support such agricultural development in combination with agro-industry.

The difficulty is to carry out such rural industrialization so that it reaches the desired purpose, i.e., greater equality, more economic opportunities and that this product be apportioned by farmers and not by the big agro-industrial groups. The truth is that almost all of our agriculture is supported by small fragmented properties, without being associated to cooperatives or to the great land properties, extensively explored by livestock raising.

According to the new approach, it is necessary to create cooperatives based on rural industrialization. Another form of combination is the participation of the government,

entrepreneurs from outside the region, and farmers—but supported by some system of farmer association. In a certain way, we started a program in the Brazilian Northeast with that idea, but the end product of five years of experience is that we ended up financing the big entrepreneurs and the big capitalists.

And now, re-examining that issue here in Israel, I begin to doubt about the practical possibilities of “interiorizing” industry the way we were thinking. Even here, rural industrialization was carried out fundamentally based on the big property, because the kibbutz is the great expression of that property. Only a minority of Mochavim owns industries at a cooperative level. The question is: how are we going to turn cooperative rural industrialization into a reality in the social and economic structure of the Northeast, in order to allow for the viability of the integration conception in the rural area?

Then Dr. Raanan Weitz, who was our host at that event, stated the following:

*— The problem raised here by Professor Pedro Sisnando is our main problem. That problem has different points of view among the people present, who are specialists in both theory and practice. I’m going to express my personal point of view and not necessarily the opinion of the Department of Colonization or the Rural-Urban Studies Center.*

*— In Israel, we want to bring industrialization to the rural area. Of course, the size of this country cannot be compared to that of Brazil. Our question is not that we don’t want to have large cities. Our problem arises from certain*

*political objectives, that is, the dispersion of population throughout our territory. I want to say that I have great faith in the family unit in agriculture, but not in family industry. I think that the two main objectives of industry in rural areas are: to serve as an element that allows to complete the income of farmers who work part time in agriculture, and to serve as source of work and income to additional people who can live in the rural areas, even though they do not work directly in agriculture. I see two possible ways of organizing industries at that level. One is through cooperative association, when the people who work in the factory, in the enterprise, are the owners themselves. The other possibility is to complete that work force per se with paid work. I think that industries must be created more at the regional level. Those enterprises will create possibilities for additional jobs to those who work part time or people who don't work in agriculture. I do not know the agriculture and the rural areas of Brazil well, but if there is no objective in Brazil to keep or maintain the purely rural aspect of agricultural villages and of rural settlements, I do not see any inconvenience that industries of a local character can be created within the framework of the village. In the case of Israel, industrialization has brought a greater balance in income distribution, especially in the process of industrialization of the rural areas, where the government has great participation both in policies of salaries and in financing, etc. I understand that in Brazil, in order to take industrialization to rural areas, the government must provide a series of incentives to industries from the large metropolitan centers. In that case, I think that the same*

*policy of incentives can serve as an instrument of control to avoid an exaggerated accumulation of income in the hands of those industries. In summary, I don't believe in small family-type industry of those people who, let's say, assemble watches and later on the cooperative is an association of small watch assemblers. I believe in the possibility of creating industries in the rural areas as a source of income and additional work, but not in that family framework."*

Then, it was time for the pronouncement by Dr. Yehuda Dekel, the director of the Industrial Development Company of the Department of Colonization, responsible for all rural industrialization in Israel:

*– We are speaking here about industry within the Moshav because, of course, at the regional level, you've seen that there are big industries, regional cooperatives and enterprises, and also private enterprises. Despite that, your impression isn't far from reality, because in the last years we have in fact started to develop that aspect of industry at the Moshav level. It's true what Dr. Pedro Sisnando said that it's not possible to copy experiences from one country to another: by the simple reason that the basic data of each region and of each country are different, and the objectives of policies are different in the two cases. If there is a massive process of rural exodus in Northeast Brazil, migration from the countryside to cities, in Israel we have in the last few years seen that there is a flow of people who go from cities to the countryside. By the looks of it, to the extent that it is not possible to reduce differences in the income levels between cities and the countryside, it seems that it's going to be very*



*difficult to control this migration process that happens in the Northeast. Since I do not know Brazil, it's very difficult to give advice from afar. From the little that I do know about the case of the Brazilian Northeast, it would be more advisable to create industries at the regional level and not at the family level. Also, a possibility of organizing small industrial enterprises based on several partnerships among farmers should be investigated. You have mentioned income concentration in the hands of industrial enterprises in the Northeast, but I think that without a policy of strong incentives, it's difficult to hope that private enterprises, for example, be willing to locate their undertakings in rural areas, at least in the first stages. So, without a differentiation that creates some incentive, it would be difficult to achieve such objective. I know Brazil only from music and movies. So I really do not know Brazil. I can only speak about possibilities of industrialization in rural areas, in Israel, and you would have to draw the due conclusions for the Brazilian case. Modern industry cannot in any way be based on the family unit. Industry has an "aggregating" characteristic. The family agricultural unit can maintain itself for many years, within certain limits, however industry—and very often we are mistaken about the size of industry at the moment of creating it—has to be modern in order to compete, to be able to come to the technological levels that the modern market requires. The issues are then limited by two basic elements: aspects of industrialization policies and organizational aspects, being that the marketing aspect is one of the most important. The question is: within rural development of the family agriculture type, which aspects will commercialization or marketing have*

*of the agricultural problems? Whether it will be done by the farmers themselves, whether it will be done by the government, or by entities or people from outside the region. It will also show us the path that rural industrialization must follow. What are the political objectives? If the objective is, for example, to eliminate the exploitation of farmers by external factors, or to raise the standard of living of farmers. I assume that one of the objectives is to improve income distribution by raising the income level of small farmers. Then, I propose a very simple technique in the organization aspect. Let us learn, then, from the success of capitalist enterprises, what the successful companies do, and let us apply these techniques to the case of a new type of enterprise, organized in a different way.*

*– Here in Israel, from the financing point of view, farmers have had the same conditions and opportunities as the private capitalists to get the capital destined to create agro-industrial enterprises. And not only in relation to investment capital, but also venture capital. Farmers have had exactly the same conditions as any other type of enterprise for that financing provided by banks and by the government. Therefore, here we managed to develop a commercialization system controlled by farmers, in such a way that the product passes through different processing stages, comes practically to the consumer either in its final form or almost in its final form. All those stages are managed by organizations that belong to farmers. And also the commercialization system of agricultural production, practically to the retail stage, is in the farmers' hands. That, naturally, is a very big organizational system in its scale,*

*rather complex in its structure, but in principle I do not see any difficulty in which that system can be applied in other countries. Maybe beginning through successive stages, but always whenever possible to count on the government's supporting instruments as well as financial instruments, which allow organizing a similar system. As to the detailed form of organization, there can be several variations. I, personally, support the cooperative system, which I believe to be the most appropriate system to organize people who at the beginning do not have their own resources and need external financial resources in order to become organized. In Israel, the prevailing system of commercialization is the cooperative system, which allows the small farmer to have access to credit sources and who can participate in the organization and in the management of the system itself. Of course, if the main and only objective is to provide jobs to the local population, it is possible to think about a scheme in which the government, through its incentive policies, attracts private enterprises that maintain industries in the rural areas and create jobs. The government's function, besides that of incentives, is to create infrastructure works that allow private enterprise to work. But if the objective includes some broader social targets, it would be the case to think about the participation of local population in the creation of such industrial enterprises. I agree with most of what has been said here, and want to insist and say that from the economic point of view, it is not profitable to create industries in villages. I see a great difference between the conditions of Israel and the conditions of other countries, but in spite of being impossible to copy exactly or to*

*transplant our experiences, I believe that it is possible to learn from them. According to my experience in Central American countries with which we have worked, it seems to me that the initial problem is not rural industrialization per se, but the industrialization of agricultural products in the rural region. The initial problem is not so much that of large amounts of capital, the capital intensity of industrial enterprises, but how to organize farmers. For example, how can raw material be provided to be processed in a stable and regular manner? The problem is not only organizational, it is structural; there is need to organize farmers so that they are able to provide raw materials in a stable manner. I saw many cases in which rural industries failed because farmers were not able to guarantee the supply of agricultural raw materials. There is a problem in organizing industrial enterprises in a cooperative manner. The fact is that cooperative industries are very few in the world, in general. Then, taking into account the little that I know about developing countries, in spite of not knowing Brazil, I believe that serious, large-scale industrialization is not possible without the participation of private capital, with its financial resources and with its system of market. In order to prevent the problem of small farmer exploitation in the hands of private industry, the solution could be the organization of farmers in strong cooperatives, which would be negotiators vis-à-vis capitalist industries at equal conditions, and it would thus be possible to assure an equitable distribution of the benefits generated by the industrial process. Of course, we would have to differentiate between at least two types of industries. One type of sophisticated industry, processor of*

*agricultural products, and enterprises of another type, such as enterprises for selecting and packing agricultural products. The simpler enterprises, which farmers can control, could be owned by farmers. Therefore, I would not be in a hurry to introduce big industries into the rural areas without previously organizing local infrastructure. And for me, the main infrastructure element is the organization of farmers. And then, only in a second stage, I would deal with creating more sophisticated industries, already taking into account the experience accumulated from farmers' organization.*

Professor Raphael Bar-El also made some observations about the themes being discussed. He stated the following:

*— I had the privilege of knowing the region that we're talking about (the Northeast of Brazil) both personally and through movies—I saw "Dona Flor" twice! I agree with most of what has been said here, but the problem is that we are relating the "region" to the problems that were presented here and, regarding that, I'm not very sure. The presentation of the problem of rural industrialization in Israel is basically on the local level, maybe it provides more work, more sources of income to the people of the Moshav or the Kibbutz. I don't know in the Northeast of Brazil of any examples of rural settlements of the Kibbutz- or Moshav-type. To the extent that there are some organized settlement systems, they are a minimal fraction within the rural population of the Brazilian Northeast. The way I see the problem in that region, the issue is not about providing more jobs or more local income sources, but it is rather a problem*

*of total development of a very large region. The problem of the Brazilian Northeast is not like the problem of Israel, when dealing on the local level with creating the Moshav, the Kibbutz, an enterprise to complement the farmer's workday. You're talking about the general problem of development strategy of the whole Brazilian Northeast at the macro level. This is a region maybe as big as many countries in Europe, for example. I believe that it's not the case of taking a macro-region and dividing it into several micro-parts and thus solving the problem. It is not a division, but having a level at which each piece of that division is a small village. The industrialization problem of the Northeast of Brazil is the problem of the "interiorization" of industrialization, and any place that is not Fortaleza, Sobral or Juazeiro do Norte can already be considered as part of the rural "interior," and I want to remind you here that the results of research that we conducted on rural industrialization in the Northeast of Brazil (work sponsored by Banco do Nordeste), indicate that the industrialization strategy cannot be based on the instance of the local village. We divided the Northeast into sub-regions and the research results indicate that industries in those relatively large sub-regions, due to the fact that they encompass several villages and several urban centers, must be located in the urban centers of such sub-regions. Dr. Arie Sheskin's opinion is that not all industries must be concentrated in cities, but the center of the industrialization hub must be the local town, a small town. This does not mean that the rural area must not participate in the industrialization process, but the town will be the main center of the industrial development. I belong to the group*

*of those who know Israel and the Northeast of Brazil. I want to clarify what can be learned and what cannot be learned from Israel. The only country in the world where there are two parallel organizational systems is Israel. On one hand, there is the farmer organizational system, and on the other hand there is the urban organizational system—two separate and parallel systems. And we should also have concentrated all our industries in regional cities, in the La Frige zone, but because of political problems in Israel, which has not happened. We have been speaking here all the time about the word “region,” but we should bear in mind which region we are talking about, because the solar system is also considered a region, within the Galaxy. And that word is also used to speak of the European Common Market or the Andean Region, for example. The Northeast region, which is almost the size of all of Europe, is also spoken about. We must define the region. The concept of region is like a functional unit in which we deal with executing a certain development plan, and that includes villages, rural population and the small rural urban centers. I think that rural industrialization in the Northeast of Brazil can only be successful if we prepare the infrastructure of the small towns, the conditions in the small rural towns. From the internal point of view of the region, industry would be concentrated, but from the state of Ceará’s point of view, of course, it would be dispersed in the different regions that make up the state. Brazil had a lot of success, great achievements, taking industrialization to cities like Fortaleza, Recife and Salvador, but the problem now is how to start from there and disperse that development towards the interior, creating new hubs*

*of industrial development in the interior of the Northeast. I want to leave it clear that the efforts that we make here in Israel to take industries into villages, are typical to Israel. I have also seen them in the Netherlands, Germany and Sweden at the village level, but those are countries or regions that have reached sophisticated automation. Maybe the Brazilian Northeast will reach them within many years. The problem is how to create conditions in the small towns of the interior of the Northeast that can serve as a base whereby industrialization will develop in the Northeast. So, I want to present three fundamental points. In the first place, the creation of adequate infrastructure in those rural towns. The creation of an incentives system, which takes private industry and cooperative industry to settle in those towns in the interior. In the third place, the urban planning of those towns in the interior, in such a way that they can absorb labor, including that second-generation labor of those who may come to settle and work in those industries, even from the social point of view. As to the type of industry, I want to say something that seems very clear to me: all transformation industries, as well as those that process agricultural raw materials, must be in the hands of farmers and of farmer organizations. All other types of industry—neutral industries, for example— must be conducted by private enterprises. Something else that I find indispensable is that without a massive intervention of the government, both from the financial and organizational point of view, such a task cannot be carried out. The incentives system must encompass two aspects: one, the financial aspect through credit for inversions and working capital. The other one is the*



*organizational aspect, in such a way that the government is represented in those places by public servants who have the capacity to make adequate decisions at the right time. I believe that you might visit what we call here the “development cities,” like Jiderot, so that you can see industries in small rural towns, not only regional enterprises, cooperatives, but cooperative industries and private industries. In Israel there are two separate, parallel systems as I’ve already mentioned. The farmers’ system and the urban system, where there is little functional contact between them. But that does not mean that in other parts, like in the Northeast of Brazil, things should be repeated exactly like has been done here. The fact is that Israel’s experience shows that it was possible to disperse the country’s industrialization, also in small towns of the interior where there is also the cooperative industry plus private and public industries. The Kibbutz has been industrialized to prevent its children—the second and third generations—from leaving the Kibbutz for the cities. The Moshav must also do the same thing, and it is on the eve of a great modification in order to keep the family bonds and allow that the second and third generations continue to live within the Moshav. Now, this is a typical problem from here, from Israel, but from which we can learn and see that the policy of industrialization dispersion was successful, and that it’s not only concentrated in the large cities, but also in a high number of small towns in the rural interior. And that is the important lesson that you can learn in the case of Israel. From that point of view, there is no doubt that Israel was successful in dispersing its industrialization.*

After the pronouncements were made, I intervened once again, trying to direct the issues toward the interest of Brazil as much as possible. Then I informed that there was a political and social decision to develop the Northeast! And that we intended to match two very difficult things; one is an accelerated growth of income and a social distribution of the results of that development. We have already proven that we can grow rapidly and that now we will have to distribute that result socially, because if we do not do that, we will not have the political conditions of survival. We do not have any other options. And one of the policies established for that purpose is integrated rural development.

The problem to be solved is the intersectoral integration of industry with agriculture and with rural centers. According to Dr. Raanan's conception, we would have to develop agriculture by stages. However, everybody says that development by stages would take too long and by the time we achieve it, we all will have died. The challenge, then, is how to advance, take a shortcut without violating the conception of adaptation by stages.

From the viewpoint of what we are observing also now in our study mission, the stages through which agricultural development should pass have not been reached here in Israel either. The question we come across is if we should establish as a *sine qua non* condition that such stages are reached by delaying the future results, or if we really will be able to carry out that development in a more accelerated way, through leaps in the rural development process.

It was Prof. Yaakov Vidislavsky who commented my concern. With regard to that question, he said that we can

take into account ideas and concepts relating to it. It is very difficult to give a real answer without knowing the conditions of the country or the Northeast. I do not know if it is possible to take leaps, to cut short some stages, but I think that the answer depends on our capacity to create the support system, because the answer is not on the farmer, individually, but rather on the support system and whether we are able to create it or not.

It is possible to take some farmers individually, or their children, for example, and cut some stages short. Now, to take the leap in a general and collective manner is a question of our capacity to organize all the support system; credit, commercialization, agricultural extension, etc.

For Dr. Shinan Ravid, it is possible to accelerate or shorten the development process. In the Netherlands, there are also development areas like in the Northeast of Brazil. But in the Netherlands, in order for the candidates to settle in those regions, they must have at least completed the secondary agricultural school and one third of the necessary investment. The question is: how long will it take until such level exists in the Northeast? But in the Netherlands there is a support system, already created by others, and which easily allows that a new region be developed rapidly. Or rather, I agree with what has been previously expressed, that the existence of a support system is an indispensable condition to accelerate the development process. And furthermore, the support system also includes other factors, like education, the educational system, the local government system, the local administrative system, etc. In that case, if there are enough resources in large scale, put at the disposal

by the government, it is possible to accelerate the development process, without following exactly all the theoretical stages.

If we are capable of including, within that process, not only agriculture but also other sectors such as industry and services, then we will be able to obtain a more accelerated development, without seeing exactly the limits, the borders between one stage and the other, but as a continuous process.

For Zeev Unger, it is possible to take a leap in the development process, taking a shortcut in stages, but only those stages that already exist in a certain region of the country, but what is impossible, let us say, is to take leaps in stages that the country itself has not yet reached.

A development plan can be prepared that foresees more distant stages, but successive stages must be taken into account even if one can pass from one stage to another in a more accelerated manner, and that is a question that depends on the support system. As Dr. Raanan questioned: is there a market or not for certain types of products? For example, the stage of industrial cultivation is an excellent school for the organized commercialization system. Without that, the traditional system is not able to successfully fulfill the functions for the case of industrial-type crops and in that case, everything would collapse.

Once again, Professor Raanan Weitz starts to speak about that question by saying that a new industrial initiative, even if there is no infrastructure, is what creates the necessary pressure so that infrastructure is created. The professor pointed out that he would not like to be against everything,

which was said before, but he found it important to also take into account other points of view when speaking about the development process, because those ideas and thoughts can make a contribution to the same development process. The problem of leaps is of first magnitude. It is really very difficult to believe that we can advance on the great front and always be balancing all aspects of that advance. It is a slow and delayed process. On the other hand, I want to remind you (he said), that all countries that wanted to take that leap, did it, but maybe they racked their brains.

When we were in Venezuela and saw a country that has financial resources and regions similar to the Northeast, with similar infrastructure, we decided to propose to that region a process different from all that we teach here in Israel, which I myself have taught. We proposed to the government of Venezuela to encourage the creation of two types of agriculture; family, cooperative agriculture at the farmers' level; but also the type of agriculture based on the average farmer, a specialized, mechanized agriculture, mainly of cereals, industrial crops or livestock-raising, whenever was the case.

That must happen under clear conditions. Let us avoid the phenomenon of the absent entrepreneur, or rather, the one who owns the land but lives in the city. We must not do that in any way, because it can make the process go the opposite direction. They are farmers who have high-school education; they have part of the capital necessary and will live in the countryside and work together with employed workers. For that proposal to be effected in a balanced way, we need a macro plan for the region; let that plan determine

the blocks where those two forms of agrarian organization are located with a common denominator: the support system of the two forms of agrarian organization.

We are proposing a development system in which two different levels of producers will exist. Two levels of production technology. And the idea is that those of more advanced technology be a kind of factor of leadership, which carry the others along. But here we have two limiting factors, which we need to take into account in the planning phase. That is, in the first place, the government would have to determine, *a priori*, two levels of different accesses for the two types of agriculture. In Venezuela, we determined the ratio of 1 to 3 to those income levels. It is a clear and declared policy of the government that supports two sectors with two different income levels.

The second inconvenience is minimum-wage employment, and that group of employed workers will be part of the structure of the region, which is something rather dangerous, because we know that in the future the agricultural proletariat can be a factor of social destabilization. We are doing that on the basis of an assumption, which takes into account the estimated risk. That is a compromise with a target for better distribution of access. We know that it is never possible for practice to be equal to planning or to obtain a perfectly equal distribution of income, but we take into account, *a priori*, a difference in the income level. So, this is a compromise between the objective of equality in the distribution and the objective of taking a leap and accelerating economic growth; but it is a calculated risk.

Without wanting to expand the theme, it is clear that regional planning is part of the national planning and our proposal, for the case of Venezuela, is somewhat uncommon and is really interesting to see what is going to happen, in practice. I hope that that solution brings good results, and if that is so, it can be an interesting model for other countries and regions that are facing the same situation and the same problems. The interesting thing in this proposal is that it allows diagnosing or discovering who are the entrepreneurs that can develop in a rapid and immediate manner. At the same time, it allows to us integrate, within the process, the mass of population that is not in the same conditions of taking the initiative as the leading and more prepared group of the local population.

Finally, I took the floor to thank all hosts for their kindness and the opportunity to exchange ideas on this topic. I also pointed out that the Northeast of Brazil is really a laboratory of experiences in regional development and that the Rural-Urban Studies Center is contributing toward the solution of some of these problems.

## Rehovot's Approach

For a better understanding of the issues dealt with in the present chapter, it is worth explaining that the aforementioned methodology is known as "Rehovot's Approach." That is, it deals with a designed conception based on the practical experience of Israel and other countries that followed this doctrine.

The renowned economist Raanan Weitz, who recently passed away, was its main designer. The basis of this

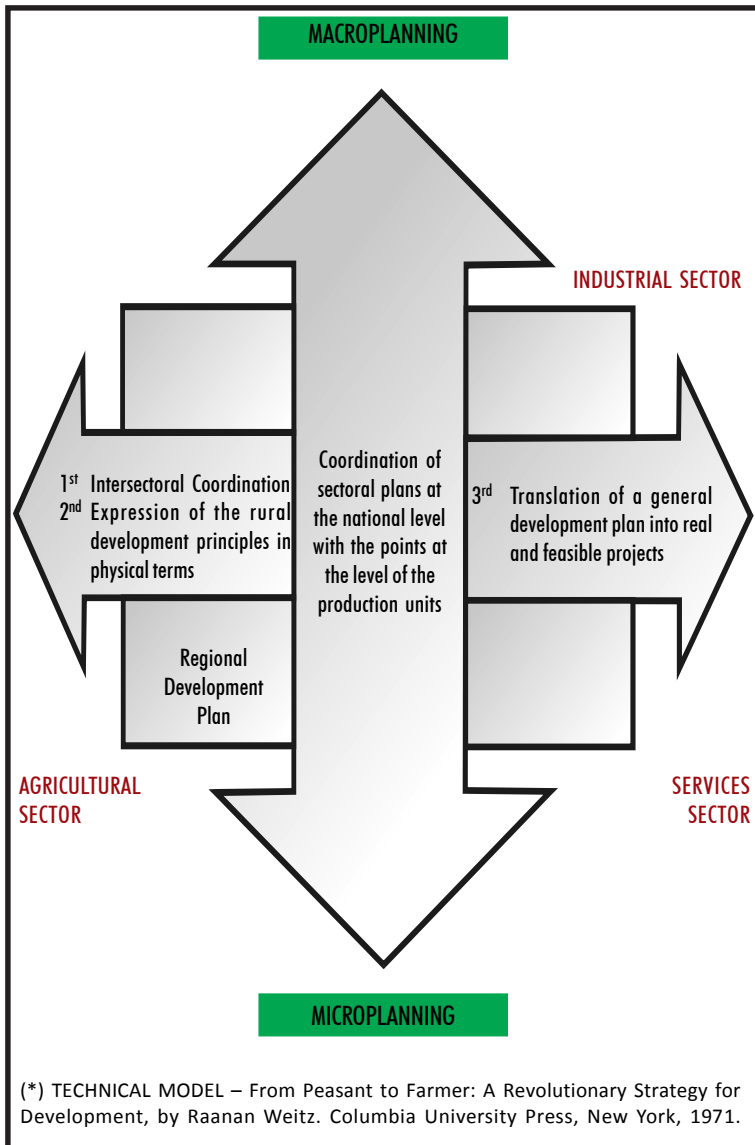
approach is that economic development is motivated by two forces that lead to the maximization of economic benefits: the freedom of action of the private initiative and governmental action. Those two interventions are what will feed the productive process of a region or country.

Rehovot's approach aims to carry out an excellent combination of the capitalist and interventionist systems. It is like a tool of a Third Economic System. The population also plays an important role within this process, because the intended social changes cannot be reached without a mobilization of the beneficiaries of the system. A development program lacks this participation so that population can express their desires, aspirations and values. Another element in order for the application of such resources to be maximized is the coordination of governmental agencies. Since actions of the federal government are vertical, it becomes necessary to create an organizational structure at the regional and intermediate or local level.

The planning approach proposed is based on the assumptions of the use of resources to provide a minimal subsistence income of an efficient system of economic and social services and the creation of job opportunities.

The general planning strategy and execution must count on coordination "from the top down" at the macro level and "from the bottom up at the micro level." With this system, it is possible to obtain coherence between the objectives defined at the national or regional levels, with the participation of individuals and communities. So, it is possible to integrate the "macro" and the "micro" and implement policies with adequate results.





**Figure 1** – Regional Planning: “Cross Function” Concept

**Source:** Weitz (1971)

The strategy of integrated rural development, in the conception of the Rehovot's group, is based on a methodology and planning that delineates the sequence of activities and the subsequent execution.

In synthesis, the proposal adopts agricultural growth as the flagship of rural development. Another assumption is that the development of agriculture requires parallel development of industry and of the services sector. Finally, the approach considers that the social forces play an important role in agricultural development. Therefore, the active participation of the population in development projects is a fundamental element of the integrated action system.

Weitz (1979) believed that the method proposed could be a powerful and effective instrument to overcome rural underdevelopment in regions like the Northeast of Brazil. Once, he said to me: "The only absolutely essential condition for the use of this instrument is to realize and understand that the situation in the rural area of the poor countries is unbearable and needs to be modified without delay."



## JAPAN: JAPANESE RECONSTRUCTION AND MODERNIZATION

### Accelerated Development

In my approach to this chapter, I have attempted to show how a country destroyed by war managed to recover within the span of a few decades, at the same time in which it dealt with regional and rural development in a more balanced and efficient manner.

Today, Japan ranks among the world's three largest economies, both from the economic and social point of view. With its Gross Domestic Product (GDP) greater than US\$ 4 trillion (in the year 2000), it is second only to the United States. Germany, which places third, has a GDP of about US\$ 2 trillion. That same year, Japan's per capita income was US\$ 32,000, at the same level of the Scandinavian countries that lead the ranking in that respect. 127 million inhabitants enjoy that opulence with a life expectancy of 80 years, and live predominantly in urban areas. The income distribution is balanced, both socially and regionally. All this is reflected in one of the world's highest Human Development Indices (HDI).

What follows is a short history of an economic "miracle." The Japanese themselves reject such an expression by saying that Japan's success is the result of the struggle and joint work of the people.

There are some aspects of the Japanese efforts to develop and rise up again after the last worldwide conflict in which it was involved, which merit some reference. Right after World War II, unification of the country and its full recovery became the great immediate objectives of the Japanese people. With a population close to that of Brazil, it is a geographically small country. At the end of the war it had more than 80 million people, which were joined by 6 million repatriates. However, the growth rate of its population is extremely low.

When the war ended, industry was still backward and one third of the national wealth was practically lost. So, as a national salvation measure, it became imperative to boost objective and feasible plans that could work the miracle, which later became real. In 1962, the government adopted a general development plan. By the end of that decade, the nation's economy had already reached the pre-war level, and it is worthy of mention that from 1962 to 1972, the GDP grew at around 150%. That effort was based on massive industrialization, with the expansion of the services sector as well, along with a relative and absolute decline of employment in agriculture, whose productivity increased due to agrarian reform, which to I will refer below.

In 1955, approximately 16 million people worked in the agricultural sector, representing 39% of all labor employed; by 1969 the proportion of employed rural labor had fallen to 14.8%, or around 7.5 million people. The post-war economy turned to the external market, supported on the importation of raw materials and exportation of finished goods. A rapid mobility of the population also occurred. By

1965, about two thirds of the population lived in cities and one third in the countryside, a situation that was the exact inverse of the one just twenty years before. In the 1960s, the economy entered a phase of rapid growth, causing a population concentration in certain areas and abandonment of others, a fact that stimulated serious social problems.

Agrarian reform and the new economic plan launched in 1962 permitted the nation to stabilize and advance fast. The leap in the economy was tremendous. The GDP, which in 1950 was only 10.9 billion dollars, reached 166.4 billion by 1969, with a per capita income in the same year equivalent to 1,289 dollars. The nation engaged deeply in its re-construction; it used scarce natural resources in the best manner, intensified foreign trade and, through education and training, enhanced the professional standard of the people, which allowed for the transformation of a conquered and defeated nation into the world's third economic power. The extremely enterprising spirit of the population, starting from agrarian reform efforts that were imposed upon them by the occupation authorities, but who nonetheless promoted it in good faith. With interest, in addition to the establishment of modern relations between bosses and industrial workers, Japan built the basis for the economic revolution in the country.

The initial concern was the creation of an internal market. The entire banking and cooperative system functioned with the objective of raising internal savings and investing them in a productive manner. Since it had lost its industry in the war, Japan started from the importation of external technology, which it later adapted to Japanese

tradition and to the conveniences of local economy as well as to the operative methods of its extraordinary human community. The advance was such that the nation started to export its own models of technological improvements to other nations in Asia, Europe and America. Manpower was abundant, laborious and extremely ingenious. The policy implemented was that of retaining only the most strictly necessary contingent in the countryside to increase productivity in agriculture and feed the nation. The remainder was relocated to the new industries, which were being set up close to large cities or in the outskirts thereof.

Japan has two thirds of its land covered in forest reserves, totaling 25 million hectares. Those forests are not only naturally beautiful; they form true parks for the enjoyment of the populace. From the wood extracted from those forests are obtained the lumber for building homes and pulp used in paper manufacturing.

Today Japan is experiencing a rising shortage of labor, especially among young workers. This is due in part to the decline in the birth rate and the increase in the number of students who finished high school and sought a college education. So, there has been a re-adjustment in the use of labor at several levels, because of the agro-industrial needs that have contributed to the gradual disappearance of unemployment, which is practically unknown there today.

Because of the conditions imposed by post-war reconstruction, Japan is spending relatively little of its national product on armaments. And their industries are being located close to major sea ports in order to make international transportation easier and cheaper. Those are

the additional factors that have allowed the improvement in the Japanese economy.

The economic development program of the country ensures wealth, which is being distributed according to criteria of social justice, for the benefit of the majority. However, there are some problems, which I was able to perceive in my visits to that country, such as the one caused by the improvement of agricultural productivity, still in disproportion to the industrial expansion—this is indeed a universal phenomenon. Agricultural mechanization is estimated and controlled. The intensive use of labor, besides small agricultural machines, is like the auxiliary instrument of rural producers. It is worthy to mention that that country owns modern metallurgic and electric industries and its development in the field of electronics is astonishing. Japan produces motor vehicles, aircraft, precision machinery, naval material, chemicals and textile products, besides conducting major international trade, which is the basis of the current dynamism of its economy. It imports mainly raw materials and food products, and exports innumerable products.

The war had hardly finished when the country had to face the serious problem of excess population in the countryside. It was discovered at that time that the reform of the agrarian structure and industrialization were independent and complementary policies, which demanded immediate execution. Let us see how that happened.

Agrarian reform played a positive role in the general improvement of agricultural economy. It became the basis for the push of industrial development. It has not meant only a legal modification regarding land ownership, but an



improvement in production, productivity and social conditions of agricultural activity. From March 31, 1947 to July 2, 1950, the government expropriated huge properties totaling around 2 million hectares, settling over 4.7 million new small landowners on intensively cultivated family lots.

The reform worked as a security element and fixation of rural families to the environment, through the system of family agriculture—an essential component for the increase in productivity. Indeed, this system had, by 1980, settled in 5.2 million families on family owned lands, with an individual average of 1.06 hectares per family. Fundamentally, the agrarian reform properties are cultivated by farmers with their offspring, utilizing very little agricultural machinery and certain inputs, like fertilizers, improved seeds, etc. The more intensive use of such inputs and the introduction of small agricultural machinery have caused part of the loss of the labor force that has relocated to other cities. The general effect on the agricultural economy throughout rural life was extraordinary.

## Regional Policies

Because of the advanced level at which the big islands in the archipelago had reached, the government adopted an ingenious regional development plan. Hokkaido Island was little developed with a predominantly agricultural economy. Honshu Island, which is the largest, encompasses 31% of Japanese territory, 62% of the population and 84% of industrial activities. There are six major metropolitan centers (Tokyo, Kanto, Osaka, Kinki, Nagoya, Tokai) and a

big industrial and demographic concentration. On the Southeast islands, the economy is dormant, with a low per capita income. The Northeastern and Southeastern regions are also characterized by unfavorable climatic conditions.

The regional development programming established in 1962 had the purpose, in synthesis, of boosting the underdeveloped regions, deconcentrating excessive population of three of the metropolitan areas mentioned, and recovering unpopulated regions due to migration.

In this way, programs of regional character resulted from the need for rapid industrialization, demographic concentration on the Pacific coast and the backwardness of rural areas or those areas more distant from the large metropolises, within a 100 km- radius distance. In the regions to be re-structured, the plan tried to create industrial hubs around cities that were endowed with all services necessary. In the conquered areas in the rural environment and in mining activities, the new industrial hubs are being set up taking into account the economies of scale.

The industrial programming pursued not only harmonious growth of regions, like the installation of new industries near the coastline, but it also aimed to facilitate the supply of raw materials and to accelerate exports—one of the major objectives of the country's industrial policy.

During the time of the application of the plan, the economic and social situation of Japan evolved at a faster pace than expected, which made other measures necessary that would adapt it to the new conditions. It was revised, yielding to new models of development. The models followed the master lines of the first one, and at the same

time defined new objectives. A new spirit inspired the new plans—trying to mobilize the creating power of citizens, utilizing their consent and the free and interested participation in the achievement thereof.

It is curious to mark the fact that, if at the beginning of the program the populations competed for the privilege of receiving new industries in their adjacent territories, over time they started becoming hostile to that idea, because they witnessed negative consequences that they had not originally thought could emerge, such as water and air pollution and blighting the natural landscape. It was for that reason that, through a new law, the government could intervene in the case of industries, which became a threat to the natural environment. In those cases, the government orders the enterprise to take the corrective measures or to modify its plans.

Later on, a special law was adopted on the use of soil, with the purpose of preventing non-planned land occupation, to control the rising land prices and to favor ordered and systematic soil use. Besides the institutions in charge of the regional programs, the government created others to finance enterprises around the less developed regions through special policies.

Certain legislative provisions constitute the instruments of the Japanese regional policy, which aims to adjust the national plan with the regional programs. Part of the plan is an administrative instrument to implement the industrialization policy in the large cities, in the re-structured urban centers and in the rural areas to be industrialized. The administrative entity also responds for special financial measures, to set up port facilities and other infrastructure

works and—as a special incentive to entrepreneurs—tax exemption and credit in special payment and interest terms. Also pertaining to the plan was strict planning of public investments, aiming to adjust regional development policies and the care of plan's social aspects, especially health, education and the improvement of the urban landscape. Finally, the government adopted another instrument of the plan, which is called “guidance measure,” according to which it defines and establishes the national and regional objectives and persuades (but does not compel) entrepreneurs to strictly comply with them at the moment of installation of the new industrial and agricultural projects.

In summary, the regional policy lies within a general planning system of the country, which is steered by regional and national objectives. It ensures a close collaboration between central and provincial authorities, between the governmental entities and the private sector enterprises. The nation's entire obstinate and lucid official development policy has relied on regional and national planning, on work, on international trade, and on the modernization of the planning and execution institutions. All this effort directed toward the rural, industrial and services sectors has produced the “Japanese miracle.”

The final result is that the population has created and enjoys a pleasant living environment, through new housing, schools, centers of theoretic and applied sciences, use of radio and television in all homes, and universalization of literature, art, music and theater. The application of the plan has brought, as has already been highlighted, extraordinary results. It has allowed the re-construction of the country and has changed it

into the third largest industrial park in the world. However, like among us, in spite of all this effort, the Japanese plan has not managed to overcome the great regional disparities, however the social problems have been significantly reduced as a result of the enormous expansion of the economy.

## The Rural Development of Japan

### General Aspects

Japan was the first overpopulated Asian country, with a feudal social structure, that conscientiously undertook the task of modernizing itself. In less than a century, it changed into an industrialized country with a modern agriculture within the system of small farms. The Japanese experiment marks the direction that many underdeveloped countries seem destined to follow.

The Japanese economic development policies cannot be transplanted in their plenitude to other countries. In the same manner, Japan could not utilize the western agricultural techniques without adapting them to its own conditions.

Even so, the Japanese show the enormous growth potential, which is latent in the agriculture of underdeveloped countries, within the system of small farms. When Japanese renaissance started, the yield of rice as well as other products was only slightly higher than yields now obtained in almost all underdeveloped countries. It must be noted that the first advances made in productivity emerged not through the importation of foreign knowledge, but through study and programming of methods of its best

farmers and through the selection of the best varieties of indigenous seeds of the major crops. The first phase of the agricultural development has been built mainly on traditional methods. Other underdeveloped countries should study the Japanese orientation in this regard.

## Japanese Agricultural Development Factors

The relation between agriculture and the rest of the economy was one of the outstanding factors in Japanese development. Agriculture could not develop so rapidly had there not occurred an equivalent advance in the other sectors. It is true that the Japanese general economic development was built, in its early phases, based on agriculture. In the initial period, agriculture supplied the necessary resources for the government and for investments in industry. Japan, like almost all underdeveloped countries, was predominantly agricultural, not having funds available at that time from other sources.

At the same time, agricultural development was reached mainly through methods of intensive labor employment, which required relatively low fixed capital. Furthermore, the agricultural exports supplied most of Japan's foreign currency credits, which the nation needed for its development. During the first 50 years of Japan's development, its agriculture was able to meet all demands of agricultural products, thus preventing inflation and eliminating the need for importing food. At last, the agricultural sector provided a market for Japan's industries that were being installed.

The agriculture relations with industry were decisive. The rhythm of agricultural development could not have been accelerated without having a market in rapid expansion as a result of the demand of the urban areas, which were increasing. The rapid growth of industry absorbed the excess labor from agriculture and prevented a new fragmentation of agricultural properties, which were already small, whereby it would have been more difficult to increase agricultural productivity. On the other hand, as Japanese industry developed, it could supply fertilizers, pesticides, machinery and other instruments necessary for an advanced agricultural system.

## Technological Factors of Agricultural Development

Research and experimental stations made an immense contribution to Japanese agricultural development. However, Japan has not imitated the cultivation techniques of other countries, but rather utilized agricultural science to solve problems typical of Japanese farmers. Not only the nation's ecological conditions were taken into account, but also the economic and social conditions. Methods were developed to increase agricultural production, which would require a relative low investment of fixed capital, but in counterpart, they fully utilized the abundant labor resources.

Policies were instated in an efficient manner by the central government intent on modernization. There was a systematic organization of the extension service, closely united to the experimental stations and in charge of diffusing the results of research. This service, which today

deserves to appear among the most efficient in the world, counted on adequate personnel to carry out the huge task of placing the results of agricultural research immediately at the disposal of millions of farmers spread throughout different regions of the world. At present, communities have available the services of an extension specialist who resides in the agricultural area itself and technical counseling is also at the disposal of many cooperative farmer associations. The level of education, even in the rural areas, is a major help for the extension work.

### Agricultural Cooperatives for Credit, Commercialization and Purchasing

The organization of economic services for farmers is another fundamental aspect. In developing countries, farmers who work on their land, are, obviously the weakest economic sector of community and stumble over great difficulties to commercialize their products profitably and to obtain resources with which they can carry out their operations. These disadvantages have been overcome, for the most part, during the passage of time, with the development of an efficient cooperative organization in Japan, to which practically all farmers belong.

The cooperative organizations, mainly organized as general-purpose entities, extended their ramification to the remotest villages and now they extend credit and offer facilities to almost all farmers for purchasing and commercialization. They provide funds so that farmers can buy the production means or put new methods into practice.



They help the smaller farmers to get the highest price for their products on the market. Finally, they efficiently channel the sustenance of prices, subsidies, production and other incentives to the farmers themselves, thus ensuring that such measures exert all of their influence.

The Japanese agricultural cooperatives owe a great part of their present vigorous growth to the government, which has used them as organizations of purchasing, storage, warehousing, etc. On the other hand, they have worked to create an internal force in the rural community, instilling in farmers the desire and confidence to apply new methods and improvements.

This internal force also originates from the land property system, as a result of two major agrarian reform programs carried out in Japan. The first one, around the year 1870, aimed above all to replace the feudal tributes with rustic contributions in the form of metal works, with the right to preventive embargo over anything that farmers owned, including the land, of which they had recently become owners. As a result of that new structure, an enterprising class of small landowners who often cultivated their own lands. During the following 30 or 40 years, they were the main push of Japanese agriculture, even though their influence would vanish gradually when increasing the number of absentee owners.

The second agrarian reform program was carried out after World War II. Once again, it gave back the land to its true tillers. Here, too, the remarkable thing in the Japanese experiment is not found in the agrarian reform laws—which do not differ fundamentally from that of other countries—but rather in the meticulousness with which they were carried out.

## Lessons from the Japanese experience

The Japanese agricultural program was based on very labor-intensive use, a method that is only found on small family farms. These methods were created by the gradual evolution of an institutional and economic structure that provided the necessary incentives when they managed to have farmers receive the benefits from their efforts.

Almost 100 years have elapsed since the Meiji Restoration, which set Japanese economic development in motion. During this period, a great variety of situations have occurred, with peak and depression periods, food shortages and surpluses, a regimen of landowners without any restrictions and security of land ownership, *laissez-faire* and price stabilization, traditional agriculture and scientific agriculture. There was a time when agricultural development advanced very slowly, especially in the years between the First and Second World Wars, when conditions were particularly unfavorable. Without a doubt, throughout the period that we examined, there occurred a continuous development in agriculture, more rapid in the favorable periods than in the adverse periods, but always with a tendency for increasing productivity.

The Japanese experiment points out that advancement is possible, even when conditions are not wholly favorable—especially when it is possible to rely on firm guidance from the government within a flexible and practical criterion, and also with the participation of farmers and employees, who must be motivated with some pride vis-à-vis a task to be performed.



## SCANDINAVIA: DEVELOPMENT WITH INCOME DISTRIBUTION AND LESS POVERTY

### General Aspects

**T**he economic development of Scandinavia is usually pointed out as the most significant example of welfare economy in the western world, based on the principles of social democracy.

The organization of the economic, social and political system of the Nordic countries was not spontaneous, but rather the product of conscientious and deliberate work of their laborious people. In fact, in the initial phases of advancement of the modern Scandinavian economy, around the beginning of the 20th century, the political parties and the institutions linked to the economic system of those nations defined as an objective of development a lengthy process of economic and social transformation, which would include the whole population. For them, development should be more than "the passage from the condition of poverty to that of prosperity," or the transition from a traditional rural economy to another urban and sophisticated economy. The attention was more directed to quality of growth. The conception was not only the improvement of the material conditions of consumption, but it targeted mainly a system,

which would enable greater human dignity, safety, justice and equity. Finally, the ideology of development adopted in Norway, Denmark and Sweden was and is strongly community-based. The ideals of economic organization have based people's mentality and the permanent objectives, which all political parties have adopted, independently from their doctrinal factions. Based on these principles, Scandinavians have built an economic model considered by their people as "almost" perfect, because they try to improve it even more.

Differently, this has occurred at the same time in the Third World nations. In these countries, discontent grows with the unbridled search for growth as the main economic objective of society. This model also resulted in deep disparities between a small portion of rich people and a broad mass of hopelessly poor people without the minimal conditions of deserved survival.

Brazil is also standing at an important crossroads. We are at the beginning of a new century feeling in need of urgent and profound transformations, which compel us to seriously and honestly rethink our present economic policies. We need to change our mentality and our strategies of development. If we do not face that challenge, the poverty problems will increase in intensity through greater deterioration of living conditions of the population, both in cities and in the countryside.

Based on distribution and equity, the study of the economic development model of Scandinavia offers important subsidies in the debate on growth at any cost adopted in Brazil. The economic policy makers of our country

affirm that theoretically there is a conflict between growth and income distribution. They say that income concentration is a necessary condition towards rapid growth. Based on studies about Scandinavia (and other experiences), I think that this conflict does not exist and that there is no documentary evidence that economic growth spills over from the rich to the poor automatically.

I believe that the character of development is determined by the development standard, that is, the style that is intended to be instilled in the economy. Thus, the choice that Brazil has to make is not between smaller growth and greater equality, but rather concerns the type of beneficiary intended to be favored. A model, which mainly benefits the richer or one whose benefits are more widely distributed among the whole people of the country. What I mean to say is that the center of gravity of the development notion must move from economic to social.

Man must effectively be the agent and the purpose of development, not as the one-dimensional abstraction of *homo economicus*, but a real being with needs, possibilities and aspirations. It is imperative, therefore, that there be a common agreement that economic development does not refer only to growth, and also that growth is not an end in itself, but a necessary means to achieve social targets. And such objectives must consist in obtaining a welfare condition, peace, safety and national and individual material prosperity, resulting from the eradication or reduction of poverty, unemployment, ignorance and infirmities; giving free reign to interest, knowledge, creativity, and freedom of spiritual expression of each man and woman.

In one word, it is necessary that there be *democracy* in the sense of government with popular participation and equitable distribution of power and freedom with responsibility. In this aspect, we have a lot to learn from the Scandinavian society, which prides itself on its democracy based on the right and obligation to respect freedom and the interests of others, both individually and in community.

When I wrote the book about the experience of the Scandinavian democratic socialism (LEITE, 1984), I had the intent of not only reporting a successful experience of economic development, but also, above all else, making evident the lesson on democratic economy, that the Scandinavian people knew how to build as an example to the whole world, aimed at a more socially just economy. Even without copying models, Brazil can have the Scandinavian experience as a source of inspiration as to the style of a more balanced and socially just development in which human values, respect and dignity prevail over unnecessary alienated consumerism.

## The Problem

Growth at any cost versus income distribution and equity is the most important current problem of the development economy. According to important segments of the economic thought in underdeveloped countries, inequality is a necessary condition for rapid economic growth. The improvement in the standard of living of the poorer layers of the population, according to theories, would

occur through a natural process of gradual diffusion of wealth.

The concern with the direct reduction of poverty would tend to fail because it is contrary to the psychological rationality for accumulating wealth on the part of elite groups responsible for production. Among the important sectors of political thought there is, nowadays, the opinion that in conditions of absolute poverty there cannot be full democracy. So the question emerges: is there innate incompatibility between development and freedom? The economic and social philosophies—capitalism and socialism—are in a crisis and in search for a system able to solve the acute problems of inequalities and achieve social, political and economic targets with greater participation and respect for human rights.

Again, Brazil stands at an important crossroads. We are at the beginning of a century in need of profound transformations, which compel us to a critical reflection of our rights and wrongs, and in search of other experiences of development, compatible with our aspirations of prosperity and welfare for our entire population.

## **The View of the Scandinavian Model**

The determination of the Scandinavian countries to build an equalitarian and rich society was met with success, destroying the deep-rooted myth of our times about the supposed incompatibility between economic growth and income distribution. Scandinavia adopts a special model of social democracy, different from the socialist system that



was adopted in Eastern European countries. The ideological background of the historical authoritarian revolutionary socialism was replaced by Christian conceptions and equalitarian capitalism.

The economic growth, full employment and excellent public services reflect Keynes and Galbraith's ideals and not Marx's ideology. Scandinavia adopts a "consumption capitalist" society. What happened in that region, in fact, was nationalization of consumption. From 1900-2000, governmental consumption rose from 10% to 50%, in contrast with the political ideology of Marxist socialism, which is nationalization of industry, agriculture and businesses. In Scandinavia, opposite to nationalization, there is a profound faith in the private initiative; 95% of industry is private in Sweden.

So, Scandinavian "socialism" is democratic and humanistic, directed to respect individual rights and promote economic and social welfare of all classes.

In the same manner, as Aristotle said, when a nation is divided into two groups—the richer and the poorer—there cannot be a true State because there cannot be real amity between classes and amity is the essential principle of any association. Finally, in Adam Smith's (1975) historical statement from 1776, no nation can be considered happy if the majority of its people are poor and destitute.

## The Historical Development Process

Up to the end of the 18th century, Scandinavia was an underdeveloped society. World War I was the dividing mark

between traditional and modern Scandinavia. According to economist Joseph Lebreton, this occurred as of World War II, together with Japan, Israel and South Africa. The development process relied not on the determining bourgeoisie, but rather on the numerous classes of farmers and landowners, resulting in the creation of a strong middle class.

The preparation process for economic take-off was long and arduous, with the participation of the people and the government. According to Kuznets (1979), the growth rates of those countries in the period between 1870 and 1913 were higher than those of the European countries. From 1913 to 1960, such growth rates cooled off—because of two world wars and the occupation of Norway and Denmark by Germans—but similar to those of Europe. Among the sources of growth, the contribution of knowledge improvement and productivity were decisive, with 50% and 60% between 1900 and 1964. Other sources were the transfer of labor from low productivity sectors to industry; the substantial improvement of agricultural productivity; and the improvement in the administration methods of public and private sectors.

The economic growth of Scandinavia during the 20th century was accompanied by expressive sectoral transformations of production and employment.

## Social Democracy

In order to understand the true meaning of democracy practiced in Scandinavia, it is necessary to forget the concept

of freedom as being the right to speak, think and do that which a person wants. Scandinavians consider freedom more as a moral power than a physical power, more responsibilities and duties than privileges and rights. Scandinavian society is proud of its democracy based on the right and duty to respect the freedoms and interests of others, both individually and in community.

The definition of democracy by Scandinavian political scientists tends to emphasize the institutional aspect more than the ideological aspect. They see democracy as a set of institutions and processes and not as a set of ideas (creeds or ideological philosophies). Democracy is not an end for development. Both democracy and development are human aspirations, each one by itself. The desire of democracy should not be weakened by the claim that it matters little to the poor. All contemporaneous democracies were once poor.

## Political Development

The government system adopted in Scandinavia is constitutional monarchy and parliamentary democracy, with great political and administrative unity among powers. The Scandinavian people dedicated centuries of efforts to organizing and solidifying their democratic institutions.

Social balance, political tranquility, self-discipline of its people and respect that the population has for its policy-makers are essential for the climate of democratic peace that characterizes the political model. Universal suffrage is part of democratic traditions of those countries, which

have—in the diversity of political parties—the vehicle of ideological expression and defense of people’s interests in parliament. There are no fundamental differences in their political platforms, differing more in ideological approaches. In the case of Sweden, as few as ten voters can found a political party, even though only those who get at least 2% of the vote can be represented in Parliament. Protection of citizens’ interests is one of the main safeguards of democracy, through ombudsmen.

## Regional Development Policies

The economic development of Scandinavian countries has not happened in a balanced way in all regions.

The geographical and climate conditions are for the most part responsible for economic and demographic inequalities of Scandinavian countries, where there occurs considerable urban concentration in a few cities. An important portion of Sweden and Norway are above the Arctic Circle and 74% of Norway is made up of mountains, and another part is fragmented by the sea. The cultural level, the political awareness and ideology of a welfare society make regional inequalities a vital problem of general development.

The regional development policy of Scandinavia is based on the integrated development strategy of depressed areas. The administrative coordination of regional policy is carried out in each Unitary State by a specific agency:

- **DENMARK: Regional Development Council—the determination of priority areas is done by the Ministry of Commerce;**

- **NORWAY:** Regional Development Fund—carries out studies and diagnoses, with the coordination at national level by the Ministry of Labor;
- **SWEDEN:** Central Agency—industry localization at the national level belongs to the Ministry of Labor and Housing, with advisory from a social committee.

Regional development measures are mostly in regards to construction of infrastructure, planning, training of manpower, and subsidies to new industries.

## **Income Distribution and Social Security**

The great national objective of the countries in this part of Europe is to build a classless society, in which the level of welfare is similar to all, without predominance of any economic category.

The main political debate is to know the rhythm at which the welfare society must be expanded. Even though generalized prosperity of families in the Nordic countries is obvious in all parts, the profile of income distribution is not leveled as might be thought.

The income profile presented reflects an apparent situation, because it only corresponds to what a citizen would get if he were not affected by the tax system, i.e., before payment of due taxes. So, it is more accurate to say that society is sufficiently free to generate the possible income, being up to an ingenuous taxing income process to correct resultant distortions. For such, revenues obtained by that process are destined to finance a massive program of

income distribution. The social welfare and family assistance program is a main element of social policy in the Scandinavian countries. It aims to ensure the welfare of society, regardless of the individual level of income.

## Arguments Favorable to Greater Equality

There is no documentary evidence that economic growth spills over to the very poor in an automatic way. The choice is not between greater growth and greater equality, but refers to the type of economic growth that the Third World desires. That is, as Todaro (1979) says, "what determines the standard of development is the character of development. A more equitable distribution of income creates psychological conditions to stimulate a sound economic expansion and public participation in the development process."

In contrast to the historical experience of today's developed countries, the rich of the Third World are not distinguished because they save to invest. What they do is waste their income on luxurious things and superfluous goods. The rise in income levels of poor countries increases the demand for first-need goods by stimulating local production. The rich buy imported goods. The gravity center of the notion of economic development has moved, therefore, from economic to social. Man is the agent and the end of development.

Development does not refer only to economic growth and this is not an end in itself, but a necessary means to reach the greater social target. This target consists of obtaining a concession of material prosperity resultant from eradication or reduction of poverty, ignorance and infirmities, in an environment of freedom, peace and self-respect.



# THE EUROPEAN UNION: REGIONAL AND RURAL DEVELOPMENT POLICIES

## Introduction

The Regional Development Programs and policies within European Union are very similar to what occurs internally in the member countries. The experience of this community of countries in the field of regional development could not be left unreported in this book, even in a summarized manner.

The economic development process is unique and exclusive of each country or region where it occurs. Each experience is like a fingerprint of a person—unique. Many studies have been carried out on what has happened in today's developed countries or countries that are in a transition process from backwardness to stages of prosperity. The winner of the Nobel Prize in economics, Kuznets (1979) distinguished himself for his investigation into this issue. Based on detailed data and time series of many countries, his celebrated book *The Modern Economy of Economic Development* shows that the phenomenon of economic development has common standards of universal occurrence. The same conclusions have been analyzed by Prof. W. Rostow and adopted in the curricula of universities throughout the world. To mention just one other renowned



scientific authority, it is worthy of remembering the studies of the winner of the Nobel Prize in Economics, Gunnar Myrdal. He also highlights the endogenous character of economic development, but he proposes corollaries applicable to the diversity of countries located in any continent.

In order to analyze and explain this dichotomy, I wrote the book *The New Approach to Economic Development and Traditional Theories* published by the publishing house of *Universidade Federal do Ceará* (LEITE, 1983). This book encouraged me to dedicate part of my studies and academic teaching to trying to understand and make corollaries about the international successful experiences of economic development. There were twenty years of successful travels to dozens of countries, out of which I selected a few for more detailed studies of regional and rural development. In the European Union, we visited all countries and conducted more detailed studies about Spain, Italy, France, Portugal and the United Kingdom. In the case of Sweden, Denmark and Norway, I carried out specific studies to elaborate a thesis for a competition for a full professorship position.

In this case, the study received the following title: *Scandinavia: A model of development, democracy and well-being*. With some adaptations, this study was published in book format in the 1980s by Editora Hucitec of São Paulo, with national circulation.

As has already been explained before, the objective of this book and this chapter is to refer to ideas and policies of regional and rural development in the European Union, which might serve as an eventual model for the Northeast

of Brazil. However, it is worth remembering that, like my sorely-missed Israeli professor Weitz (1979) warned: “Development Models are not to be copied, but their experiences fully utilized.”

## The European Union

The Maastricht Treaty, which established the European Union, was signed in 1992, giving continuity to the evolution of the previous European Economic Community. By April 2004, the Union gathered 15 countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and the United Kingdom. As of the May 1<sup>st</sup> of that same year, ten new central and eastern European member states joined the EU: Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia.

As can be seen, the European Union gathers one of the most developed regions in the world. On the whole, there are 380 million inhabitants across areas measuring around 3.5 million km<sup>2</sup>. In 2003, the EU's Gross Domestic Product was •8.7 trillion and the average per capita income •23,400; Portugal was the country with the lowest per capita income, at around •17,000.

The metropolises of London, Paris, Milan, Munich and Hamburg cover a surface corresponding to 20% of the territory of the European Union, but they concentrate 40% of the population and account for 50% of the GDP. This imbalance on the European scale is also registered between the “rich” and “poor” regions in the backlands of most of

the member states. Such inequalities have been caused by the course of economic history, motivated by geographic isolation and social conditions, appearing in the relative low levels of wages, quality of schools, high unemployment rates and shortage of adequate infrastructure. According to documents of European Union itself, disparities can be due to the low level of development of some regions, the economic stagnation of others, or because they are located in the periphery of the Union.

With respect to activities of the EU concerning regional policies, we can synthesize by stating that it is an instrument of financial “solidarity” and a means of economic integration. In the latter case, the intent is to promote cohesion aimed at reducing economic and social inequalities among poorer countries (and regions) and richer countries, for the benefit of all. The policy has as a core objective supporting social groups and regions that are at economic and social disadvantage in regards to the European average.

Regional policy is financed by four structural funds. The European Regional Development Fund, the European Social Fund, the European Agricultural Guidance and Guarantee Fund. The resources programming for the 2000-2006 period is •213 million, out of which 70% are earmarked to promote development and structural adjustment of less developed regions.

The operations of these four Funds have three priority objectives: The first objective, as mentioned above, calls for 70% of resources to be destined to infrastructure and financing in regions with slow development; i.e., those regions with a GDP below 75% of the average for the

European Union. There are 50 such regions, with 22% of European Union population. The second objective is to support the economic and social re-conversion of regions with structural deficiencies. For that purpose, 11.5% of the budget is earmarked to 18% of the population. The third objective is to destine 12.3% of the budget to carry out adaptation and modernization of the educational systems and the promotion of job opportunities in regions covered by Objective One.

In addition, there are four Community Initiatives aiming to help develop cities and towns, improve rural actions of a local character, and the struggle against discrimination in access to job markets.

In the period from 1989 to 1999, structural funds enabled the creation of 2.2 million new jobs and reduced the unemployment rate by one third among those countries and the other, more developed ones. That fund has also helped Greece, Spain, Portugal and Ireland to enter the European Union. By and large, the Maastricht Treaty has achieved its targets of solidarity as well as economic and social advance.

The intervention scope of the European Regional Development Fund (ERDF) aims to correct regional imbalances through the strategy of utilizing synergy with the activities of other funds and programs of the Union. In Brazil, the recently created Northeast Development Fund (FDNE) by the National Congress in December 2003, has a lot of similarity with that experience.

In the case of the European Fund, the scope of application to assure the fulfillment of its mission

encompasses the following measures, according to the Council's regulation, which establishes the following relevant provisions:

1. Productive investments, which allow for the creation or maintenance of productive employment.
2. Investments in infrastructure, which contribute to the development, structural adjustment, creation and maintenance of jobs in the eligible regions, in industrial areas, rural zones, and degraded urban zones;
3. Development of the endogenous potential through supporting measures of initiatives for local development and the activities of small and medium enterprises, and;
4. Investment in the sectors of education and health, in the most backward regions of objective number one of the Fund.

At the same time, such measures are destined to technological development, environmental protection and improvement, and equal job opportunities for men and women.

## **Agriculture and Regional Policy in the European Union**

In order to reach a balanced and sustainable development of the European Union territory, the European Spatial Development Perspective was adapted. The

fundamentals of that policy were first defined in the 1970s based on the document titled “European Plan of Territorial Organization” of the European Parliament. The Spatial Development Committee meeting, held in Potsdam in May 1999, ushered in the execution of the new guidelines to support rural development of the Union.

The European Spatial Development Perspective is a policy, which aims at the improvement of cooperation of sectoral programs that have a significant impact on the territory.

Through the last few decades, the economic performance imbalances between the “rich” and “poor” regions have indeed diminished. In the interior of those regions, however, disparities have advanced in most of the member states. The Spatial Development Perspective policy, which aims to alleviate this situation, encompasses several segments:

- **Urban Zones:** At present, the European population is predominantly urban, with more than 80% of the people residing in cities. Even so, a new city/urban relationship is shown as necessary for a better balance in spatial development. It is worth highlighting that the metropolises of London, Paris, Milan, Munich and Hamburg are concentrated 40% of the EU population and account for 50% of the EU's Gross Domestic Product, even if occupying only 20% of the surface.
- **Rural Zones:** Rural zones in the European Union are the areas where most of the poor people are found. This situation usually arises from severe

climate, low population density, equipment deficiencies and the low degree of economic diversification. The lack of the areas' own resources has led agricultural producers to develop new opportunities of green tourism and other non-agricultural activities to complete their income.

The other domains of relevant policy are in regard to the modernization of transportation infrastructures and the situation of the environment and ecosystems.

From the point of view of sectoral policies with territorial impact, of interest in this study, the Common Agricultural Policy (CAP) stands out. At first, such policy had an increase in productivity as the main focus. Even with positive results, the experience has shown that agriculture had many relations with rural spaces. From that perspective, other objectives were included, especially the issues of food and environmental safety. Greater attention has also been given to the coordination of rural development policies. So, the re-structuring of the agricultural sector started to be considered within the scope of economic diversity of the territory and city/countryside relations. The technological investigation policy is developed to enterprises, through the research centers and universities, in matters of spatial development. The model of spatial development that involves urban development and encompasses rural zones located in the vicinity, aims to diminish disparities between these two spaces.

More recent documents of European Union highlight the reflection on a new city-countryside partnership. The

important conclusion of this new regional development strategy is that the productive process in the countryside does not conflict with competitive development or with the generation of employment. The rural territories are also gradually solving their structural limitations and trying to stimulate the forces of endogenous development. On the other hand, the rural areas need to re-discover their specificities and own needs. The concern now is to guide the productive activities towards quality and development of new technologies of information and the exchange of experiences for the best use of their potentialities.

In that integrated approach of a region, difficulties must be solved together and not in an isolated way, as was the traditional procedure.

In summary, what that policy proposes is to reinforce the strategic role in urban-rural inter-relations within a regional context.

## Support to Rural Development

The European Agricultural Guidance and Guarantee Fund (EAGGF) started to support a new rural development program as of May 1999.

The integrated policy of sustainable rural development focuses on the improvement of living and working conditions and equal opportunities for farmers of the European Union. By and large, the objectives of action defined converged upon the improvement of quality of products and the creation of complementary activities. So, stimuli to creative activities have been established in order to “hamper rural exodus and



reinforce the economic and social fabric of rural spaces,” according to what the Committee regulation establishes and has approved the programming concerning the issue of rural development.

The struggle against poverty is one of the objectives of the European Community, as well as the sustainable management of natural resources of those countries. According to the resolution of the European Union’s Central Committee, rural development is a priority because 75% of the poor and hungry people live in rural zones, and the rural sector plays an important role for the general economic growth and the sustainable management of the environment.

Rural poverty in the EU is associated with low yield in agricultural activity, reduced consumption resulting from low productivity, and limitations of access to means of production. The rural population has deficiencies in education and health and is subject to the consequences of vulnerability to climatic conditions.

Through much of the economic history of some of these countries, rural zones were neglected, while in other countries actions were aimed at solving localized problems. In view of that reality, the community policy of struggle against rural poverty aims to encourage the economic growth of these areas in a broader phase. Specifically, the guidelines adopted are to guarantee a more equitable access to the means of production, such as access to land, credit and better infrastructure. In social development, the main focus is on education and health. Vulnerability, climate risks and diseases are another concern, as well as the

reduction of social and political exclusion through the organization of more efficient, decentralized and participatory institutions.

The strategy to reduce rural poverty in the European Union must be reflected on the governmental investments and on improvement of public services that support rural development.



## **BRAZIL: THE NORTHEASTERN REGION AND SUDENE**

### **Introduction**

**T**he growth of income in the Northeast of Brazil, in both total and per capita terms, has been satisfactory by international standards. As of the 1960s, the participation of the Northeast in the national economy has also improved. The growth in the industrial sector, the increase in foreign trade and in other macro economical regional indicators followed an identical trend. There are many studies that speak about such accomplishments in the public economic policy and the private initiative. This is the optimistic view of what has happened in the region in recent years.

However, the results have not been the same with respect to the improvement of life quality and social conditions of most of the 40 million people who live in the region. In fact, what has occurred in the Brazilian Northeast is bad economic development, subsisting the main problems of inequalities and poverty that mark most underdeveloped economies in the world. In this sense, the most relevant factors are low productivity of agriculture, an excess of people on small properties, extensive malnutrition, high illiteracy rates, an abysmal lack of job opportunities, and an excessive concentration of social and inter-regional income.

It is frustrating and difficult to understand how the region has not managed to advance further in order to overcome such elementary problems of economic development—especially knowing that the government has created a network of important agencies to plan and carry out the actions of the federal government for the Northeast. There exists this social debt, which is little commented by *Dnocs*, *Companhia de Desenvolvimento do Vale do São Francisco*, *Banco do Nordeste*, *Banco do Brasil* or *Superintendência do Desenvolvimento do Nordeste* (*Sudene*), which were created to face the problems of the semi-arid and of regional development. Certainly the coordination of actions and strategic efficiency has failed in the application of billions of reais transferred to the region during many years through such institutions. Programs like the *Polonordeste*, *Sertanejo*, *Proterra*, *Agroindústria*, *Irrigação* and others have not fully achieved their objectives. The target to irrigate one million hectares only resulted in the current 78,000 hectares operating. Out of these, no more than 20,000 hectares are being used with minimum technical and economic rationality. A proof of this is that agriculture continues backward and practically stagnated in its general context. The advances in the production of grains in the *cerrado* and fruit in areas along the São Francisco River are very localized. Tax incentives to big farming and cattle-raising companies have not succeeded. At the time of the formulation of that policy within the scope of the Ministry of Planning and *Sudene*, our arguments in favor of family agriculture have not mattered much. *Sudene* did not have the organizational capacity to monitor such an undertaking

and the beneficiaries did not adequately use the resources supplied by that program.

In turn, the success attributed to the industrialization program in the Northeast of Brazil needs to be better analyzed. There has been a concentration of investments in the larger metropolitan centers, a high cost per man-hour used or per added value generated, high rate of bankruptcy or default, little internalization of industrial activities, and no attention given to small enterprises—which were the employers and sources of income distribution. The acceleration of the sector growth rate, the appearance of a local business class, and investments in infrastructure to support this process of investment in industry are positive aspects, which must not be forgotten.

Despite the difficulties mentioned above, there is no doubt that a new era of economic growth was initiated during the last forty years in the Northeast. What we lament is that the results presented are not up to par with the resources and efforts dedicated by institutions to transform the economic and social profile of the region. The people are tired of unfulfilled promises. There is need for new planning and more creative strategies of governance, which show society more effective results than those obtained until now.

## The Region and Its Problems

The Northeast is one the special areas of governmental action for regional development in Brazil. It covers an area of 1.56 million km<sup>2</sup> and represents 18.3% of Brazilian land area, and includes nine states of the Federation<sup>3</sup>. The total

area of these states is approximately equal to the entire area occupied by Germany, France, Italy, Switzerland, Netherlands, Belgium, Portugal, Austria and Luxembourg.

The population of the region has doubled in the last forty years, leaving out a portion that immigrated to other regions of the country. There are more than 100 countries with fewer people than this region. Based on the economic and social indicators, the Northeast is an underdeveloped and a socially backward region in comparison with the Southeast and South or with the country as a whole. Even though it is the region with the oldest colonization in Brazil, it was stagnated during many years, while other regions grew and prospered economically.

As a result of those differences of growth, disparities between the Northeast and most of the country became accentuated. While in 1950, for example, the per capita income of the Northeast represented 43% of the national income, by 1965 that percentage had decreased to 37%.

Consequently, the regional development problems started to be the object of great attention of the federal government, which has re-affirmed, in its plans of action, the intent to diminish the existing disparities within a scheme of more just social development.

A radical change in the development policies of the Northeast began in the 1950s with the creation of new development agencies such as *Banco do Nordeste* and *Sudene* (Superintendency for the Development of the

<sup>3</sup> The States are: Maranhão, Piauí, Ceará, Rio Grande do Norte, Paraíba, Pernambuco, Alagoas, Sergipe and Bahia.

Northeast), as well as through the re-structuring of the other regional institutions.

As of then, the Northeast began to present a reversion of its growth tendencies to such an extent that in 1968, its position in relation to Brazil had reestablished. Moreover, during the 1960s, the essential bases of infrastructure and of economic policies for a more rapid and lasting development were defined. By the end of that decade, the growth rate of the economy had achieved 7% a year, allowing the regional income to double in just ten years.

This does not mean, however, that the region has overcome its problems of underdevelopment. Despite its relatively high rate of global expansion of the economy, the agricultural sector continues congested by low productivity and in need of extraordinary efforts of organization and increase in efficiency.

The most accentuated characteristic of the economic history of the Northeast was the predominance of agricultural activities coexisting with an industrial sector of little importance and dynamism. The option of economic policy for the development of those two sectors, however, resulted in a strongly industrialist approach in the first phases of the regional development programs.

As a result of that, a strong, modern and competitive industrial sector began to be seen in the region, while agriculture only grew extensively. The need to look simultaneously at the two basic sectors has determined, in recent years, the establishment of guidelines for the activation of the agricultural sector also, as a complementary and supporting element to general economic development.



The adoption of that economic philosophy of integration of development also had, as a decisive element, the political and strategic conviction that backwardness and inadequate social conditions prevailing in the rural area of the Northeast would no longer be tolerable.

However, the economic sectors that have levered the growth of the economy of the Northeast were the industrial and the services sector. Farming and livestock was the only sector that did not manage to overcome the performance obtained nationally, because of the constant droughts that afflicted the area in that period.

Such modality of expansion has not favored the increase of productivity. The latter has remained, on average, practically unchanged for most crops, having in view that it dealt with a sector that was little-capitalized and had routine technological traditions. In this respect, it is also necessary to point out the ludicrous effect of mechanization on the agricultural results.

Conjugating the low productivity of crops and the limited capacity of farmers to explore larger tracts of land results in the low average income of the sector. In fact, it is estimated that the per capita agricultural output corresponds to 33% of the regional per capita income, much less than the levels obtained in the urban area.

The structure of the regional agriculture production has presented the following composition in recent years: 65% farming, 28% livestock and animal byproducts, and 7% extractive vegetable products.

Among the most important crops are sugarcane, rice, cassava (manioc), beans, cocoa beans, corn and cashew.

These main products concentrate 86% of total farming production. There is, however, a varied diversification of crops, which if not important in the general estimate, are at times significant within local scope where they occur, such as tobacco, pineapple, sisal (agave sisalana), and castor beans, to mention just a few. Half of the agricultural production is made up of raw materials. For the most part, they are almost wholly processed in this very region, where one of the most important industrial parks of sugar, oil-seed plants and textiles is concentrated, this latter being one of the most modern in Brazil.

A peculiarity of the agriculture in the Northeast are extractive activities, which have regularly contributed as an alternative source of income generation of peasants living in the countryside in some Northeastern Brazilian states. The most traditional extractive products are: babassu palm (*Orbignya oleifera*), carnauba wax and oiticica (*Liconia rigida*), which are important raw materials for local industry. In fact, the region has national supremacy in the production of those items. Some of them are only found in the Brazilian Northeast, thus the region is the exclusive supplier of such products on the foreign market.

The composition of the region's foreign trade per product is very diversified and some of them are in fact produced with the predominant purpose of exportation, such as: sugar, cocoa beans, cashew nuts, tobacco, sisal (agave sisalana), carnauba wax, to mention just a few. Added to such exports are sales from the region to the inter-regional trade.

Traditionally, the Northeast has presented a favorable trade balance with other countries. In counterpart, there is

a deficit in the trade balance of its transactions with the rest of the country. From that triangular mechanism of trade results a transfer of resources to the region, through a unique system of exchange and price mechanisms.

However, the region has not limited itself to promoting exports of just primary goods. Diversification of the list of exports has been manifested as a deliberate and conscientious objective, having in view that the region has relatively high availability of raw materials—which are not duly explored with that purpose—as well as abundant labor and an industrial sector able to compete in those markets in equal conditions with other suppliers. Both agricultural and industrial products in the Northeast present more than just a few comparative advantages, besides the fact that the Northeast is the geographically closest region to the important European and North American markets.

## **The Historical Evolution of *Sudene***

At the beginning of the 1950s, several scholars and politicians from the Northeast of Brazil identified an enormous disarticulation between the federal agencies and the relationship of the central government with the states. In effect, this lack of administrative organization caused the waste of public resources, especially in the so-called “Polygon of Droughts.”

In a report presented to then-President Getúlio Vargas about the great drought of 1953, Dr. Rômulo de Almeida, from the state of Bahia, suggested that it was necessary to create an interdepartmental committee to deal with the Northeast

problem. The ideal thing would be the creation of a permanent agency, but the committee recognized that such initiative could generate many political problems at that time.

By influence of interest of the South of Brazil, President Vargas held the opinion that regions with greater economic dynamism should have priority in public investments in comparison with backward regions. He stated in 1959: "the programs for the more developed regions could not be jeopardized by a spirit of simple equalitarianism or poorly-guided distributiveness." (SOUZA, 1979).

The economic ideas of the academic environment then were that unequal development is inherent to the process of economic growth and not an adversary. The regional income concentration was considered a stage, and there should come the time when disparities would start to disappear through a natural process of convergence. In other words, the policy should be one of maximum development of the country and not of a particular region to the detriment of that objective. The pioneer defenders of the creation of a special agency to reduce Northeastern poverty proposed a new thesis in which regional development should be seen as a maximization component of national growth. It is good to remind that Roberto Campos, by the way, was one of the few economists who at that time held an opinion in favor of regional policy. He warned: "The growing regional disparities generate unbearable social tension and a chronic clamor of revolt, which could cause a generalized waste of productivity in the country." (CAMPOS, 1990).

That struggle of politics against the techno-economic forces and vice-versa had marked the entire regional

development history of Brazil up to that time. However, the greatest barrier for the success of actions with the objective of a more harmonious development of the country was disclosed in the following years as being of an institutional and administrative character. That is, based upon technical manpower and skilled labor for that great struggle.

Finally, as a result of remaining pressures of the drought of 1953 as well as the recommendations of Dr. Almeida, a special committee was set up in 1954 under the leadership of then-Minister Osvaldo Aranha.

Following President Vargas' death by suicide, the proposal for the creation of the Special Committee to deal with the Northeast problems was interrupted. The new President Café Filho, however, followed up on the issue by creating an Investment Committee of the Northeast. Since the main concern was related to engineering and infrastructure works, that committee was linked to the Ministry of Roads and Public Works. The political crisis, which marked Brazilian history at that time, fatally affected the implementation of that Committee in practice.

*Banco do Nordeste*, whose first Chairman was Dr. Rômulo de Almeida, resumed the issue of the pressing need of coordination of the public sector agencies in the region. The issue was presented to Brazilian President Juscelino Kubitschek in 1956. The proposal defended by *Banco do Nordeste* was the product of research conducted by the young team of technicians of the Bank, with the participation of the United Nations advisor Stefan Robock, who cooperated in the structuring of the Technical Office of Economic Studies of the Northeast (*Etene*).

The suggestion was to create a work team aimed at defining a regional coordination and planning system. Also based on other ideas similar to those of the Bishops of the Northeast (GTDN). To give it more strength, the initiative was linked to the Presidency of the Republic, and the group leadership belonged to Dr. Aloísio Afonso Campos, then-director of *Banco do Nordeste*. This occurred on December 14, 1956. It is appropriate to mention that in May of that same year, a meeting of the Bishops of the Northeast was held, in which the President of Brazil took part. This important meeting was held by the incentive of the Assistant Archbishop of Rio de Janeiro, Helder Câmara. He was from the Northeast and a great advocate of drawing more attention from the federal government in favor of development of the Northeast. During the meeting and subsequently, the bishops objected to the emphasis attributed to research and planning of the proposal by *Banco do Nordeste*. Finally, President Juscelino Kubitschek managed to get the support of interested parties so that the Group started to work.

From that time on, until 1958, with the support of *Banco do Nordeste* and consultants of the United Nations, several studies were carried out trying to identify the most important problems and new solutions for the development of the Northeast.

In 1958, Economist Celso Furtado, after working for the Latin American Economic Committee (*Cepal*) and as director of *BNDE* (Brazil's National Bank for Economic Development), was invited by President Kubitschek to serve as director of *GTDN*. With the support of studies carried out

by the Group and by *Banco do Nordeste*, Dr. Furtado prepared a remarkable document titled *An Economic Development Policy for the Northeast*. That initiative was called *Operação Nordeste* and Celso Furtado was appointed as its director. In May of that year, the president sent to the National Congress, a bill creating the Superintendency for the Development of the Northeast (*Sudene*). In both the House of Representatives and the Senate, the bill received a hundred amendments, and was approved and sanctioned in December of 1959.

The formal ceremony to officially approve the institution of the new Agency was held on December 13, 1959. The event took place at *Teatro Santa Izabel*, in the city Recife, with the presence of President Kubitschek and all of the state governors from the Northeast. Before entering the theater, the President passed through an area where a great crowd of people gathered and applauded him in response to smiles and embraces that he distributed among those present. (I had the opportunity to get a handshake from this charismatic personality at that occasion. I was in Recife on a business trip for *Banco do Nordeste*, as a trainee in the capacity of student of economics linked to the Office of Economic Studies. It was a moment of great emotion for me.)

By watching those manifestations and listening to Dr. Furtado's and President Kubitschek's messages, I believed at that historical moment that the Northeast would never be the same again. I am now trying to focus on some aspects of that epopee.

Besides the reasons already mentioned, the creation of *Sudene* had an important connection with the Pan-

American Operation. In fact, that initiative originated from a proposal from Brazilian President to the US government. According to Dr. João Gonçalves' testimony, President Kubitschek was warned by several politicians of his confidence that he was leading a great inter-American movement for overcoming underdevelopment on the continent. Meanwhile, in the interior of Brazil prevailed great regional imbalances—especially the poverty problems in the Brazilian Northeast that were drawing international attention through the Studies by the Technical Office of Economic Studies of the Northeast, which were being supported by the United Nations.

That situation became especially delicate politically, because at the time, Jânio Quadros was leading a public opinion movement for São Paulo to support programs for the development of the Northeast. As it is known, Jânio Quadros was a candidate for the presidency of Brazil and defended a moralizing action in application of federal resources aimed to the “Polygon of Droughts.” In addition, Kubitschek, who won a landslide victory in the Northeast, was allocating 41% of resources of his Goals Program to São Paulo. The creation of *Sudene* thus became something very opportune.

## The Pioneering Phase of Sudene

In the first years of *Sudene's* work, after the approval of its Five-Year Plan, the main concern of the institution, according to Dr. Stefan Robock, was of a political mark. In fact, Celso Furtado stated then that “economic development



must be political-economic" (FURTADO, 1982). For the Northeast Plan to be approved, Dr. Furtado had to get the support of the governors of the Northeast, congressmen from the South, university students and many leaders friendly to the idea of *Sudene*. He also got foreign help from President John F. Kennedy.

In order to comply with President Jânio Quadros' instructions when he visited the Northeast, the Agency's actions were initially limited to an immediate character or emergency projects. Even if there was the purpose of decentralized performance, the focus on action was from the "top down," causing discontent and political resistance, even in that initial phase.

The development policy of the Northeast formulated in the first Plan of *Sudene* was to create an economy resistant to droughts, to restructure the agrarian economy, and to intensify investments towards accelerated industrialization. The existing disparities between the Northeast and the Center-South regions were, however, linked to the national industrialization policy, control over foreign exchange rates and imports, as well as the tax system. Dr. Furtado and his team admitted that the Northeast lost private capital, which was attracted by investment opportunities in the Southeast, but the federal government transferred more resources to the region than it collected from it. Furtado's criticism, however, was that such applications in the "Polygon of Droughts" were of an "assistance" or "clientelist" nature and that they did not generate new job and income opportunities. Regional decentralization through triangular trade—exports to other countries and importation from the Southeast—was

another point of concern of the Agency's technical team. Another issue, which is still polemic today, was the argument that the works to fight drought, with construction of dams and helpful assistance, stimulated the population to remain artificially in the semi-arid, aggravating the demand for food. One of the proposals of the new regional policy was the transference of the population to the state of Maranhão, where humid and fertile soils could productively receive that excess labor force. One of the measures with that objective was the installation of a large settlement in the backlands of Maranhão. Because it is an area of difficult access, that project became very onerous and did not succeed. As a technician of *Banco do Nordeste* I visited that undertaking in 1975, together with a mission from the Brazilian Planning Ministry. The settled families were in precarious conditions and very frustrated.

The regional plans were elaborated by the Executive Secretariat and approved by the Deliberative Body and sent to National Congress. "Director Plan I" established that *Sudene* had the power to "act as the centralizing planning agency of federal investments in the region." Based on the Plan, *Sudene* could carry out innovative works as well as create, transform and dissolve entities.

That plan was not approved before President Kubitschek left office, nor was it approved during the seven months of Jânio Quadro's administration, which ended in August 1961. Only on December 14 of that year did the Congress approve grants for the first two years of the institution. A new Five-Year Plan was prepared to be presented at the meeting of Alliance for Progress, in Punta

del Este. This plan for the 1963-1965 period, went before Congress (as Plan II) in October 1962.

In the first years of *Sudene's* existence, the agency was the victim of several contradictions that affected its future. The original idea was that the economic planning process would be of a decentralized nature, with the participation of the states and federal agencies acting in the region. The plan would be like a consolidation of those proposals. What happened is that the states and the agencies of the region, besides *Banco do Nordeste*, *Companhia Hidroelétrica do São Francisco* and the National Department of Roads and Highways (*DNER*), were not prepared for that mission. In fact, only the state of Bahia, with the performance of Dr. Rômulo de Almeida as Secretary of Planning, presented the relevant document. Even so, because it was considered as a demanding work by *Sudene*, it was not considered by the Director Plan.

So, even dealing with technically well-elaborated documents, *Sudene's* plans were of a partial nature. They did not consider all public investments for the region and did not clearly define the income and job targets nor other important components.

According to politicians and intellectuals from the South, *Sudene's* plans treated the Northeast as a country and not as a region within a national context. At the beginning of *Sudene*, little attention was given to the institutional needs, while the educational sector was neglected altogether. Suffice it to say that the investments structure of "Plan I" was made up of 70% for infrastructure and 17% for the social development. In this latter case, it

referred mainly to water supply and sewage, while for education, mainly at the college level—only 1.3%. In “Plan II,” that percentage rose to 6%, but literacy programs continued being excluded. Resources for education improved very little in the other plans. It was the USA that at that time provided financial assistance to the states in the Northeast for basic education programs. Plans were of high quality, but they presented little change over the years in their basic principles, besides a growing attention to industrial development and tax incentives, including business farming and livestock-raising.

As of 1964, *Sudene* lost its link with the Presidency of Brazil. Even so, it kept the attribution of coordination and execution of the National Development Plan with respect to the Northeast. This was because, with the installation of the military government, regional policies were transferred to the National Plan, whose doctrine was national integration. So, *Sudene*’s “Plan V” and the others that followed began to be part of the national plans.

It is worth mentioning here that Dr. Celso Furtado and his team stayed at *Sudene* from December 1959 to April 1964. Pressed into service by Brazilian President Castelo Branco, Dr. João Gonçalves took over as Head of *Sudene* in the period between 1964 and 1966, when he took over the Ministry of Coordination of Regional Agencies. The Chief Economist of Technical Office of Economic Studies of BNB, Dr. Rubens Vaz da Costa, became the new superintendent and served from August 1966 to March 1967. That phase of *Sudene* was analyzed in depth by Dr. João Gonçalves in his book: *Brazilian Northeast: A Regional Development Experience* (SOUZA,

1979). This work was commissioned by *Banco do Nordeste* Chairman, the economist Nilson Craveiro Holanda, who designated me to act as secretary for the author in the final phase of elaboration of the aforementioned study.

For effect of comparison of the development policies of the Northeast of Brazil and the role of *Sudene* to other countries, it is worth referring to the financial incentive instruments designed and put into practice in the final phase of this Agency. The incentive policy to the private initiative designed by *Sudene* was aimed at the maintenance, modernization and expansion of the already existing industries, the creation of new industries, besides the increase in production and regional agricultural productivity.

This policy was put into execution by means of several tax, financial, and foreign exchange incentives given to industrial and agricultural enterprises. In addition, entrepreneurs could also rely on the support of the Technical Office of Economic Studies of the Northeast (*Etene*) and the state planning agencies. With that, the federal government aimed to compensate some of the advantages of localization and non-existence of external economies in the region other than what the Center-South had available. By and large, such incentives provided federal tax exemption on imported equipment, total or partial income tax exemption for ten years, financing or suretyship of BNB or BNDE, license for importing equipment without foreign exchange coverage, and others.

During the first ten years that this incentive system to the economic development of the Northeast was in effect, a complete set of laws and decrees were created, which

became difficult to manage. Several distortions and frauds were identified, which affected the sustainability of the system. So in 1974, an Investment Fund of the Northeast (*Finor*) was created, consolidating and improving the financial support policy for the regional development. Finally, Law 9.532 of December 10, 1997 introduced changes to the legislation of tax incentives that prevail to the present time.

In its new phase, *Finor* has approved around 3,500 undertakings, out of which 2,500 were completed by 2002. Today, *Finor* can finance infrastructure works, especially sanitation, water supply, transportation and energy. But the main and prioritized undertakings are those of the industrial, telecommunications and services sectors.

*Finor's* resources come from options made by enterprises that contribute income tax from the whole country and that collect part of their income tax for that specific purpose: *Banco do Nordeste* is *Finor's* financial operating institution.

## Nationalization of the Development Plans of the Northeast

Complementary Act number 43 of January 29, 1969 established the National Planning System of Brazil, whereby the regional development plans became an integral part of the National Development Plan (*PND*), as occurred with the 1<sup>st</sup> *PND* for the 1972-1974 period. It is worth remembering that *Sudene* previously had difficulty to prepare its plans in an isolated manner, and it did so until "Director Plan IV" (Five-Year Plan) whose completion was foreseen for 1973.

The Development of the Northeast for the 1972-1974 triennial, elaborated in accordance with the new system, kept the structure of the previous plans. But it attributed greater emphasis to the economic relations of the Northeast with other regions of the country, within a global view of the national development policy.

Another regional planning innovation was the inclusion of all of the federal government's investment programming in the region (*Sudene*, ministries and other regional agencies) in *Sudene's* plan. So, the new programming included the state development plans and practically the totality of private investments in the area's industries.

The new development policy for the Northeast that began initiated in 1952 with the creation of *Banco do Nordeste* and was strengthened as of 1959 with the establishment of *Sudene*, allowed the bases for an accelerated development of the regional economy to be established during the 1960s. The elevation in the deficiency standards of the region's administrative apparatus and the persistent efforts toward the creation of the economic and social infrastructure intended, during that phase, to contribute to the success of the regional development economic policy.

The National Development Project recommended, as a basic objective: "the economic, social and political feasibility of Brazil as a Great Power." It included, within its great targets, economic integration, the overcoming of regional inequalities and territorial occupation as an element to protect national sovereignty. From the national point of

view, therefore, the development of the Northeast represented a key factor for the achievement of the integrated development objectives of the nation.

In turn, the development policy of the Northeast had the following guidelines as regional objectives:

1. To incorporate the Northeast into the national development process: the objective of synthesis;
2. To create a national development hub in the Northeast through the construction of a modern economic system;
3. To create conditions so that the Northeast started to grow in the medium term at a rate of 10%, as the only condition able to reduce or prevent the aggravation of the development disparities between the Northeast and other, more advanced regions of Brazil;
4. To assure a rising improvement in the living standards of the population in the region, in compliance with the process of economic evolution of the area.

The plan has also established the guidelines of the development policy of the Northeast, in order to raise the income growth rate in the region to 10% a year, in comparison with the 7.4% obtained in the 1960-1969 period. These included the following: the intensification of industrial investments aimed at manners in which to create an autonomous center of manufacturing expansion in the Northeast; re-structuring of the agricultural economy in the



Northeast; expansion of supply and more intensive utilization of natural resources in the region; and the invigoration of activities related to the development of science and technology.

## Strategy for the Industrial Sector

The lines of the industrial policy are guided by the guideline to create a national hub of development in the Northeast. Its achievement will have the following strategy:

1. Changing in the industrial structure with the diversification of production of intermediate-base goods (chemicals and petrochemicals) and capital goods;
  2. Rationalization of the traditional branches that are users of local raw materials and present relative capacity to absorb the labor pool;
  3. More intensive exploration of possibilities of production for purposes of exportation, especially of light industries, which use regional agricultural inputs;
  4. Promoting the strengthening of small and medium sized industries, whose expansion can be carried out at a low cost, aimed at supplying local markets.
- The conception of an industrial strategy presumes a model of industrial growth that allows for a greater integration of the very sector with other sectors of the economy and with national industry. On the other hand, the execution of that policy will

rely upon tax incentives as the main instrument of feasibility, in addition to the more active mobilization of other resources.

## Strategy for the Agricultural Sector

The basic aspects of the strategy for the agricultural sector relate fundamentally to the factors of land, market behavior, and agricultural services. In this manner, the political guidelines for the sector were the following:

1. Agrarian re-structuring, with highlights on the agrarian reform programs and expansion of agricultural frontiers through colonization, with a view to utilize the availability of unusable or inadequately explored land and provide employment to the local labor force;
2. Increase in agricultural productivity through the introduction of modern techniques of exploration, especially based on irrigation programs, modernization of sugarcane crops and reorganization and intensification of agronomic research (improved seeds, seedlings and lineages of high-productivity plants and animals);
3. Actions capable of propitiating a greater incorporation of the agricultural sector into the market economy;
4. Effective implementation of a regional system of supply, including a system of supply center in all state capitals of the Northeast; a system of

agricultural development companies (*Cida*); and a market information system;

5. Coordination of the state agricultural planning system, technical assistance, agronomic research, and supply of inputs and financing, all these aspects being directed towards an integrated agricultural development policy.

Considering that agriculture in the Brazilian Northeast is periodically subject to production crises because of climatic irregularities, a great emphasis was given to the sector guidelines to create an agricultural model that worked preventively against this factor of uncertainty.

## Post-Sudene Growth in the Northeast

The Northeast economy has grown and changed since the creation of the Superintendency for the Development of the Northeast (*Sudene*). Brazil has also undergone substantial changes in that period, with advances in economic and social indicators, especially in the Center-South. Many studies analyze the evolution tendencies of the Brazilian economy and the Northeast. In this latter case, I prepared a book published by *Banco do Nordeste*, dealing with the retrospect and perspectives of the population and income of the Northeast in the period from 1950 to 2000. For the purposes of this book, I dealt in this item with a few general aspects, which marked the socio-economic performance of the post-*Sudene* phase.

At present, 30% of Brazil's population lives in the Northeast, or around 48 million inhabitants. In just around

forty years, the population of the Northeast has more than doubled, since it was 22.1 million in 1960. The geometrical growth rate of the population in the 1990s was 1.6% per year, against 2.7% in the previous decade. The urban population, however, grew 2.8% yearly, reason whereby more than 70% of the region's residents now live in cities; in 1960, that contingent was only 34%. The rural population has decreased in relation to the total population during the same period. That is a worldwide trend, whenever economic growth occurs. In fact, until 1980, the rural population of the Northeast grew in absolute terms, since which time the rate of the demographic evolution began to be negative—approximately one per cent a year. The combination of a drop of regional mortality and birth rates increased the average life expectancy from 40 years to 69 years of age.

The structural changes of employment and income are indicators of the growth and modernization process of the economy. In that sense, trends in the Northeast are coherent with what occurred in the historical experience. The fall in the relative participation of agriculture is reflected on the increase of the contribution of industry and services. In 1960, for example, the occupation of the Northeastern labor force was 70% in agriculture, 7.8% in industry and 23% in the services sector. Some forty years later, in 2001, the 20 million people employed in the region were distributed with 36% in agriculture, 15% in industry and 49% in services. The same trends have taken place in the generation of income. In the beginning of the 1960s, agriculture accounted for 30% of production, falling to only 10% in 2001. In counterpart, industry increased from 22% to 30% and services from 47% to 60%.

The major changes in the productive process happened in transformation industries. Advances were inexpressive in industries of intermediate goods and in petrochemicals. Also outstanding are the textile and clothing industries, metal mechanics, footwear, and agro-industry. In the tertiary sector, trade, financial services, tourism and educational services are highlights.

With respect to infrastructure, improvements have been remarkable in the last few decades. The entire northeast today is served by a network of high quality paved highways, linking practically all urban and production centers. Very different from what it was in 1960, the electric power supply system reaches all cities and places, having penetrated in the rural areas in almost 70% of households. The airports of the state capitals are all modern and well-equipped, besides the construction and recovery of the major sea ports. In comparison with the past, urban and interstate transportation services are satisfactory and modern. Railways, however, did not receive the same attention and did not take part of the economic growth, many having been decommissioned.

Special highlight must be given to urban growth and modernization. Cities such as Salvador, Recife, Fortaleza and many others are marked today by a standard of apartment buildings, shopping centers and residential complexes similar to those of the developed countries. In that context, the negative factor (which still subsists) was the appearance of slums in the metropolitan centers, which receive a significant portion of the population residing in those agglomerates. This contrast is one of the main problems in

the growth process of the Northeast—a rich population and a poor population.

Backwardness in regional agriculture is certainly the greatest distortion and cause of economic and social inequalities, which subsist among the urban and rural zones. Without a doubt, it is the origin of the state of poverty, which marks Northeastern societies. At present, about 70% of the people who live in the rural area live under the poverty line, which is defined as corresponding to earnings of half the minimum wage. Education, health, housing and sanitation conditions are deplorable, even in an absolute sense. Also in urban zones, about 20% to 30% of the residents are in that poverty situation and need services for their basic essential needs. In the whole of the Northeast, the proportion of poor people is of 50% of the population. The states in the most dire situation are Maranhão, Piauí, Bahia and Ceará, because they have the largest populations.

The economy of the Northeast, however, has presented a positive growth in the post-*Sudene* period. The main reasons for that performance are inter-linked to the government's strategy and policies of creating the conditions to reduce the advanced gap of the region in relation to Brazil and the Southeast. The evolution of the Northeastern economy naturally depends on the limitations of its natural resources, especially in the "Polygon of Droughts," as well as historical factors and policies defined at the national level. Pricing policies, international trade, credit and tax are the responsibility of the federal government and affect the regional and state programs.

The Gross Domestic Product (GDP) of the Northeast was US\$ 78 billion in 2000, corresponding to 13% of Brazil's overall GDP. In the same year, per capita income reached US\$ 3,014, less than half that of Brazil. The GDP growth rates between 1990 and 2000 were 2.6% for the Northeast and 2.8% for Brazil, even though, in the 1995-2000 sub-period, the Northeast grew a little more than Brazil. In that period, *Sudene* practically had no more influence on the policies and investments made.

Through *Finor* and administered by *Banco do Nordeste*, tax incentives weighed on industrial activities. Even in that sector, however, what greatly influenced the installation of new undertakings, especially medium and large enterprises, were the state programs of tax incentives. With resources of *Finor* and *Banco Nacional de Desenvolvimento Econômico e Social (BNDES)*, the performance of *Banco do Nordeste* was also responsible for the industrial and farming and livestock-raising investments. *Banco do Brasil* provided cost resources to the commercial and agricultural sector. That was with respect to the directly productive activities. Infrastructure, especially airports, sea ports, highways, water systems and sanitation were financed by the federal government and programs together with the states, the World Bank and the IDB financing, to mention just the main sources of resources.

A special highlight, however, must be mentioned now. That is, what happened in term of performance of the economy of the Northeast in the first years when *Sudene* started to act in compliance with the objectives for which it was created. In other words, the reduction of growth

disparities between the Northeast and the Center-South regions and the improvement in the living conditions of millions of people who lived in situation of extreme poverty in the Northeast.

In 1960, for example, the per capita income of the Northeast corresponded to 40% of that of Brazil and around 1/3 that of the Center-South. Even with the adjustment policies of Brazilian economy between 1960 and 1967, the Northeast grew more rapidly than Brazil overall. That performance caused a certain euphoria in the region, even though some discontent of the regional leaderships happened vis-à-vis the centralization policies, which the agency had to adopt in order to accelerate the decision-making process to implement the policies elaborated.

To imagine what happened in the above-mentioned period, the Northeast grew at 5.2% a year. A record rate in the history of the Northeast. In the following period, from 1968 to 1973, that performance improved even more, climbing to an average of 7.7%. A favorable wave of circumstances in the international economy and in Brazil motivated a phenomenon that was then called a “miracle” in the Brazilian economy, with an average growth rate of 11.2% a year. There followed, however, the oil shock in 1974-1980, with the Northeast accelerating its growth rate to 9.8% per year in that period, and Brazil falling to 6.8%. According to one classification, which I adopted in an aforementioned study on this issue, Brazil was affected by an economic crisis that persisted between 1981 and 1983. At that time, the Northeast was affected by many factors of a national and regional order, making its growth rate fall to 5.5%. But the



Brazilian economy also suffered with an annual fall of (–) 1.4% in this phase. The highest growth rate in the Northeast happened between 1984 and 1986, with 10.2% and Brazil with 7.9% a year. Since then, the economies of Brazil and the Northeast started to experiment a phase of low growth rates, which have remained until today. Even so, the Northeast still managed to slightly exceed Brazil with the respective 2% rate against 1.8% between 1990 and 1995. But between 1995 and 2000, the Northeast grew only 1% and Brazil, 1.4% per year.

As to the performance of per capita income, the Northeast has some advantage over Brazil. In this case, since the population growth rates are smaller in the Northeast, the increase in the per capita income is greater even when there occurs an identical addition to the absolute income.

In summary, we can conclude that the Northeast presented significant economic expansion from 1960 to 1980, a period in which *Sudene* had an important presence in the formulation and execution of regional development programs. These results became possible through a long list of factors. But the fuel for this growth engine was the regional formation of fixed capital. Between 1965 and 1970 and 1975 to 1980, on average, the growth rates of capital accumulation were 14% per year. In the case of industry, it was 17%. In the following five-year period, this rate fell to 2.6%, remaining low in the following years.

The relations between capital formation and GDP were 22% in the 1970s, against 19% in Brazil, falling to 15% in the 1980s. In the following years, that proportion was close to 10%. Another highlight worthy of mention is that the

public sector has accounted for around 50% of investments in the region.

Analyzing those data, the Inter-ministry Work Group for creating *Sudene* highlights several worrisome aspects in need of new policies and the performance of the public sector. Textually, the Group's report states: "The production growth and economic transformations in the post-*Sudene* Northeast, although resulting in economic and social changes, have not substantially altered inequalities between the Northeast and the national average, and above all, between the most industrialized regions such as the Southeast." (*SUDENE*, 1967).

On average, the standard of living of the Northeastern population remains below the conditions that can be considered dignified and tolerable humanitarily. An example of this is that 66% of the people employed receive minimum wage or less. This corresponds to 50% of all those who are in that group, even though only 28% of the Brazilian population lives in the region. For comparison, that ratio is 26% in the Southeast and 47% in Brazil as a whole. Through the years, on the other hand, the exporting capacity of the Northeast decreased in relation to Brazil. In 1960, the region accounted for 20% of the generation of foreign trade, but in 1980 this figure had fallen to 11%, currently hovering around 7%.

The main conclusion that we can come to about the impact of what happened in the Northeast during the period examined, is that the creation of *Sudene* was important and helped the region to accelerate its growth process. The issue, which has been very much criticized, is in regards to the quality of growth. Another piece of evidence is that the rich were the most benefited by that process. The macroeconomic

data show, in fact, that the growth was unequal between the urban and rural zones and between the rich and poor social groups. Or rather, growth concentrated income and social services and did not generate employment enough to relatively reduce unemployment and under-employment. Poverty and inequality continue to challenge the government and the regional society.

How policies and institutions have contributed to the results recorded in the last few decades must be studied further. There are no evaluations that clearly point out *Sudene* participation in the growth of the Northeast or which negative effects may have motivated investments to be directed to mistaken programs. This, without mentioning cases of embezzlement in business applications of a fraudulent nature or of little efficiency. The official banks and federal agencies that work in the region have also made an outstanding contribution regarding the public good that came about, or influenced the programs carried out through the years in which *Sudene* worked.

Dr. Celso Furtado stated it correctly in a speech he made during the launch of the new *Sudene*, the Northeast is little studied and many problems continue without adequate diagnosis. We also cannot forget the wary wisdom of Dr. Rômulo de Almeida: “The Northeast is already tired of studies and plans; what it needs is action and money.”

## Some Considerations about *Sudene*’s Policies

At the moment in which the issues of the Northeast vis-à-vis the re-creation of *Sudene* are to be discussed, it is

appropriate to review some of the criticisms about the regional model.

As has been shown in this book, the historical sources of growth in the European countries were mainly economic and technological. Another factor that marked regional growth was the exploration of the potential of many social investments in which individuals participated in economic and social activities.

With the advance of growth, societies have modified their pre-existing institutional structures, replacing them with new institutions. Outstanding among the characteristics of this process are an accelerated increase of productivity of labor and the structural transformation of the economy. Income participation and agricultural employment declines, while the participation of industry and services increases. Transformations in the social, political and ideological practices also occur; and finally, the increase in the per capita income and improvement in the distribution of income and the welfare conditions of most urban and rural population.

In the case of the Brazilian Northeast, Robock (1964) says that it becomes necessary to achieve development, an improvement in the efficiency of operation of all of society: individuals, private institutions and governmental institutions, in a continued manner. In light of such conditions, it is worth asking: what happened in the Northeast in the last thirty or forty years? How has *Sudene* contributed, effectively, so that such changes happened?

As it is known, *Sudene* did very little for the rural development of the Northeast. That sector is still the most

backward in the region, with the greatest proportion of poor, both in relative and absolute terms, and deplorable social indicators. Only a few irrigated areas and grain crops in the *cerrado* and areas located on the coast were modernized. The agrarian structure continues practically the same, with a breaking up of the small establishments that become unable to maintain the population dependent upon subsistence agriculture.

It was in the industrial sector that *Sudene* concentrated all of its efforts, besides building infrastructure to support the region's development.

At the beginning of the 1980s, Economist Celso Furtado wrote the book *The New Dependence*, published by Editora Paz e Terra, where the former superintendent focuses on the results of regional policies and *Sudene's* performance in the previous twenty years (FURTADO, 1982). His diagnosis is that the industrialization of the Northeast tended to assume the form of an extension of the industrial system of the Center-South. Therefore, it has not played the role of a growth-inducing nucleus of new inter-related activities (industry, agriculture and services).

However, it is worth remembering that that situation is attributed by other analysts of the industrialization of the Northeast, the thesis and dogma of CEPAL divulged in the 1960s. The view of this organization was that industrialization is the only formula able to breakthrough the underdevelopment barrier. For that objective, the first step was the replacement of imported manufacturing to escape the wastes generated by the trade terms of the backward region. That is, exporting raw materials at low prices and importing manufactured products

at high prices. So, the young economists of the Northeast, who were trained by CEPAL, ended up defending industrialization at any price, neglecting the agriculture problems. Having taught classes in CEPAL courses in the Northeast, I was fully in agreement with that argumentation. Over time, I became an agricultural economist to expose other more integrated development approaches, focusing on agriculture. A thesis of which I am still an obstinate defender. Industry is the accelerating and modernizing sector, but agriculture is the basis of development.

Dr. Furtado was right when he stated that the allocation of resources to the countryside, mainly in the 1960s and 1970s, provided a greater concentration of land ownership, at that same time that it privileged the large and wealthier cattle ranchers (FURTADO, 1982).

*Sudene's* organizer understands that the core objective of policy for the agricultural sector would be to create an economy adapted to the semi-arid zone. The optimization of water and soil use must be the priority of farming and livestock raising activities. The family agricultural organization is the modality of exploration capable of engendering forms of solidarity and cooperativeness. Celso Furtado reminds that it is important to adopt a safe agricultural system to prevent disarticulation in the productive process during the time of droughts (FURTADO, 1998).

With respect to the urban zones, he rejects *Sudene's* experience of allocating resources from outside the region to create productive processes adopted in external markets. The option defended is that there is a need to increase the purchasing power of the masses of population "which

generates a dynamic push of resources to reproduce.” In this aspect, he proposes a policy to create jobs generated by linking the productive process to the local market. With that, the job-generating market would be potentialized. Dr. Furtado explains that to reach this new industrial economy, it must be carried out in the form of medium and small enterprises, or even micro enterprises and of a traditional nature. Furtado accepts and defends a thesis long referred to in the studies of the technicians of the Office of Economic Studies of *Banco do Nordeste* (Etene). Or rather, the investments directed to the exploration of renewable resources in the region and/or linked to the Center-South markets or aimed to replace imports, “must fit in their national economic development policy” (FURTADO, 1982).

Finally, the father of *Sudene* concludes: “The development model that is being adopted in the Northeast, favoring larger-size enterprises with the use of subsidized credit and tax incentives, has resulted in income concentration and an increase of inequalities, with scarce generation of jobs, both in the countryside and in cities” (FURTADO, 1982).

## The Re-Creation of Sudene

The Complementary Bill that instated the Superintendency for the Development of the Northeast, establishes that it must have a special autarchy nature, linked to the Ministry of National Integration. Its administrative and financial composition is autonomous and integrated to the Federal System of Planning and Budget

headquartered in the city of Recife. Its scope of activity encompasses the nine states of the Northeast and micro regions of the states of Minas Gerais and Espírito Santo.

The purpose of the new *Sudene*<sup>4</sup> shall be to promote the inclusive sustainable development, to articulate the action of the public agencies and to formulate plans and propose guidelines for regional development in articulation with the national plans. More specifically, this agency must support public and private investments in economic and social infrastructures, capacity-building of human resources, innovation and technological diffusion. Also falling under its competency are sub-regional development initiatives and stimuli to investment in productive activities, by means of tax incentives and benefits.

The new model of *Sudene* will be fundamentally that of an institution of planning and articulation to accelerate development, with reduction of inequalities and poverty. It will not be operational, as happened with its predecessor, but a type of IPEA with a strong Deliberative Body that will establish the guidelines of utilization of resources in its scope of work.

In that sense, *Sudene* can also influence the federal government in the allocation of resources based on diagnoses carried out in very region, by means of a cooperation system with academia and the state governments. This work modality is very similar to the present institutions of regional development in operation

<sup>4</sup> Complementary Bill of the Federal House of Representatives 59/04 and Substitutive Bill of the Regional Development Committee of the Federal Senate.



in the European Union, the United States and Canada, as analyzed in this book.

The action instruments of *Sudene* are the regional development plan, the Constitutional Financing Fund of the Northeast (*FNE*), the tax incentives and benefits program, and resources pursuant to specific laws of the Federal Constitution. The Northeast Development Fund (*FNDE*) has also been created to be managed by BNB, with the purpose of assuring resources for carrying out investments in infrastructure and public services and in productive enterprises. With that purpose, about one billion reais a year have been prescribed.

In order to monitor and follow up the objectives defined in the regional plan, a data network will be used, besides the Human Development Index (HDI). The bill creates the BNB-PAR, an investment subsidiary bank of *Banco do Nordeste*, which expands the work of that bank in the capital market through loans, opening of capital of enterprises, public-private partnerships and other actions.

Finally, the bill establishes that the Deliberative Body be made up of governors of *Sudene's* jurisdiction, the autarchy's superintendent, and three ministers of State. According to the meeting's agenda, other ministers can participate with voting rights, as long as the meeting deals with issues linked to their portfolio. BNB is also expected to participate in the Body, which is fully justified by the importance of its performance in the development of the Northeast for more than half a century.

To re-create the new agency, the Minister of National Integration submitted to the National Congress a synthetic

justification, whose main points refer to the role of the new institution within the efforts to resume planning in the country. A long-term strategy is intended to be adopted by articulating public and private investments. The second foundation of the Statement of Reasons highlights the commitment of the new government to the struggle against regional inequalities, which continue marking the life of the country." Notwithstanding, it is highlighted that in the 40 years of *Sudene*, the Northeast advanced, "but the effective needs of its huge population continue to be a challenge for us." The Minister states that the social achievements were modest and that the great challenge to face in the Northeast concerns overcoming poverty. The new *Sudene* will have sustainable development and social effectiveness as its motto, within the context of the national and world markets. Growth will be a means, but the social, cultural, and political insertion to millions of Northeasterners will be the end to be pursued, along with the construction of a less unequal nation.

The launch ceremony to re-create the new *Sudene* was held at *Banco do Nordeste*, in Passaré on the June 28<sup>th</sup>, 2003. I was present at this event, as I was during the original launch of *Sudene* back in 1959 by President Kubitschek. At that moment, president Lula da Silva stated that Brazil has a debt to the Northeast and the payment of that debt is the commitment of his government. He also highlighted in his speech that the new institution would bring an end to the "fiscal war" practiced by the states, which he classified as "prodigal."

Dr. Celso Furtado was present and made a pronouncement that reverberated greatly throughout the region. He reported that when he took over as

Superintendent of *Sudene* at that time, “we knew very little about the Northeast.” He vented his feelings, however, by saying that today—in spite of the volume of information—we still know little. At another point, he stated that there is a lot to do in our region. He was also convicted that we cannot think about the Northeast without thinking about Brazil. He attributed the creation of conditions for the aggravation of inter-regional inequalities to the neo-liberal policy adopted in the Brazilian economy lately. The most incisive statement, which marked Dr. Celso Furtado’s message, was relating to the priority that the public policies of the Northeast must give to the internal market and that “forty four years later, the Northeast continues the same as with the First Director Plan” (FURTADO, 2003).

It is worth mentioning that the Inter-ministry Group, which elaborated the revision proposal of *Sudene*, makes it explicit that the Northeast today relies on a low level of productivity in comparison with other regions. Another strategic problem is related to farming and livestock-raising, which continues to be backward and vulnerable, and where the greatest portion of regional occupation is found. Even with the great investments made, industrial activity is weakened by the intense participation of the low-competitiveness sectors.

The proposal formulated by the Group is to attribute social priority to the activities of the new *Sudene*. The adoption of a more aggressive rural development policy is recommended based on family agriculture and effective agrarian reform. Specifically, expansion of the employment level, improvement in the distribution of income and combating hunger are referred to as directives of the new

institution. The improvement of housing, health, education, protection of employment and social welfare must be the main concern for the development of the Northeast.

## **The Rural Approach of Regional Development**

One of the purposes of this chapter is to try to clarify that we cannot intend to overcome the difficulties that the Northeast faces by keeping the same development policy followed until now. There is a need to change the emphasis of the objectives, as well as of the strategy used in the rural sector and improvement of the instruments of economic policy for the region.

Another highlighted conception is that, even though recognizing the fundamental role of the industrial sector, the solution for the Northeast's underdevelopment, with reduction of poverty, is in the substantial increase in productivity of land and labor. The new strategy has, as a presumption of economic development, the evolution of agriculture simultaneously with the industrial and services sectors, with an emphasis on the social forces as a basic element of the rural development process.

The causes for underdevelopment of the Northeast are often attributed to several historical, economic, international and political factors, as well as inadequate allocation of natural resources, besides the social and cultural limiting factors. However, it becomes difficult to distinguish between the causal factors and the effects of regional, economic and social backwardness itself.

With the purpose to estimate only a few technical-economic indicators that explain the differences of the income level between the Northeast and the Southeast, I prepared the calculations commented below, based on the methodology used by Hans W. Singer.

According to those estimates, the difference of per capita income between the rural sector in the Southeast and the Northeast results mainly from the greater proportion of young people in the population of the Northeast, lower productivity on the land, and smaller area per worker in this region than in the Southeast. These factors explain 85% of the difference of the per capita income of the population residing in the rural areas of the two regions.

We notice that the Northeast has long way to go in order to overcome the development differences with the Southeast of Brazil. In addition to the aspects of obtaining resources, the great task to be carried out will be with respect to the organization and coordination of the directives and institutions in order to substantially modernize agriculture without creating unemployment and concentration of income.

The change in the age structure of the population only occurs slowly, and very little can be done so that the Northeast equals to the Southeast, especially knowing that also in that region, the population has been in a process of aging for more than two generations. So, it is probable that the differences between the Northeast and the Southeast will continue for a longer period of age stabilization than the Southeast.

The increase in the area per agricultural worker is also a complex and long-term problem, depending on the system of agrarian reform. With the level of existing mechanization,

it no longer seems possible for the past tendencies of more land per work unit to continue without auxiliary mechanical force. Several difficulties lack a solution in this aspect in the Northeast. The accentuated under-employment and unemployment, associated with the demographic growth rate, would be aggravated, with repercussions on the already delicate social pressure prevailing in the countryside and in the cities of the region.

It is well known that the soils in the Northeast are inadequate for the use of tractors and equipment that removes the shallow, easily-eroded fertile layers. This without mentioning the great proportion of small and micro-establishments that do not bear investments of that nature. So, on one side, we have the need to increase the area per agricultural worker to allow for an increase in the income level and living standard of agricultural workers, and on the other hand, the social and technical consequences that mechanization of soil cultivation can provoke. The idea that the recovery of soils can be compensated by the use of chemical fertilizers has been contested because of the high risk that it represents to the Northeast agriculture, marked by crisis and rainfall irregularities. It is true that in some areas and for certain crops, it is completely feasible to use mechanization, besides the livestock-raising regions where the proportion of land per agricultural worker can, and has, increased substantially.

The crucial issue, however, is that the great contingent of population and the near totality of farming, especially subsistence agriculture, are located in the semi-arid and in areas of demographic pressure. That is why the great challenge and the greatest hope of improvement of living

conditions of the population are in the substantial increase of land productivity and in the development of crops adapted to the climatic conditions of the region.

The increase in productivity depends on better seeds, better use of soil, better techniques, and adequate credit and preparation of workers for the required changes. The increase in income of the families of farmers will also depend on the creation of rural industries that allow, together with tertiary activities, to offer complementary options of occupation and economic activity in the rural area for a longer time than the short periods of time for planting and harvesting.

In fact, rural development requires more than research, education and credit. It also requires good transportation, sanitation services and a set of other factors, mainly industrial development within the agricultural zones. This industrial development will provide employment to the excess agricultural population.

In other words, any solution will imply the increase of investments in the countryside. The traditional concentration of investments only on large properties, in livestock-raising and in export crops, whose yields tend to be transferred to the urban centers and other regions of the country, should be avoided. They are difficult problems and cannot be solved rapidly.

As George C. Lodge says, "a high priority must be given to policies that increase the capacity of agricultural communities to organize themselves and develop initiatives, to defeat resistance to changes, and to make progress a reality." (LODGE, 1965). In summary, one of the most remarkable characteristics of development is modernization, without which it is useless to expect real economic progress.

For that reason, it is necessary to help rural producers with the purpose of modernization, because the small and medium farmers do not have autonomous conditions to act. However, assistance-based or paternalistic programs—which would only result in ostracism of labor, source of corruption and discouragement to true constructive work, indispensable to development—should not be conceived. Furthermore, in the case of the Northeast, there are no financial possibilities for non-productive programs of the “donation” or “permanent subsidized solutions” type.

However, It is worth remembering the conclusions of the studies of Prof. Stefan H. Robock when he worked for *Banco do Nordeste* in the capacity of a United Nations expert. When analyzing the problem of regional disparities, the renowned economist states: “a change in philosophy must be encouraged so that the Northeast focuses attention on its absolute gains and on the possibilities of greater growth, instead of worrying exclusively about comparing its performance with that of São Paulo. In addition, the improper income distribution in the Northeast can be a much more serious problem for that area than the income disparities between regions” (ROBOCK, 1964).

In turn, the structural problems in the rural area, especially the ownership of land, the fragility of agricultural cooperatives, and institutional improvement, has not yet been solved satisfactorily.

The task of overcoming regional underdevelopment naturally depends on the solution of some basic problems, which must be considered seriously in the economic policies for the Northeast, besides the mere pretension of income increase and of other general indicators.



So, it becomes necessary to clearly explain within the regional economic policy, the core problems to be tackled. With that orientation, it will be easier to adjust all directives and instruments of performance, avoiding dissemination of the scarce resources in problems without priority for authentic economic development.

In this manner, the objectives for the development of the Northeast for the coming years should be:

- The most accelerated growth of income possible, trying to maximize results in economic, social and spatial terms;
- Modernization of agriculture based on the family unit and on the support to the agricultural enterprise where it becomes necessary;
- Strengthening of the modern industrial sector, reorganization of traditional enterprises and aid to small and medium enterprises, especially agro-industries and rural industries of communities in the interior; and
- Expansion and organization of supporting services to agriculture, without which it can hardly occupy its real economic and social functions in regional development.

Moreover, in a program of authentic development, resources must be allocated with the specific purpose to obtain the maximum welfare for the people who live in conditions of poverty in the rural area and who have been affected by the development model carried out in the

Northeast up to now. This does not mean that agriculture must grow by sacrificing industrialization, but rather matching the growth of the two sectors, because it also wouldn't be fair to exclude the poor social strata in the urban centers from that process.

The idea is to adopt a "model" that produces a harmonious development process. For such, it becomes necessary, with respect to agriculture, to "establish policies, delineating projects, rules and regulations, which give sufficient attention to gradual development and to the absorption of the poor peasants, in a rural economy expansion." This implies the organization of the administrative system and the supporting organizations to the production of the small producers and their needs. On the other hand, it becomes necessary to adopt measures for the viability and motivation of rural communities with that purpose.

In order to develop those guidelines, it will be necessary for a gradual improvement of institutions to occur, for the purpose of a coordinated work in certain areas according to a comprehensive method, which could start with a set of more restricted activities, guided towards the improvement of conditions of the target public and progressively towards the entire regional population.

A program for the rural development cannot be restricted to one sector or to isolated measures. Individual interventions of agrarian reform, technological modernization or rural industrialization, for example, can have an effect far below their possibilities if they are not done together. In practice, it is opportune to remember that the development of agriculture is part of the more comprehensive development

of all rural space that, in turn, is umbilically connected to the entire economic development process.

From that verification, we can conclude that the orientation of actions lacks a new strategy that takes into account the need for a comprehensive focus on priority locations. "All activities require space," says Friedman (1959). For these reasons, the measures proposed here need to be considered in a perspective of interdependence and complementarity so that the economic and social results of those programs can be maximized.

The suggested strategy aims at tackling the problem of rural underdevelopment in a multi-sectoral way with a view to reduce rural migrations to the already congested metropolitan areas. The key to this focus is to create productive opportunities in the rural zones themselves, including the small towns in the interior, which must function as centers of social services and support to production.

The method towards development must be based on the economic growth, modernization and increase in the economic dimension of rural areas, through the mobilization of human resources and a better use of the existing natural resources and infrastructure in the areas of priority action. It is essential to guarantee access of small producers to productive resources and to supporting services necessary to production. The purpose of such actions is to create employment opportunities aimed at improving income distribution and the purchasing power of the rural populace.

The basic guideline of rural development must, therefore, transform and resolve the economic and social problems of communities in the interior in a harmonious

way, according to standards of social justice and in the most equitable manner possible. This focus, as Weitz (1985) defends, is based on a fundamental strategy of three presumptions: agricultural growth as key to rural development; development of agriculture simultaneously with the industrial and services sectors; and an emphasis on the social forces as an element of the rural development process.

In summary, we need a new philosophy, a new economic policy and a renewed political participation and social sensitivity to define the direction for an authentic regional development. Within that focus, it is worth mentioning that the achievement of such goals must be objectively guided in order to obtain growth of production with equity, in the most accelerated way possible and including, in this concept, the reduction of absolute poverty in terms of satisfaction of basic needs. For such purpose, it becomes necessary to expand employment and strengthen the economic base of small farmers, as well as the organization of associations and rural producer cooperatives.

It is up to the government to act through its regional agencies in order to increase efficiency in the use of regional resources, by offering incentives for improvement of technology, mobilization of rural savings for re-investments, and fomentation of business initiatives in agricultural activities in rural areas. For such, it becomes necessary to elaborate global investment programs and credit policies, in order to compensate the inequalities in allocating resources as well as in the very availability of social and economic infrastructure in the Northeast.

In order to achieve such purposes, changes are needed in the objectives, in the public administrative system, and in regards to a re-orientation of the attributions of the entities that work on regional rural development, in addition to the re-organization of the producers themselves.

## Observations and Lessons for the Northeast

Through the years I have evaluated several conclusions about the factors or core ideas that have guided regional and rural development in the developed and underdeveloped countries. The intent was to formulate some postulates that might serve as guidance to the development programs of the Brazilian Northeast. Dr. Stefan Robock reminded me that in using foreign experiences in the Northeast, such experiences need to be considered not only from the viewpoint of positive lessons, but also the viewpoint of limitations (ROBOCK, 1964).

With respect to regional development, the policies adopted can present different results when the sizes of population or the area of the programs are very accentuated. The Northeast, for example, is fifteen times bigger than the region of Tennessee Valley in the United States, three times bigger than France and five times bigger than Italy. There are only a few countries in the world with a population surpassing that of the Northeast. Besides the case of China, no regional development program in the world is close to the size of this region. The differentiation in political power between the levels of government responsible for the program is another vital element. It is said that when *Sudene*

was linked to the Presidency, it got more attention than when linked to a Ministry. The system of decision-making and the levels of autonomy of regional development agencies have strongly contributed to the success or failure of some regional program. There are differences in the economic philosophies focused on decentralized development or on the maximization of national growth rates. In some countries, the reduction of inter-regional disparities is really a priority and receives the approval of public opinion. In other nations, there prevails an indifference of society and dubiety of the government in the allocation of resources for that purpose. Countries with hypertrophied metropolitan centers are usually inducers of decentralization policies and territorial occupation in the interior areas whose economic potentials remain unexplored.

There are economic, political, social and structural factors that intervene with regional development, some of which change over time. In any way, I am convinced that the recommendations made by Prof. Stefan Robock for a development program in the Northeast are in agreement with the conclusions of the studies contained in this book. Here are some of those practical strategies (Robock, 1964).

- Regional development programs must be affirmative;
- Regional development programs must offer benefits to the whole nation as well as region that is the object of governmental action;
- Development programs must bring as a true objective the improvement of welfare of all urban and rural populations;

- The programs must be geared toward internal and external demand, creating regional competitive advantages;
- Regional development programs must include a greater participation of the local private sector, the region and the nation, and foreign investments as well;
- Regional development programs must include greater participation of people and institutions of the region in the planning process, in cooperation with the national level;
- Regional development programs must recognize the influence of the force of foreign institutions;
- The development target programs must utilize promotion initiatives to encourage potential investments;
- Regional development programs must follow the presentation strategy of new viable alternatives when trying to change the existing policies.

Balanced development is the core objective in most of the regional policies studied in this book. In some cases, the goals are to reduce inequalities between the regions of each country. In general, the main focus of the programs with this purpose is of an economic nature, relevant to the generation of income. In the other cases, the plans aim to obtain greater inter-regional justice, so that a greater economic and social development occurs in the country as a whole. In this last case, policies intend the resources for development to be distributed by the special areas of the

program in an inverse proportion to the existing economic welfare levels—to concentrate more expenditures on the poor and to invest less on the rich.

I discovered that in certain regions studied here, income differences are not prioritized, but there is a reduction in the gap of social indicators such as education, health, and other essential services for the population. The valorization of the use of the institutional resources and human potential and the localization of a certain region is another strategy adopted within the purpose of regional development. The regional imbalances have also been faced as a normal stage of the development process. Economic advancement, as many researches show, does not occur simultaneously in the whole space of a country, but at initial points. They are called growth hubs. In the geographic sense, therefore, growth tends to be balanced. These ideas are also shared by the renowned economists Albert Hirschman, François Perroux and Jacques Bonderville. For these reasons, it is axiomatic that the essential needs of the least developed areas deserve to be met by compensatory policies and governmental support.

Several causes contribute to the manifestation of this phenomenon. There is no determinism in regards to it. In some countries, the government has adopted preventive policies that corrected the centralizing forces caused by external and cumulative economies of productive activities. In addition, in my book, *Scandinavia: A model of development, democracy and well-being*, published by Hucitec, São Paulo, I show—in an analysis of fifty years of economic and social progress—that the model of concentrated development does not apply. An important



verification, therefore, is that the political actions are extremely important for the regional development process. If that does not happen, the development disparities may subsist for decades, or even increase.

The desire for social equality, according to the experience of the Scandinavian social democracy, has been reason of much interest in the last few years in the regional development projects. Traditionally, social advances in regional policies are considered as a byproduct of growth. But the most recent thesis is that the notion of social development should be an attribute of development, because the most serious problem of regional imbalances regards the quality of life of the populace and little economic imbalance. So the new proposal, which is gaining meaning (especially in the underdeveloped countries) is to invest, which historically has happened. That is: global economic growth with social development of parts. In the new order, regional policy must be: equality of social development of the whole, with economic growth differentiated from the parts. It is no longer about emphasizing economic equality, but rather social equality. In fact, the growth potential is differentiated among the regions, but the aspirations and needs of the populations are homogenous.

The right thing is to present regional development with a different face in each nation. As Dr. Paul Hoffman, former director of the United Nations Special Fund taught: "One hundred countries, one hundred problems." The task imposed upon the Northeast of Brazil is to build its historical identity and find the path to economic development, with less poverty and more social justice. This is my hope and my belief. May God help us!

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