

HIGHER EDUCATION AND ECONOMIC DEVELOPMENT IN VENEZUELA  
SINCE 1958: AN APPROACH WITH SPECIAL REFERENCE TO  
THE CURRICULUM. A CASE

by

Fernando R. Salazar

UNIVERSITY OF LONDON  
INSTITUTE OF EDUCATION LIBRARY  
NOT TO BE REMOVED FROM LIBRARY

A thesis submitted in partial fulfilment of the  
requirements for the Degree of Doctor of Philosophy  
in Comparative Education

University of London Institute of Education

1984

## ABSTRACT

The thesis is an analysis of Venezuelan Higher Education, from the return of democracy in 1958, to 1980. An attempt is made to explain the role of Venezuelan Higher Education in the training of manpower to assist the process of economic development during this period.

The analysis has shown that the process of democratization of Higher Education lacked adequate educational policies and thus failed to train the professionals and technicians required for national economic development. On the contrary, the expansion resulted in a low number of graduates in those areas considered as priorities in the national development plans. Furthermore, the small number of Higher Education graduates has not been well-prepared to meet current industrial demands.

The failure of Higher Education to fulfil its role in the training of manpower to assist the country's social and economic development is attributed in this research to the inconsistency between the Higher Education curriculum and current demands and national economic planning. The final part of this thesis attempts to provide an alternative solution to the above mentioned problem.

## ACKNOWLEDGEMENTS

I would like to thank in the first place my supervisor Professor Brian Holmes, Head of the Department of Comparative Education at the University of London whose valuable guidance and encouragement made possible the completion of this work. My thanks are due also to Mr. David Coulby, Lecturer at the University of London Institute of Education, who constantly advised me and was always ready to discuss relevant aspects of the thesis. He contributed to a great extent to the development of this research.

I am deeply indebted to Mrs. Sybilla, M.A. (Honours) from the University of London Institute of Education, whose constructive criticisms (both in the intellectual and educational fields) and personality also contributed to the completion of this work.

I would also like to acknowledge the valuable contribution of Mrs. Bernadette Cifuentes, M.Sc. (Sociology) from the University of London Institute of Education who helped me with the typing of the thesis and whose willingness to discuss relevant aspects of Latin American education and constant criticism were very much appreciated.

My thanks also go to the personnel of Senate House Library and the Institute of Education Library. The personnel of several departments of the British Library were also of great help to me and I would like to acknowledge their contribution.

In Venezuela I would like to thank Professor Elis Mercado, Academic Vice-Rector of the University of Carabobo, who constantly supported my work when he was Secretary of the institution. I am very much indebted to Professor Mercado's secretary, Mrs. Mireya Coronel, who was always willing to keep me in touch with Venezuelan assistance. My thanks also go to Professor Luis Diaz, ex-Dean of the Faculty of Education for his support while I was working on my thesis in London. I would like also to thank all the members of the Department of Educational Sciences in the Faculty of Education who allowed me to come to London and finish my studies.

I am deeply grateful for the trust and encouragement of my brother Leopoldo, electrical engineer at the University of Carabobo in Venezuela. With him I have discussed relevant aspects in the training of engineers in Venezuela. I would also like to thank my sister Priscila Margarita.

Finally, my deepest acknowledgements go to two very patient persons in Venezuela. My wife Reina Karella Gallup de Salazar, Master of Sciences from the University of Carabobo in Venezuela and my daughter Mariaeva del Carmen Salazar Gallup, painter and student of Bioanalysis at the University of Carabobo in Venezuela who have long waited and encouraged the completion of this thesis. To both of them I dedicate this work.

Fernando R. Salazar

TABLE OF CONTENTS

	Page
ABSTRACT	2
ACKNOWLEDGEMENTS	3
I. INTRODUCTION	16
i. The Problem	16
ii. Changes and No-Changes	18
iii. Hypothesis	18
iv. Methodology	18
v. Social Change Theory	21
vi. Holmes and the Ogburn's concept of social lag	24
vii. Key Terms	25
viii Framework of the Thesis	26
References	28
 CHAPTER I - SOCIAL AND ECONOMIC DEVELOPMENT IN VENEZUELA	 30
1.1 <u>Introduction</u>	31
1.2 <u>Development and Underdevelopment: An Approach</u>	32
1.2.1 Economic Development	33
1.2.2 An Interdisciplinary Approach to Development	34
1.2.3 Development: A Comprehensive Approach	37
1.3 <u>Social Change</u>	39
1.3.1 External Models of Development	39
1.3.2 Demonstration Effect	40
1.3.3 Underdevelopment and Dependency	42
1.3.4 Conclusion	45

1.4	<u>Social and Economic Development in Venezuela</u>	47
1.4.1	The Colonial Period	47
1.4.1.1	Legal and Political Organisation of Venezuela During the Colonial Period	49
1.4.1.2	Social Organisation	50
1.4.1.3	The Economy	51
1.4.2	The Republican Period	53
1.4.2.1	The Economic Dependence of Venezuela During the Republican Period	56
1.4.2.2	The Civil Wars	57
1.4.2.3	Economic Recovery at the End of the XIX Century	58
1.4.3	The Twentieth Century	60
1.4.3.1	From An Agrarian Economy to An Oil Producing Economy	61
1.4.3.2	Migration	64
1.4.3.3	The End of the Dictatorship	65
1.4.4	The Venezuelan Economy in the Democratic Period	66
1.4.4.1	Possibilities of Autonomous Development in Venezuela	70
1.4.4.2	The 1980's	76
1.4.4.2.a	The Economy	76
1.4.4.2.b	Population	77
1.5	<u>Conclusion</u>	79
	References Chapter I	80
CHAPTER II - CHANGES IN VENEZUELAN HIGHER EDUCATION SINCE 1958		86
2.1	<u>Introduction</u>	87
2.2	<u>Changes in Higher Education</u>	87

	Page	
2.2.1	Changes During the Government Junta	89
2.2.2	1958 University Act	90
2.2.3	The Creation of Institutions of Higher Education	92
2.2.4	Courses and Specialisms	94
2.2.5	Registration Requirements	96
2.2.6	Distribution of Areas of Study by Institutions	97
2.2.7	Higher Education by Region	97
2.2.8	Distribution of Higher Education Institutions by Regions	98
2.2.9	Degrees and Length of Courses by Institutions	99
2.2.9.1	Institutions with Long Courses	99
2.2.9.2	Institutions with Short Courses	100
2.3	<u>Conclusion</u>	101
	References Chapter II	102
CHAPTER III - THE VENEZUELAN HIGHER EDUCATION AND THE ATTITUDES OF STUDENTS IN THE SELECTION OF CAREERS		103
3.1	<u>Introduction</u>	104
3.2	<u>The Venezuelan Higher Education System</u>	105
3.2.1	Entry Requirements	107
3.2.2	System of Studies	107
3.2.3	The Curriculum	108
3.2.4	Degrees	108
3.2.5	Priority Areas for Economic Development	108
3.2.6	Inconsistencies of the System	109
3.3	<u>Free-Choice of Institutions and Course of Studies</u>	110
3.3.1	Preference for Autonomous Universities	113

	Page	
3.3.2	Free-Choice and Low Performance	116
3.4	<u>Failures in Counselling and Selection Procedures</u>	118
3.5	<u>Higher Education Free-Choice Policy and its Consequences</u>	119
3.5.1	Individualistic Choices in the Selection of Careers	119
3.5.2	Concentration of Enrolment in Traditional Courses of Study	126
3.5.3	Inconsistencies in the Distribution of Students by Courses of Study	128
3.5.4	Rejection of Short Technical Courses	129
3.6	<u>Further Problems of the Expansion Policy</u>	132
3.6.1	The National Pre-Registration Policy	132
3.6.2	The Curriculum	134
3.6.3	Lack of Flexibility and Consistency of the System	135
3.6.4	Costs	136
3.7	<u>Conclusion</u>	138
	References Chapter III	139
CHAPTER IV - RELATION BETWEEN HIGHER EDUCATION AND PRECEDING LEVELS OF EDUCATION IN VENEZUELA		141
4.1	<u>Introduction</u>	142
4.2	<u>Preceding Levels of Higher Education</u>	142
4.2.1	The Traditional Primary Education Model	143
4.2.2	Secondary Education	143
4.2.3	The Reformed Model	145
4.2.4	Basic Education	145
4.2.5	Secondary Diversified Education	145
4.3	<u>Disconnection Between Secondary and Higher Education</u>	146



	Page	
4.3.1	The Higher Education Basic Cycle	148
4.3.2	Characteristics of Propedeutic Courses	149
4.3.3	Duration of Courses	150
4.4	<u>Conclusion</u>	151
	References Chapter IV	154
CHAPTER V - HIGHER EDUCATION GRADUATES AND ECONOMIC DEVELOPMENT IN VENEZUELA		156
5.1	<u>Introduction</u>	157
5.2	<u>Period 1960-1966</u>	158
5.2.1	Concentration in Classical Careers	161
5.2.2	Absence of Relevant Educational Policies during the period 1960-1966	167
5.3	<u>Period 1967-1973</u>	171
5.3.1	Expansion and Traditionalism	171
5.3.2	Persistence of Traditionalism	179
5.4	<u>Period 1974-1978</u>	180
5.4.1	New Institutions and Careers	180
5.4.2	Concentration of Graduates in Traditional Careers	184
5.4.3	The Profile of Change	187
5.4.4	Higher Education Graduates During the Period 1974-1978	188
5.4.5	The Outcome of the Expansion	194
5.5	<u>Economic Consequences of the Higher Education Expansion in Venezuela</u>	196
5.5.1	Educational Expansion Versus Economic Production	198
5.6	<u>Conclusion</u>	202
	References Chapter V	204

CHAPTER VI - GENERAL CONCLUSIONS	206
6.1 Venezuelan Resources	207
6.2 The Role of Higher Education in Venezuela	207
6.3 The Expansion of Higher Education in Venezuela	208
6.4 Curricular Diversity and Admission Policies	209
6.5 Students Guidance	210
6.6 Conclusion	211
References Chapter VI	214
CHAPTER VII - POLICY SOLUTION	216
7.1. <u>Introduction</u>	218
7.2. <u>Some alternatives for Higher Education in Venezuela</u>	218
7.2.1. Policy for grants abroad	219
7.2.1.1. Policy for grants and the transfer of technology	219
7.2.1.2. The costs of the grant policy	221
7.2.1.3. Studies abroad and national conscience	222
7.2.2. The Open Univeresity	223
7.2.2.1. The Open University and the training of Professionals in Venezuela	224

7.3.	<u>Foreign Models</u>	225
7.3.1.	The North American model	226
7.3.2.	The Cuban model	228
7.3.2.1.	The students	231
7.3.2.2.	Parents and guardians	232
7.3.2.3.	Political parties	232
7.3.2.4.	The teachers' unions	233
7.3.2.5.	Economic institutions	233
7.4.	<u>Conclusions</u>	235
7.5.	<u>Recommendations</u>	239
7.5.1.	Organisation	239
7.5.1.1.	Admission	240
7.5.1.1.1.	Advantages	241
7.5.1.1.2.	Difficulties	242
7.5.2.	Administration	244
7.5.2.1.	The Directorate of Interinstitutional Relations	245
7.5.2.2.	The Planning Office	246
7.5.2.3.	Advantages	246
7.5.2.4.	Difficulties	248
7.5.3.	The Curriculum	249
7.5.3.1.	Basic studies stage	249
7.5.3.2.	Applied studies stage	250
7.5.3.3.	Advantages	250
7.5.3.4.	Difficulties	252
7.5.4.	Finance	254
7.5.4.1.	Advantages	257
7.5.4.2.	Difficulties	258
	References Chapter VII	263

BIBLIOGRAPHY	264
--------------	-----

## APPENDICES

### Appendix 1

Pre-Conditions for the Development of the Venezuelan Capitalist Structure	270
---	-----

### Appendix 2

Exports Requirements for Manufactured Goods (1975-1980)	295
---	-----

### Appendix 3

Institutions of Higher Education in Venezuela	298
---	-----

### Appendix 4

Courses Offered by the Venezuelan Higher Education System by Area of Study	303
--	-----

### Appendix 5

Degrees Granted by Higher Education Institutions and Duration of Courses of Study	308
---	-----

### Appendix 6

Total Number of Pre-Registrations Distributed by Type of Higher Education Institution, Areas of Knowledge and First Choice Career	323
---	-----

## Appendix 7

Pre-Enrolments Classified by Option and Area of Knowledge and Career in Venezuelan Higher Education Institutions 1979-1980	336
--	-----

## Appendix 8

An Alternative Model of Curriculum Organisation for Venezuelan Secondary Education	342
--	-----

LIST OF TABLES

	Page
CHAPTER I	
Table No.1	71
Table No.2	72
Table No.3	78
CHAPTER III	
Table No.1	112
Table No.2	113
Table No.3	115
Table No. 4	117
Table No.5	121
Table No.6	130
CHAPTER V	
Table A-1	160
Table A-2	162
Table A-3	164
Table A-4	166
Table A-5	169

	Page
Table A-6	Distribution of Venezuelan Higher Education Graduates in Some Careers in Venezuela from 1960 to 1966. 170
Table B-1	Distribution of Graduates by Area of Study and Careers from 1967 to 1973 173
Table B-2	Distribution of Venezuelan Higher Education Graduates in Some Careers between 1967 and 1973. 175
Table B-3	Venezuelan Higher Education Graduates in Some Careers in the Area of Engineering, Architecture and Technology between 1967 and 1973. 176
Table B-4	Comparative Number of Venezuelan Higher Education Graduates in Some Careers in the periods 1960-1966 and 1967-1973. 178
Table C-1	Courses of Study offered by Venezuelan University Colleges until 1976 182
Table C-2	Courses of Study offered by Venezuelan University Technological Institutes until 1976. 183
Table C-3	Higher Education Graduates in Venezuela by Area of Study Years 1974, 1975, 1976, 1977 and 1978. 185
Table C-4	Higher Education Graduates in Venezuela by Area of Study during the periods 1967-1973 and 1974-1978. 186
Table C-5	Distribution of Graduates in Venezuelan Universities by Areas of Study from 1974 to 1978. 189
Table C-6	Distribution of Venezuelan Higher Education Graduates in Some Careers from 1974 to 1978. 190
Table C-7	University Graduates by Area of Study and Specialism in Venezuelan Universities from 1974 to 1978. 191
CHAPTER VI	
Table No.1	Distribution of the Educational Budget Amongst Higher Education Institutions from 1964 to 1980. 215

## INTRODUCTION

1. THE PROBLEM

Since its beginning, in the eighteenth century, Higher Education in Venezuela had been the privilege of a small number of well-to-do people who also exerted great influence in national politics.

At the time of the Cordoba's Reform Movement, in 1918<sup>(1)</sup> there was widespread social unrest in Latin America and action was being taken by local groups leading to the democratization of Higher Education. The Reformist Movements considered Higher Education a Human Right (not the privilege of an elite who used it to pursue higher positions and social prestige) which should be available to all citizens. Argentina, Uruguay, Bolivia and Peru<sup>(2)</sup> gradually achieved this target. In Venezuela, the first attempt to democratize Higher Education took place between 1945 and 1948<sup>(3)</sup> but the rise of a new dictatorship put an end to this attempt. It was only with the return of democracy in 1958<sup>(4)</sup> that the democratization of Higher Education was finally achieved.

Higher Education was expanded - as part of the general process of democratization - in order to provide places to all applicants. This expansion gave rise to an increased enrolment in existing institutions but a concentration of students in traditional careers could be



noticed from the beginning.

In order to satisfy the increased demand for Higher Education the government expanded existing institutions and created new ones. The process of democratization of education was supposed to run parallel to national economic planning leading to a diversification of the economy. It was envisaged that both processes - educational and economic - would lead to a better use of a) natural resources and b) the profits from a highly priced oil and iron exports and would also encourage the creation of new industries. It was thought that because of Venezuela's privileged natural resources as compared to other Latin American<sup>(a)</sup> countries and other countries of the world<sup>(b)</sup> industrialization would expand the job market and provide for the basic needs of its population. It was also assumed that by itself the democratization (expansion) of Higher Education and the creation of new courses of study was enough to a) persuade students to enrol in those courses closely connected with economic development and b) that independent Higher Education institutions would have no trouble in adapting their curricula to national economic needs. However it was soon apparent that while industry was demanding highly qualified professionals and technicians to assist their sophisticated technological expansion Higher Education institutions were producing graduates in subjects unrelated to national economic development and, furthermore, those graduates trained in priority areas of development

lacked in quantity and quality to successfully meet the industry's demand. It was soon realized that the economic targets set by the government could not be achieved.

ii. CHANGES AND NO-CHANGES

In the light of the aforementioned problem we can identify Changes and No-Changes.

Changes

Democratization (expansion) of Higher Education

Diversification of the national economy

No-Changes

People's attitude: the students

The Higher Education Curriculum

iii. HYPOTHESIS

This work assumes that if the expansion of Venezuelan Higher Education is accompanied by a curriculum closely connected to national socio-economic planning Higher Education institutions would be able to successfully train the professionals and technicians required to assist the process of economic development leading to national economic autonomy.

iv. METHODOLOGY

The methodology adopted in this thesis is that of Professor Brian Holmes' Problem Approach in Comparative

Education. This methodology was considered suitable for this work because its comprehensive character allows a) the identification of the problem through an intellectual process which takes into account a variety of data and situations in the social environment under study and b) the identification of relevant variables in the analysis. The above characteristics facilitate the formulation of policies intended to solve the problem and throws light on the likely outcomes of the policy solution.

In his book Problems in Education (1965) Professor Holmes summarizes his methodology in the following way:

"In the face of a perplexing situation possible solutions may immediately spring to mind. Further reflection involves a process of intellectualization out of which the problem to be solved becomes clearly formulated. This stage directs attention to data of a certain kind, namely those which are relevant to the problem. Out of which it emerge refined or new possible solutions which are then put forward as hypotheses to be tested one after the other. Testing involves making logical deductions from the hypothesis within the context of relevant factors and then (ideally) comparing the predicted events with the actual events which are observed to flow a selected course of action. Agreement between predicted and observed events provides verification of a hypothesis, an explanation of the events, and constitutes a successful resolution of the confused situation. It also provides a springboard for further action.

Disagreement between the two types of events (predicted and observed) constitutes a refutation of the hypothesis, but should lead to a re-examination of the degree to which all the stages of reflective thinking have satisfactory completed". (7)

The logical deductions in Professor Holmes' methodology facilitates the analysis of the proposed

alternative solution and the introduction of further elements to reinforce the policy suggested as a solution.

The main stages in Professor Holmes' methodology can be summarized in four main aspects:

1. Problem analysis. Professor Holmes says that the selection of the problem depends very much on the investigator who may reasonably assume, for working purposes, that problems, at least in their generalised form, are common to a number of countries.<sup>(8)</sup> Once the problem has been identified, it must be analysed in general terms and then its specific causes must be revealed in selected contexts.

2. Policy formulation. It should be an alternative solution to solve the problem. This should be an improvement on other proposed solutions which have proved unsuccessful.<sup>(9)</sup>

3. Identification of relevant factors. Holmes suggests the identification of the infrastructure of the Problem<sup>(10)</sup> and the selection of relevant variables. He says that a classification of variables is necessary, and one might consist of the division of variables into ideological factors (eg. norms, attitudes), institutional factors (eg. various organizations and practices) and miscellaneous factors (eg. terrain, natural resources).<sup>(11)</sup> Finally, he says, that a specification of the circumstances under which predictions are to be made involve three operations. First, the contextual

determinants of initial conditions should be identified and analysed in detail. Second, those relevant to the problem under consideration should be selected, thus reducing the total number of variables to manageable proportions. Lastly, in order to make logical deductions each of the factors should be weighted relative to the others. <sup>(12)</sup>

4. Predictions. Relate to the anticipation of results after applying a policy solution. For accurate prediction, he says, then it is most important to establish criteria of success with the utmost care. These criteria may be expressed in terms like social justice, economic growth, individual development, and so on. <sup>(13)</sup>

In the light of Brian Holmes' methodology a theory of social change is proposed next.

#### v. SOCIAL CHANGE THEORY

##### Ogburn's Hypothesis of Cultural Lag

Ogburn assumes that society is an organisation which consists of habits and institutions, among which there is a fair degree of equilibrium, and that society comprises at least two parts, one material and one non-material. The material consists of houses, factories, machines, raw materials, manufactured goods, foodstuffs and other material objects. The non-material consists of customs, beliefs, philosophies, laws, governments. <sup>(14)</sup>

Both parts are inter-related and a certain degree of

balance exists between them.

In the present days constant change on societies induces movement in these two parts; however, what is important is the fact that the degree of balance between them is not perfect. Ogburn says that there is a dynamic equilibrium, and one seeks to catch up the other. When one part changes the other moves as well, but they do it at different rates. Some parts are changing much more rapidly than others, and since there is a correlation and interdependence of parts, a rapid change in one part of the culture requires readjustments, as a result of changes in the other correlated parts of the culture.<sup>'15'</sup> Whereby a lag occurs when two correlated parts of culture change at different rates. In this regard Ogburn says that,

"a cultural lag occurs when one of two parts of culture which are correlated changes before or in greater degree than the other part does, thereby causing less adjustment between the two parts than existed previously."<sup>'16'</sup>

Two variables are identified in the theory: the independent variable and the dependent variable. The former is the innovation, therefore it is the one which changes first; the latter moves later, trying to catch up with the former. As the adjustment is made by the dependent variable it is that part which adapts and it is called 'adaptable culture'.<sup>'17'</sup>

Ogburn maintains that changes are mainly introduced to the material sector of society, giving rise to an adaptive non-material response; however, he does not

rule out the possibility of changes introduced to the non-material sector of society first and then originating an adaptive material response later on. He thinks that more changes and maybe more rapid changes are initially introduced to the material sector given rise thus to a rather slow change in legislation or a very slow change in attitude, which influences behaviour. '16'

The independent variable may be either a technological discovery or an ideology. In this sense, for instance, an innovation introduced in education may be part of the non-material sector of society and may expect an adaptive response in the material sector or even within the non-material sector as well. Ogburn asserts that the extent of applicability of this theory rests on how much interconnection exists among the parts of culture. '17'

In summary, there is a cultural lag when two correlated variables change at a different rate of speed. The thesis is that the various parts of modern culture are not changing at the same rate, some parts are changing much more rapidly than others and that since there is a correlation and interdependence of parts, a rapid change in one part of our culture requires re-adjustments through other changes in the various correlated parts of culture. '20'

When culture begins to change the adaptations do not occur evenly in all parts of the social heritage. The part that is moving at the slowest rate of speed

adjustment. Many problems can, in fact, be regarded as stemming from the circumstantial or environmental pattern in its relationships with the other two, or as a result of changes within it." (24)

Changes are asynchronous, that is, in a society all sectors do not change at the same time or at the same rate of speed, this creates inconsistencies, incompatibilities. Various types of inconsistencies are possible, and hence different kinds of social problems can be identified. In other words, the innovation introduced in one sector of society reflects changes in mental states, institutions or the physical world. Holmes maintains that social problems arise as a consequence of asynchronous change assumed to take place in any one part of any of the three patterns. Finally, Holmes assumes that various aspects of any social system are closely interrelated either logically or functionally (27). Contrary to historicists, sociologists like Marx, Hegel and Mill, who assert that inevitable changes in a given direction occur in society through historical events, Holmes asserts that the possibility to predict social events is limited and contingent. (28)

#### vii. KEY TERMS

##### Curriculum

For the purpose of this work curriculum includes the institutions, (29) objectives, levels, contents, study methods and forms of evaluation (30) organised to achieve education aims leading to the adequate training of



professionals able to usefully contribute to society and to themselves.

#### Areas of Study or Areas of Knowledge

Specialisms grouped together according to the type of knowledge under study.

#### Course, Course of Study or Career

Studies leading to a professional degree in a specialism.

### viii. FRAMEWORK OF THE THESIS

This thesis is divided into seven chapters.

Chapter One discusses a comprehensive theory of development and uses it to explain the Venezuelan development from the colonial period to the present days.

Chapter Two refers to the changes occurred in Venezuelan Higher Education since 1958. The chapter provides a general review of Venezuelan Higher Education.

Chapter Three is an analysis of Venezuelan Higher Education and some of its problems, eg. the curriculum and registration in institutions and careers.

Chapter Four refers to the inconsistency between Higher Education and preceding levels of education and the role of Higher Education in students' guidance regarding their choice of career and permanence in the system.

Chapter Five discusses the consequences of

students' Tendency to concentrate on traditional careers.

Chapter Six is a summary of the contents of the thesis.

Chapter Seven attempts to provide an alternative solution to the problems outlined. The chapter also emphasises the advantages of this solution.

The contents of Chapters One, Two and Part A of Chapter Three provide data regarding the miscellaneous and institutional factors mentioned in Holmes' Problem Approach in Comparative Education.

Part B in Chapter Three and Chapters Four and Five analyse the problem, and Chapter Seven includes the policy solution and predictions (advantages of the policy solution) according to Holmes' methodology.

INTRODUCTION - REFERENCES

1. Ribeiro, Darcy La Universidad Latinoamericana, U.C.V. Ediciones de la Biblioteca, Caracas, Venezuela, 1971, p.85.
2. Ibid., p.86.
3. Salcedo Bastardo, Jose Luis Historia Fundamental de Venezuela, U.C.V., Caracas, Venezuela, 1970, p.693.
4. Ibid., pp.694-695.
5. Uslar Pietri, Arturo Del Estado, la Economia, la Universidad y los Ranchos, BETA C.A., Caracas, Venezuela 1974, p.18.
6. Ibid., p.44.
7. Holmes, Brian Problems in Education. Routledge and Kegan Paul, London, 1965, p.33.
8. Ibid., p.35.
9. Ibid., p.40.
10. Ibid., p.41.
11. Ibid., p.43.
12. Ibid., p.41.
13. Ibid., p.45.
14. Parsons, T., Shils, E., Naegele, K., Pitts, J. Theories of Society. The Free Press of Glencoe, Inc. U.S.A., 1961, p.1270.
15. Ogburn, W.F. and Nimkoff, M.F. A Handbook of Sociology. Routledge and Kegan Paul Ltd., 5th ed., London, 1964, pp.590-595.
16. Ogburn, W.F. On culture and Social Change. University of Chicago Press. Chicago, 1964 p.86.
17. Parsons, T. and others. Op. cit. p.90.
18. Ogburn and Nimkoff. Op. cit. pp.598-599.
19. Ogburn, W.F. Op. cit. p.91.
20. Etzioni, A., Etzioni, E. Social Change: Sources, Patterns and Consequences Basic Books, Inc. Publishers. New York, 1964, p.459.
21. Ogburn, W.F. Op. cit., p.91

22. Etzioni, A., Etzioni, E., Op. cit. p.459.
23. Holmes, Brian. Problems in Education, Op. cit. p.84.
24. Ibidem.
25. Ibidem.
26. Ibidem.
27. Ibid., p.73.
28. Holmes, Brian Comparative Education. Op. cit. p.78.
29. Herrick, Virgil and Ralph Tyler, Toward Improved Curriculum Theory. The University of Chicago Press. Chicago, 1950, p.62.
30. Ibid. pp.60-61.

CHAPTER I

SOCIAL AND ECONOMIC DEVELOPMENT IN VENEZUELA

## CHAPTER I

SOCIAL AND ECONOMIC DEVELOPMENT IN VENEZUELAPART A1.1. INTRODUCTION

As it has been mentioned in the Introduction to the thesis, this study focuses on Venezuelan Higher Education from 1958 to 1980 and it aims to establish the relationship between the training of professionals at this level of education and the requirements for manpower leading to national economic development.

Chapter 1 attempts an analysis of Venezuelan economic development from the colonial period to the beginning of the 1980's and in the light of this analysis to explain present economic demands.

The chapter is divided into two parts. Part A discusses the concept of development and a theory which attempts to explain the process of development as it occurred in Latin American in general. In this chapter the theory is used to explain the Venezuelan development in particular. Part B analyses Venezuelan socio-economic development until the 1980's and explores the context in which Higher Education should play an important role in the training of manpower required to assist the process of national economic development.

## 1.2 DEVELOPMENT AND UNDERDEVELOPMENT: An Approach

Development economics is one of the newer branches of economics which is concerned with the problems of under-development and with policy prescriptions employed or advocated to overcome it. Viewed in this light, it is essentially a branch of political economy in which political, social and institutional factors cannot be neglected. While the field is comparatively new, perhaps paradoxically, it is also one of the oldest enquiries of systematic economic thought.<sup>11</sup> Interest in economic development and growth has been so contagious that since World War II, the literature on this subject has reached huge proportions. In the period since the end of the War, 'development' has become a slogan of national aspirations and efforts. The aspiration to change and institutional means for achieving it, are central to present day conceptions and ideas of development. Policy for development is a major preoccupation of the policy makers of the poor countries. Research on development and the channeling of resources like capital equipment and skilled personnel have become the functions of specially created agencies. The economists' main aim is to find ways of understanding the specific problems of economic underdevelopment. They may also discern possibilities for improving the allocation of resources.

### 1.2.1. Economic Development

Meier says that,

"economic development is not equivalent to the total development of a society: it is only part - or one dimension of general development. We usually focus on the nation-state as the unit of development, but 'national development' is a term which encompasses - at a maximum - social and political development, as well as economic development, in the building of national identity. Depending on the orientation of one's discipline, it is also possible to consider other types - for example, legal or administrative development. The interrelations among these various types of development are extremely important. A major question implicit in our entire subject is how sociocultural and political development contribute to economic development, and are in turn determined by it. It would be apparent that much more interdisciplinary study is needed to determine how economic and non-economic forces interact." (2)

Professor Penrose observed in a book review several years ago that,

"It is, of course, common for economists to note the importance of (non-economic) considerations, but usually only to ignore them" (3)

On the other hand, the other social sciences are relevant to the extent that they illuminate the fully social nature of economic development, a quality that cannot be claimed automatically for the contributions of sociologists and political scientists.

It is useful to note a distinction between economic growth and development. Development has been defined rather formally in terms of



"Changes in the value of economic parameters in given institutional conditions ... (and) changes in the value of economic parameters (which) are accompanied or even preceded by institutional change." (4)

A supplementary formulation is that,

"growth is a quantitative process, involving principally the extension of an already established structure of production, whereas development suggests qualitative changes, the creation of new economic and non-economic structures." (5)

The two statements draw attention to the kind of change with which we are concerned, and specially the encompassing nature of development with respect to the economic and the non-economic - a continuing distinction symptomatic of the interdisciplinary problem.

### 1.2.2 An Interdisciplinary Approach to Development

At two extremes of theoretical and empirical expression, economics has failed to confront the density of development as a social process and the range of its historical possibilities. As the author of an authoritative theoretical survey concluded:

"The variety of growth of models is very great and with ingenuity can evidently be almost indefinitely enlarged. This is largely due to the rather extreme level of abstraction employed and the very artificial nature of the problems considered." (6)

The inadequacy of the method of abstracting and manipulating a few variables in pristine isolation is matched by the technical and conceptual strains on growth

statistics and the uses to which they are put precise uses of growth rates are entirely inadmissible, whether for comparing different countries or short periods of the same country. (7)

Considering other aspects of economy theory, and social science theories in general, have been found wanting in face of the challenge to their competence presented by contemporary underdevelopment, that is to say, by situations which represent very different historical conditions from those with which Western social science has been permanently concerned and by which it has been shaped. Some of the central theoretical problems, as distinct from merely ethno-centric and chauvinist prejudices, stem from traditions of model building which centres on closed systems employing self-regulating mechanisms, such as market forces, to maintain equilibrium. Bendix, in his book Nation-Building and Citizenship, 1969, (8) has offered a poignant comment on the centrality of equilibrium as an organising concept:

"... the dominant experience of our generation appears to be that the unanticipated repercussions of European expansion were effective enough to undermine or destroy social frameworks (of traditional societies) but often not nearly effective enough to provide structural alternatives. To future historians it may appear as a touching if minor irony that an organic conception of society based on the idea of equilibrium is one of the major intellectual perspectives of our time."

In the 1950's Gunnar Myrdal pointed to some of the ways in which the prevailing assumptions of economic

theory precluded an adequate understanding of underdevelopment, and hence effective action to overcome it. The equilibrium postulate, he argued, is irrelevant to the imperatives of rapid development<sup>(9)</sup> while market forces, rather than having a positive distributive and stimulating effect, in fact sustain and even intensify existing unequal relationships. Myrdal's notion of cumulative and circular cautions represents an early attempt to characterize under-development in dynamic and relational terms, as opposed to viewing it merely as a static condition of backwardness.

"What is wrong with the stable equilibrium assumption as applied to social reality is the very idea that a social process follows a direction - though it might move towards it in a circuitous way - towards a position which in some sense or other can be described as a state of equilibrium between forces. Behind this idea is another still more basic assumption, namely that a change will regularly call forth a reaction in the system in the form of changes which on the whole go in the opposite direction to the first change."<sup>(10)</sup>

Myrdal says that in the normal case there is no such tendency towards automatic self-stabilization in the social system.

"The system is by itself not moving towards any sort of balance between forces, but is constantly on the move away from such a situation. In the normal case a change does not call forth counter-vailing changes but, instead, supporting changes, which move the system in the same direction as the first change but much further. Because of such circular causation of social process tends to become cumulative and often to gather speed at an accelerating rate."<sup>(11)</sup>

Underdevelopment is simply defined negatively in relation to development, a form of conceptualization by

default expressed in such invidious terms as backwardness, stagnation and traditions (or traditionalism). In conventional usage development means the process of developing while underdevelopment is conceived only in a static fashion as a state - underdeveloping is not considered as a possibility. This precludes any understanding of underdevelopment as a process, as a phenomenon which has itself emerged historically.

Contemporary underdevelopment assumes a conception of, and an aspiration to development which in turn presupposes a world in which the confrontations of different types of societies, raises new possibilities of social evolution. Myrdal and Gerschenkron<sup>'12'</sup> have drawn attention to the relational nature of underdevelopment. However, neither of these writers investigated the historical context of relationships between the developed countries and those of the Third World.<sup>'13'</sup>

### 1.2.3 Development: A Comprehensive Approach

A better understanding about the development and underdevelopment is offered by Fernando Henrique Cardoso and Enzo Faletto in the book Dependency and Development in Latin America, 1979.

For Cardoso and Faletto<sup>'14'</sup> development is itself a social process. They reject the conception according to which, Latin American societies belong to a structural type generally called "traditional",<sup>'15'</sup> which

is giving to another type of society called "modern"; according to this conception it would appear that before becoming modern a society enters an intermediate, hybrid pattern called "structural dualism",<sup>(16)</sup> and that this pattern is characteristic of "developing countries". Cardoso and Faletto say that,

"This scheme is a reincarnation of the classical community-society dicotomy formulated by Tonnies. It is open to criticism from two points of view. On the one hand, the concepts of "traditional" and "modern" are neither broad enough to cover all existing social situations nor specific enough to distinguish the structures that define the ways of life of different societies. On the other hand, these concepts do not show how the different economic stages (for example, underdevelopment or development through exports or through import substitution, etc.) are linked to the various types of social structure that are attributed to "traditional" and "modern" societies."<sup>(17)</sup>

With this kind of characterization they say, it continues to be impossible to explain the transitions from one type of society to another. In fact, change in social structures far from being only a cumulative process of incorporating new "variables", involves a series of relations among social groups, forces, and classes, through which some of them try to impose their domination over society.<sup>(18)</sup>

In their criticism about the conception of development, understood in economic terms, Cardoso and Faletto say:

"In purely economic terms, the degree of development of a production sector can be analysed through a group of variables - the relation between the number of workers and capital,

industrial output per added capital, and so forth - that reflects the process of structural diversification of the economy. Using this analysis as a base, the structure of society is deduced principally from the pattern of income distribution and the structure of employment. However, this strictly economic analysis can only be related to political and social development by looking beyond the social structure to its process of formation and to the social forces exerting pressure to maintain or change it." (17)

Analyses that relate development to modern society and underdevelopment to traditional society are too simple. It may happen that a society modernizes its patterns of consumption, education, and so forth without a corresponding advance in development, for instance, if by development we understand less dependency and self-sustained growth based on the local capital accumulation and on the dynamism of the industrial sector.

### 1.3 SOCIAL CHANGE

#### 1.3.1 External Models of Development

Some authors, such as W.W. Rostow<sup>(20)</sup>, W. Moore<sup>(21)</sup> and Clark Kerr<sup>(22)</sup>, in their theories of modernization assume that the course taken by political, social, and economic systems of Western Europe and the U.S.A. foretells the future for the underdeveloped countries. The development process in this sense would consist in completing an even reproducing the various stages that characterize the social transformation of these countries; consequently, the historical variations, the specificities of each situation of underdevelopment,

have little value for this type of approach. The necessity for every society to pass through the same stages of development has been rightly rejected by Cardoso and Faletto, and they say that,

"It would be **naïve** to assume that Latin America is in the **nineteenth** century while the developed countries are in the **twentieth**" (23)

They add,

"More frequently the underdeveloped countries are described as being 'backward' in certain aspects of their structures although not in others".

As an example they say,

"Thus, labour unions in countries like Brazil and Argentina became national and influenced decisions on wage levels during a phase that was abnormal by comparison with what had occurred in the countries of 'early development'" (24)

Accelerated urbanization in Latin America, which has come before industrialization, has helped to spread expectations and forms of political behaviour that encourage greater participation of the masses in the power game before there is autonomous economic growth based on a domestic market. Such popular demands to share in the decisions affecting consumption are considered a precaucious doctrine in the development process of Latin America. (25)

### 1.3.2 Demonstration Effect

It has been suggested that, because this level of participation is supposedly similar of that of the

central countries, it might serve as a kind of bridge tending to approximate the social patterns and value orientations of the underdeveloped society to those of the developed, modernizing them, even if not assuring similar levels of economic growth. Cardoso and Faletto say that this is what, broadly speaking, has come to be called the 'demonstration effect', it is to say, the modernization of consumption patterns, implying some degree of income improvement of urban population. (26)

"In an economic analysis, the 'demonstration effect' assumes that the economy will be modernized through consumption and that ultimately modernization alters the production system in such a way that it may deviate from the 'stages' of industrialization characteristic of advanced countries. But since investments depend to a large extent on domestic savings, the modernizing pressure of consumption can act also as a break on development: it may stimulate the importation of consumer goods orienting the utilization of savings to the payment of external producers, as well as induce investment in sectors that are not basic to the economy." (27)

Their kind of approach which bases the development under the conception of demonstration effect amounts to say that the dynamism of underdeveloped societies derives from external factors and that the structural particularities in underdeveloped countries produce forms of development that are deviant cases when compared with classic stages of growth.

In this approach the 'demonstration effect' and any other exogenous variables as the modernizing factor are incorporated into the analysis as a subordinate explanatory element, rather than stressing the



consequences of them in the functioning of the economic system. It is more important to describe the relations among social groups at the national level, which of course depend on linkages between the economic system and the international political blocs.

### 1.3.3 Underdevelopment and Dependency

The concept of underdevelopment, as it is usually employed, refers to a type of economic system with a predominant primary sector, a high concentration of income, little diversification in its production system, and above all, an external market for outweighing the internal. Cardoso and Faletto consider that understanding the historicity of the underdevelopment situation requires more than just an indication of the structural characteristics of underdeveloped economies. They say that it is necessary to analyse how the underdeveloped economies were linked historically to the world market and how international social groups defined the outward-directed relations implicit in underdevelopment. Dependence they say, on the socio-political level also began historically with the expansion of the economies of the early capitalist countries. In extreme cases of dependence, decision affecting the production of consumption of a given economy are taken in terms of the growth and interests of the developed countries.

The idea of dependence in this work, refers to the conditions under which alone the economic and

political system can exist and function in its connections with the world productive structure. The idea of underdevelopment refers to the degree of diversification of the production system without emphasizing the patterns of control of decisions on production and consumption, whether internal or external, the ideas of 'center' and 'periphery' stress the functions that underdeveloped economies perform in the world market, but overlook the socio-political factors involved in the situation of dependence.

National underdevelopment is a situation of objective economic subordination to outside nations and enterprises and, at the same time, of partial political attempts to cope with 'national interests' through the state and social movements that try to preserve political autonomy. Ideological components play some role in the perception of what national interest means, '28' as well as in the rationalizations about the possibility of the existence of nation-states that have submitted to foreign interests and pressures. One of the aims of comprehensive analysis of the national development process, considering the development as "the result from the interactions and struggles of social groups and classes that have specific ways of relating to each other" '29', is to determine the links between social groups that in their behavior actually tie together the economic and political spheres. Insofar as, by definition, links of economic dependency imply a relationship between local and external classes,

states, and enterprises, the analyses of local social and political groups must include the connections with international partners. Cardoso and Faletto say,

"Some local classes or groups sustain dependency ties, enforcing foreign economic and political interests. Others are opposed to the maintenance of a given pattern of dependency. Dependence thus finds not only internal 'expression', but also its true character as implying a situation that structurally entails a link with the outside in such a way that what happens 'internally' in a dependent society cannot be fully explained without taking into consideration the links that internal social groups have with external ones. Dependence should no longer be considered an 'external variable'; its analysis should be based on the relations between the different social classes within the dependent nations themselves."  
(30)

It is clear, according to Cardoso and Faletto, that from the beginning the capitalist process implied an unequal relation between the central and the peripheral economies. Many underdeveloped economies were incorporated into the capitalist system as colonies and later as national states, and they have stayed in the capitalist system throughout their history; however, they remain peripheral economies with particular historical paths when compared with central capitalist economies. According to Cardoso and Faletto,

"Capitalism should be studied in the hope, not of finding how its history may repeat at a later date in the peripheral countries, but of learning how the relations between peripheral and central was produced." (31)

They add that, even though it is possible to distinguish the periods of mercantile, industrial and

financial capitalism in the economic history of the Latin American countries what is important is to make clear what the relation of dependence meant in each of these phases.

Finally, Cardoso and Faletto say that,

"(The Latin American countries) belong to the same international capitalistic system as central economies do. Consequently the history of central capitalism is, at the same time, the history of peripheral capitalism. But specific links between dependent and central economies could have been different in each of the above periods (mercantile, industrial and financial capitalism). The same can be argued vis-a-vis analyses about competitive or monopolistic trends in the development of capitalism and its effects on peripheral economies."

#### 1.3.4 Conclusion

In resume, and following the Cardoso and Faletto theory of development, the analysis of underdevelopment must focus on the changes societies have undergone and particularly the nature of their integration with externally generated social forces. The differential forms of underdevelopment or a continuing process require sensitive analysis which in turn bears on the consideration of development possibilities. The interaction between internal forces and the internal social dynamics of societies is complex and variable, and clearly is itself subject to historical change. All this is to say that the analysis of underdevelopment is inseparable from that of development, and demands the same intensity of theoretical attention which focus on the nature and type of dynamic underdevelopment biases.

Considering that the author of this work is concerned about the relation between Higher in Education and Economic Development in Venezuela, in the next chapter an attempt is going to be made to analyse the development in this country, considering that the analysis of Venezuelan underdevelopment must take account of basic continuities and changes in the periods of Spanish mercantilist colonial domination, British imperialism of free trade and of current technological and financial superiority possessed by inter-national corporations. This analysis will take place following the Cardoso and Faletto historical approach for the analysis of the development in the Latin American countries already described in this chapter, under the believe that such an approach allows an understanding of the perspective in which Higher Education can take place in the Venezuelan economic development in the present days.

## PART B

### 1.4. SOCIAL AND ECONOMIC DEVELOPMENT IN VENEZUELA

#### 1.4.1 The Colonial Period

The Spaniards were attracted to the Latin American continent at the end of the XV century mainly in the hope of finding precious metals in order to strengthen the power of the Spanish Crown. The first attempts to conquer Venezuela were not straight forward. This was partly because the natural topography of the country made access difficult<sup>'32'</sup> and also because the indigenous population did not constitute a single organised social unit but were scattered in groups belonging to many different tribes<sup>'33'</sup> and so their conquest was more difficult. In the meantime the Spaniards who were seeking to start a profitable activity connected with the extraction of precious metals found an island in the north with a reasonable supply of pearls<sup>'34'</sup> and so they were able to make some profit.<sup>'35'</sup> The activity, however, was not profitable enough to make this group important to the Spanish Crown. In 1528 the Welsers also tried unsuccessfully to find gold in the Venezuelan mainland.<sup>'36'</sup> Meanwhile other parts of the continent, e.g. Mexico and Peru proved to have large deposits of precious metals and economic activities in mining began long before those in Venezuela and thus attracted early Spanish settlement and the interest of the Spanish king.

Inspite of the fact that attempts to gain wealth through mining were not successful, hopes of doing so continued to be an important incentive to conquer Venezuela in the XVI century. The new settlers who did not manage to satisfy their economic expectations through mining turned to agriculture. This activity not only guaranteed their self-sufficiency in foodstuff but was later the basis for a growing and profitable economic activity. Activities in agriculture which were self-sufficient were mainly carried out in limited social units consisting of Spanish settlers and indigenous population; but later these activities expanded (albeit very slowly until the XVII century) and links with different social units created an internal market. Eventually foodstuff was exported to other parts of the continent and to England and Holland.

Agriculture began with the encomienda, a labour system by which land was allocated to the Spanish settlers together with a number of indigenous workers over whom the landowner had the right of property. However, although the new settlers were allocated large tracts of land the distribution of workers per land unit was not sufficient to ensure a large production. The Spanish therefore resorted to slavery. Although the encomienda system was abolished in 1687<sup>37</sup> it continued illegally until the XVIII century. Eventually, a division of labour emerged in which the indigenous population and the mestizos worked in the self-subsistence economy and the black slaves in

the export economy. However, slave proved costly when compared to the indigenous population and the number of slaves a settler could have depended very much on the possibility of exporting the goods produced. During the XVI and XVII centuries exports of tropical produce to European countries developed very slowly and so the numbers of slaves did not increase significantly.

#### 1.4.1.1 Legal and Political Organisation of Venezuela During the Colonial Period

The geography of Venezuela and the social organisation of the indigenous population had a significant influence on the political and social organisation of the Spanish settlers. Consequently the Spaniards organised the population in isolated social units or provinces politically linked to different centres, e.g. some provinces belonged to the Vice-kingdom of Nueva Granada while others were centred on the Court of Appeal of Santo Domingo. But none had direct contact with the metropolis and in this sense they could be said to be marginal colonies.<sup>38</sup> However, the internal political organisation of these provinces allowed the population to elect their representatives to the Cabildos, a form of local government which eventually became the centre of power for the dominant class.<sup>39</sup> Therefore, at a local level the power of the Crown envoys was matched to the growing power of the Cabildos which chiefly represented the interests of the privileged local classes. The



interests of the new settlers always prevailed partly because of their common economic interests which acted as a unifying element and partly because of their isolation from the metropolis which was thereby prevented from exercising a stricter control over its subjects.

#### 1.4.1.2 Social Organisation

The social divisions of early Venezuelan society are closely related to the differentiation of economic activities according to sector. On this basis we can distinguish:

The Encomenderos: These were the group of Spanish settlers who received land from the Spanish king together with a group of indigenous workers who were employed in the self-sufficiency agricultural economy or in export-oriented activities.

The Labourers: These were mainly the indigenous population who were forced to work - at least until 1687 - without pay under the system of encomienda. This group was later enlarged by a group of white settlers<sup>(40)</sup> who, lacked the ownership of labour and therefore had to work the land themselves.<sup>(41)</sup> The black slaves joined the group as the market economy developed.

The market economy gathered momentum when mining in other parts of the Latin American continent began to decline and agricultural produce such as cacao and coffee and sugar cane became important export products for the

European market. This opened up possibilities to different social groups which were established in Venezuela and engaged in export production.

There was another group consisting of royal envoys and priests who acted as nexus between Venezuela and the Spanish Crown.

#### 1.4.1.3 The Economy

At the end of the XVII century the Venezuelan agricultural export economy had reached high levels of production in those goods which had a strong appeal for the European market, particularly cacao. During this period, however, the Spanish Crown was still able to impose a system of taxes and an economic monopoly which greatly restricted trade between the direct producers and the European merchants. The Spanish control over the Venezuelan economy allowed Spain not only to get all the produce and to act as an intermediary between the producers and the rest of Europe but also to fix prices and taxes at a high level. Spain also forced the Venezuelans to carry their produce in Spanish vessels.<sup>(42)</sup> Venezuela was also forced to import much needed goods from Spain at monopoly prices and was deprived of any item which Spain did not produce.<sup>(43)</sup>

This state of affairs greatly influenced the producers who invested large amounts of money in the buying and maintenance of slave labour in order to

increase production. The restrictive character of the Spanish economic policy towards its colonies gave rise to a growing black market economy particularly with Holland, England and France.<sup>'44'</sup> This option was taken mainly because of the refusal of Spain to allow free trade between Venezuela and European countries or even between Venezuela and other colonies. On 25th September 1728 the king of Spain seeking to end the black market allowed the Compania Guipuzcoana to trade with Venezuela and other European countries. Both objectives i.e. trade and the abolition of the black market were successfully achieved by this company. A further un-welcome effect for the Spanish Crown was that the native producers (criollos<sup>'45'</sup> and mantuanos<sup>'46'</sup>) united against the economic policy of Spain. At the end of the XVIII century, however, the creoles had managed to acquire greater power by creating new political and legal institutions with greater local representation such as: the Royal Ministry of Finance, the Royal Court of Appeal in Caracas, the Royal Consulate and the Capitania General in Venezuela. These institutions legitimised their positions as the dominant class and as the only group besides the Spaniards allowed to participate in them.<sup>'47'</sup> The ambition of the creoles to achieve the right to and control of free trade was hampered by the Spanish representatives of the Crown who controlled the administration of commerce as well as the politics of the country.<sup>'48'</sup>

This situation finally led to the emancipation

movement of 19 April 1810. This movement, however, was divided between those who wanted a violent revolution and those who wanted a moderate process. The success achieved in 1810 was followed by a series of internal social conflicts which resulted in a stagnation of economic activities. Although Independence was a common aim it did not mean that the native population shared common economic interests. The white creoles were the dominant class and had the economic power but were unable to engage in free trade. The pardos who worked the land and as craftsmen for the internal market were the largest group and saw the creoles as an obstacle to their further development. This was partly because the pardos were not considered by the whites nor by the law as of "clean blood" (49) and for this reason were not allowed to participate in any of the fundamental economic or social activities as equal partners to the whites. In the export activities they participated in the same conditions as the indigenous population and the slaves. Not surprisingly they were eagerly seeking to achieve the social, economic and political privileges the creoles already enjoyed. The slaves on the other hand, were mainly seeking to achieve their freedom and slave revolts towards this end had already occurred in 1795, 1797 and 1799. (50)

#### 1.4.2 Republican Period

In 1810, at the time of the Independence, the creoles were still not clear about which economic policy

was the most adequate to the achievement of their economic aims. A group of creoles, the realistas, favoured the idea of remaining loyal to the Spanish king and another group were seeking complete autonomy. The former wanted to continue the trade with Spain but with a local administrative control and the latter wanted to get rid of any link with Spain and develop a direct commercial relationship with England. This difference of opinion resulted in a series of armed confrontations between the two groups who were able to form a contingent of armed forces by recruiting black slaves and pardos who were promised freedom and land in exchange for their support. Black slaves and pardos therefore participated in these conflicts only with the aim of achieving freedom and economic and social power. These divisions between the whites creoles allowed the Spanish to join the realistas with the intent of reclaiming the colony for Spain. <sup>(1)</sup>

In 1813 the creoles who favoured total independence from Spain adopted a policy of relentless war against the Spaniards. This drastic resolution and the promise to distribute land and grant freedom to the slaves which attracted the majority of the population to the patriota cause finally led to the victory of the patriotas and to the independence of Venezuela in 1821.

As Cardoso and Faletto <sup>(2)</sup> point out, the break of the link with Spain was not enough to give the creole group a dominant position. They first had to face and solve the internal social problems and take decisions

about their links with the outside world.

In 1815 the defeat of Napoleon in Europe restored absolutism to Spain under the reign of Fernando VII. Spain attempted to reconquer her former Latin American colonies. The non-white Venezuelan population was promised a redistribution of land as a compensation for fighting against the Spanish. After the war was over and victory over Spain achieved the military leaders were forced to expropriate land in order to comply with the promises made to the soldiers when the war started.<sup>(53)</sup> But this policy of expropriation of land for the benefit of the oppressed groups had to be modified after the breaking of the colonial tie turned into a crisis in 1821.

Concentration of land into a few hands again became the policy of the dominant group and the initial attempts to redistribute land among ex-soldiers were abandoned. Measures intended to strengthen the economy (such as the abolition of taxes) were not enough. Some of these measures were intended to change the tax system e.g. the abolition of taxes in order to strengthen the local economy. Others were intended to redistribute wealth and encourage the accumulation of capital such as credit for producers, the first attempts to institute a banking system or the attempt to maintain the slave system so as to increase the numbers of workers which had been greatly diminished through war fatalities.

#### 1.4.2.1 The Economic Dependence of Venezuela During the Republican Period

The lack of an economic structure, the emergence of other areas of competition and the effects of the crisis of the middle of the XIX century greatly affected the markets as far as Venezuelan production concurred. In breaking the colonial link the dominant class had also sought to achieve power and leadership in the country. The creoles who were faced on the one hand with the metropolis, and on the other with the growing pressure from the oppressed local groups, sought the support of some European countries, particularly England. However the absence of a production structure, competitive markets, the need to recoup the expense of war together with the limitations of the government's economic resources made Venezuela completely dependent on external credit, particularly British credit which eventually came to control all Venezuelan financial activities and their export trade just as Spain had done years before. From this moment in the Venezuelan history the country became dependent not only on England but on all other European countries which were in a state of advanced capitalist development. As Cardoso and Faletto point out that:

"If there is a dependent economy, then there is a dominant power which affects the orientation and activities of groups of people who in a market economy are known as producers and consumers. In extreme cases this situation gives priority to the interests of developed economies when decisions are being made which affect the production or consumption of an underdeveloped economy" (54)

Breaking the colonial tie with Spain did not result in a structural change in Venezuela's main source of wealth, i.e. agricultural production. It only increased the export market because of the greater consumer capacity of industrialised countries from which Venezuela also imported goods. As Cardoso and Faletto point out this situation connected agricultural production to the problems confronting the world capitalist economy, one of which was the problem of overproduction. The overproduction crises of 1825, 1837 and 1848 in England, France and Germany resulted in lower export prices for national produce and therefore made it more difficult to import.<sup>(55)</sup> Higher unemployment showed the influence of external factors on the country's internal economy.

#### 1.4.2.2 The Civil Wars

After the breaking of the Spanish colonial tie the dominant Venezuelan class tried to establish the legal and political bases of the Republic. The first attempt was the creation of the Great Colombia but it failed.<sup>(56)</sup> The emergence of autonomous movements in all the provinces and confrontations between the centrists and the federalists were some of the problems that the government had to face when trying to impose an integrated legal-political structure on a country of heterogenous social and economic characteristics.

Until the middle of the XIX century efforts to



give the country a unifying social and economic structure were debated among those who wanted to impose foreign organisational models and ideologies. Internal conflicts were also common particularly between producers and distributors and between producers and creditors. These conflicts culminated in the Federal War.

#### 1.4.2.3 Economic Recovery at the End of the XIX Century

The problems of overproduction in European countries on the one hand, and the civil wars and the liberation of slaves on the other, resulted in an economic national crisis. Confronted with this crisis the conservative oligarchy concentrated on three issues: (i) The first priority was the restructuring of the Ministry of Public Finances and the payment of the external debt in order to guarantee external credit; (ii) the strengthening of the relationship with areas of capitalist development in order to encourage economic recovery and (iii) the strengthening of internal control mechanisms in order to maintain social order. However none of these measures were successful in boosting economic activity.<sup>67</sup> This situation only began to improve in the 1860's when confrontations among the dominant groups came to an end, oppressed groups were controlled and the price of coffee reached its highest in the international market. The high priced coffee produced a slow but steady recovery of the export economy. The cultivation of cacao was begun again and cattle breeding showed signs of recovering.<sup>68</sup>

Within this context a National Project which satisfied the interests of the dominant class emerged and efforts to implement it were made. This project was intended to strengthen the economic and social power bases of the dominant class through the modernisation of agriculture. The State was conceived of as a dynamic centre with responsibility in creating favourable conditions for economic development. Attempts to implement it were made. It must be remembered that the possibility of development in any area was closely connected with its relationships to capitalist development.<sup>(\*)</sup> A credit policy based on foreign loans was fostered and European immigration was encouraged so as to improve the technological level of the agrarian sector by getting skilled European technicians.<sup>(\*\*)</sup> As mentioned earlier, the feasibility of implementing the National Project was closely connected with the relationship which Venezuela could have with capitalist countries since it was thought that the latter were the key factor in helping Venezuela to overcome its economic backwardness. Capitalist countries represented a market for Venezuelan agricultural products and their expanding capitalist development<sup>(\*\*\*)</sup> was a source of capital, technology and population.

In the 1960's this relationship was strengthened. Export trade, since the economic recovery,

---

\* For an account of the development of a capitalist structure in Venezuela see Appendix No.1.

was controlled by foreign commercial capital and this greatly influenced the internal process of capital accumulation. Characteristic of this period were the increase in foreign loans negotiated by the State and in foreign investments. These investments were due, largely, to the process of capitalist expansion going on in the more developed European countries and in the United States where advanced technology had generated an overflow of capital available for investment. It was invested in Venezuela, e.g. in mining and railroads.<sup>61</sup>

#### 1.4.3 The Twentieth Century

At the beginning of the century the Venezuelan society comprised: (i) a group of landowners who controlled agriculture and participated actively in the external market; (ii) an urban group engaged in commerce and import of goods required for the internal market; (iii) the labourers who worked in the private-owned haciendas and the urban workers engaged in craftsmanship and other minor urban jobs.

Until the 20th century the government had been led by caudillos<sup>62</sup> who had constantly been engaged in internal confrontations intended to impose a federalist or a centralist form of government.<sup>63</sup> The economy had begun to expand following an increase in the production and price of coffee and cacao. However, the government was also facing a large external debt negotiated during the presidential period of Guzman Blanco<sup>64</sup> at the time

of the world's over-production.

In 1908 the joint interests of the U.S.A. and the caraguena oligarchy brought to power the dictatorship of J.V. Gomez.<sup>65</sup> This dictatorship, assisted by a modernised army and police force, put an end to the traditional Venezuelan oligarchies and facilitated the participation of Venezuela in the world capitalist system as an oil producing country. By the end of the 20th century the leading capitalist countries had substituted their light industry by heavy industry<sup>66</sup> and oil became an important source of energy. Meanwhile, important oil fields had been found in the eastern part of Venezuela.<sup>67</sup> Other metals like gold and silver had also been found in the middle of the 19th century.<sup>68</sup> The First World War increased the oil price and at the beginning of the century the oil price had placed Venezuela in the same position it had once had as the second most important producer and exporter of coffee.<sup>69</sup>

#### 1.4.3.1 From and Agrarian Economy to an Oil Producing Economy

Until 1925 agriculture was the most important economic sector of the country, particularly because of the production of coffee and cacao which produced the highest revenue in the international market. This also meant that the landowners and merchants remained as the most powerful social groups in the country. But from 1928 oil began to substitute coffee and cacao as the main

Venezuelan export. This was due to two factors: 1) there was a decline in the value of the dollar which decreased the profit of the cacao and coffee exports even when the level of production was maintained, and 2) the emergence of competitive markets of agricultural products which surpassed the Venezuelan produce quantitatively and qualitatively. The Venezuelan State which by law is the only one entitled to exploit and administer the products of the subsoil and the fact that oil became the main Venezuelan export made the State the only and absolute ruler of the national economy, '70' replacing the traditional group of landowners and traders as the dominant economic class.

The nature of the link which connected Venezuela to the world capitalist system had a qualitative change when Venezuela became an oil producing country. During the first decades of the 20th century Venezuela's connection with the world's capitalist economy had been mainly commercial. When Venezuela became an oil producing country this link became more organic, i.e., from then on there was an increase in foreign investment imposing its own conditions of reproduction. '71'

The Gomez dictatorship favoured North American investment and facilitated U.S. control of the national economy. This attitude gained him U.S. support and Gomez was thus able to do without the support of the traditional dominant class. The implementation of the economic development programme therefore, did not have to rely on

internal class alliances. The repressive character of the government guaranteed the conditions for the development of the oil industry as required by the programme of the North American enterprises. The importance England had had as an importer and exporter in the the Venezuelan was clearly displaced by the U.S.A. '72'

The decline of agriculture for the reasons mentioned earlier, particularly the emergent oil industry, produced significant changes in the Venezuelan economy. The most important consequences were: 1) From being an agricultural export producing country Venezuela began to import the foodstuff it had once produced '73'; 2) there was a significant increase in imports, which included superfluous products '74'; 3) The incipient national industry which was already supplying the internal market rapidly declined. This was partly due to the inability of the national producers to compete with the imported goods and partly to the lack of a protectionist policy for national products. '75'; 4) the use of a highly sophisticated foreign technology increased unemployment and led to an increase in government bureaucracy which absorbed the unemployed; 5) there was an increase in import of raw materials and capital goods for the industry which resulted in a stagnation of the national industry which could, perhaps, otherwise developed and overcome underdevelopment. '76'

#### 1.4.3.2 Migration

The decline of agriculture and of the landowners as the dominant class did not mean that they withdrew completely from the economic scenario.

The oil exploitation provided the economic basis for the settlement of foreign industries in Venezuela, particularly those of U.S. origin. Their involvement in the economy, however, was not restricted to the oil production but expanded to other economic areas. This was a joint venture with the Venezuelan traders and some landowners who had accumulated capital and were willing to invest it in profitable businesses. Many landowners, therefore, moved to the main cities and to the oil producing centres where conditions were favourable to activities other than those related to agriculture.

These conditions also proved favourable for the emergence of a middle class for several reasons: (i) there was an increasing government bureaucracy; (ii) there was a growing need for administrative personnel in the oil industry, and (iii) there was an increase in commercial activities and public works in the main cities and in the oil producing centres.<sup>(77)</sup> The decline in the amount and price of agricultural produce and the development of commercial activities, particularly those connected with oil, created new job opportunities in urban areas. The rural population was thus attracted to the cities and oil producing centres which offered jobs and consequently a better standard of living.<sup>(78)</sup>

#### 1.4.3.3 The End of the Dictatorship

The dictatorship of J.V. Gomez - which started the oil industry in Venezuela - ended with the death of the dictator. The middle class and other groups with common economic interests who had grouped in political parties in an attempt to overthrow Gomez thus did not succeed.

The democratic attempt of Medina Angarita between 1945 and 1948 and the dictatorship of M.P. Jimenez did not produce significant social or economic changes in Venezuela. North American involvement in the country was strengthened. The country's underdevelopment was characterised by a lack of autonomy and an inability to pursue its own development programme. On the contrary, its economy was entirely dependent on its capacity to export oil and iron<sup>(77)</sup> and to import consumers goods to supply the internal market.<sup>(80)</sup>

The end of the dictatorship of M.P. Jimenez in 1958 was a result of the alliance of different social groups. These groups were: 1) The dominant class who had had the control of the agricultural export economy and later organised itself in commercial activities, services and industry, 2) The working class. The new economic activities which gathered the workers in urban areas provided a social setting favourable for their organisation. 3) The complexity of economic activities resulted in new social relations which gave birth to a middle class.



Meanwhile, the interest in Venezuelan oil had begun to decline. Oil had been found in other countries and was being exploited with good results and in better conditions than those prevailing in Venezuela.<sup>(e1)</sup> These conditions were particularly attractive to the U.S.A. the main importer of Venezuelan oil. Confronted with this situation the most influential groups sought to achieve a new consensus in an alliance with some sectors of the middle class, the top bureaucracy, the leaders of political parties and the armed forces. This consensus resulted in the establishment of a representative democracy. The State was reorganised in the interests of the new power structure and class relations.

#### 1.4.4. The Venezuelan Economy in the Democratic Period

The class alliances which replaced the dictatorships with a democratic government in 1958, developed a new strategy for economic recovery. Foreign capital though (particularly North American) continued to be the fundamental basis of these strategies<sup>(e2)</sup> which needed this capital as a means to develop industries able to supply the internal market.

From the 1960's onwards the Venezuelan industrialisation process has developed at such a speed that it soon became the main factor of the Venezuelan social process. Even when industry has not replaced oil as the main economic activity, it has had important

effects which go beyond the purely economic, e.g. it is the basis on which society tends to organise. The Venezuelan dominant class, well aware of the vulnerability of traditional agriculture, and the temporary boom of the oil industry, envisaged an alternative industrial project. It is worth pointing out that although the industrial project has been financed by international capital its conception is a product of the national dominant class. (23)

Industry began as a substitution industry, i.e. as a producer of goods which had been so far supplied by imports. (24) The beginnings of industrialisation, therefore, as a supplier of an already established demand were relatively straight forward. Industrial development was carried out between the Venezuelan and the international bourgeoisie although the latter gained global control of the industrialisation process. (25) This joint leadership resulted in a reproduction of international capital investment and in a strengthening of local capital investment. This alliance also strengthened the position of the Venezuelan dominant class.

From the early 1950's foreign investments were distributed in different areas. New mining possibilities were explored and iron and aluminium were heavily financed in addition to oil. Investments in the primary sector were followed by an increase in services. The main stimuli for this new industrial programme were the advantages offered by the government's economic policy,

e.g. the protection of foreign and national investment as the basis from which to develop an industrialisation process and the prospect of a rapidly growing market. As expected, the industrialisation process was a success but the extent of the participation of foreign investors soon resulted in complete control of the economy by international capital. (66)

It can be said that the economic strategy of the 1960's is based on the following premises: (i) the country's economy is excessively dependent on oil production; (ii) oil production is not locally controlled; and (iii) the only possibility of achieving a sustained autonomous development lies in industry. It is assumed that industrialisation will provide a local dynamic centre which will eventually result in self-sustained development. The industrial areas will be nationally controlled and should therefore reduce Venezuela's dependence on oil and consequently on externally controlled capital. This autonomy will allow to organise the economy on the more reliable bases detailed in the first three Projects of the National Planning Programme. (67)

The increase in oil revenue after 1963 and government support resulted in a great industrial expansion which was then able to supply the internal demand for manufactured goods. In 1966 production of finished goods had increased considerably. However, after this first stage of expansion the industrialisation

process began to slow down and there was a great concern in the public and private sectors that it might have come to a bottle-neck. The report of the Central Bank of Venezuela and FEDECAMARAS (the official publication of the Venezuelan bourgeoisie) pointed out to some critical signs of decline in 1967. In its first stage the national industry had been able to supply the internal market with consumers goods<sup>(66)</sup> but it was admitted that the substitution of intermediary products was a more complex and difficult entrepreneurial attempt and it needed heavy investments and reliable markets in order to achieve the level of a scale economy. FEDECAMARAS which had initially rejected any scheme leading to a Latin American integration then agreed to the necessity of such integration.

The IV Plan of the Nation showed similar preoccupations. It was recognised that the national economy was going through a difficult period, partly because there had been a decline in exports in the last five years and partly because the process of industrialisation had not been able to go beyond the stage of substitution of consumers goods. The strategy suggested in the Plan was a radical change in the development model. It was not considered enough to reorganise and expand the internal market but it was also necessary to look for external markets, particularly in countries with the same development level as Venezuela, e.g. Latin American countries.<sup>(67)</sup> However, despite the

efforts made to expand the external market these were not enough to give a boost to the Venezuelan industry.<sup>(70)</sup> The failure to gain external markets was greatly due to the quality of the Venezuelan export products. These products had to face a fierce competition not only from similar goods made by international monopolies but also by others made in Latin American countries.<sup>(71)</sup> Therefore, even when the external market was not completely lost the possibility of using it as an incentive for industrial production had to be postponed.

#### 1.4.4.1 Possibilities of Autonomous Development in Venezuela

Despite price fluctuations in the international market oil continues to be the main Venezuelan export. Oil exports have greatly helped to overcome the many difficulties encountered in the development plans of the nation, particularly those which followed the planned industrial take-off which did not succeed. Venezuela has been mainly an importer in the international market and so has only exported oil and iron as it is shown in the Table below:

TABLE I

VENEZUELAN EXPORTS 1970-1977

Year	TOTAL		OIL	-	IRON	OTHERS	
	Metric Tons	Value in Mill. Bs	Metric Tons		Value in Mill. Bs	Metric Tons	Value in Mill. Bs
1970	204.777,6	11.691,4	203.968,3		11.188,5	809,3	502,9
1971	195.866,0	13.893,5	195.062,3		13.438,2	803,7	455,3
1972	183.669,9	13.776,8	182.790,3		13.160,0	879,6	616,5
1973	194.203,1	20.141,2	192.590,0		19.404,6	1.613,1	736,5
1974	173.769,7	47.416,3	172.215,5		46.344,8	1.554,1	1.071,5
1975	130.176,1	37.708,8	129.700,3		36.795,6	475,8	913,2
1976	128.915,1	38.895,1	128.018,9		38.677,7	896,2	1.217,2
1977	116.512,5	40.985,5	115.693,0		39.829,7	819,2	1.155,8

Sources: Central Bank of Venezuela, B.C.V.  
 Statistics & Computing Headquarters O.C.E.I.  
 Caracas Venezuela, 1978.

The Table shows that oil and iron amount for the largest part of the national export revenue (95.71% in 1970 and 97.18% in 1977). It also shows that the country still depends largely on the export of perishable products but conditions are different from those which prevailed at the time of agricultural exports. The Table seems to show as well that the Venezuelan manufactured goods are not successful in the external or internal markets and this is further demonstrated in the Table which follows:

TABLE 2

VOLUME OF VENEZUELAN IMPORTS FROM 1974 to 1977  
(in thousands tons)

Imports	1974	1975	1976	1977
Foodstuffs and live animals	1,634,82	1,694,97	2,157,93	2,838,89
Drinks and tobaccos	29,38	46,83	50,77	61,30
Non-edible raw materials	946,89	804,27	1,223,91	1,236,15
Fuels and mineral lubricants	277,33	365,66	250,11	529,01
Vegetal and animal oils and fats	52,10	109,27	141,51	203,84
Chemical products	844,99	1,025,56	1,324,44	1,504,37
Classified manufactured goods	1,641,15	1,954,00	2,807,57	5,223,51
Engines and stuff for transport	490,14	761,68	888,91	348,77
Manufactured goods (various)	38,73	59,92	60,68	89,53
Commodities	1,30	1,97	0,83	0,65
Total Imports	5,956,83	6,824,13	8,906,66	13,036,02

Source: Economic Report, Banco Central de Venezuela, 1978.

\* For details on Venezuelan imports needs see Appendix No.2.

The previous Table shows an increase in imports. It also shows the economic areas which have not developed and have thus contributed to increase the country's dependency.

Meanwhile - and as a result of the social transformations occurred in the Venezuelan society - it has been suggested that there is a need to readjust the connection which links Venezuela to the world capitalist system. This need for readjustment is becoming widely shared by the society as it is increasingly felt that national capital cannot be reproduced within this narrow framework of economic relations. In other words, the continuation of the social process is subjected to a readjustment of the Venezuelan connection to the world capitalist system. The economic process as developed since 1958 only confirms the need to readjust the role of Venezuela in the world system. Although during the first years of the democratic process foreign investment was the basis for national capital accumulation, the need to control foreign investment and give a greater share of participation to the national bourgeoisie in the process of accumulation has now become apparent. Some of the measures taken towards this goal are: the Law of the Market of Capitals in 1969<sup>'72'</sup>, the denunciation of the Commercial Reciprocity Treaty with the U.S.A.<sup>'73'</sup>, participation in the Andean Pact<sup>'74'</sup> and the nationalisation of oil<sup>'75'</sup> and iron<sup>'76'</sup> in 1974.



Industrial development and the need to diversify exports<sup>177</sup> have led Venezuelans to explore new forms of participation in the international market. Venezuela has thus sought stronger links with Latin American countries. As a result of this new policy Venezuela is now a member of ALALC (Latin American Association of Free Trade), the Cartagena Treaty, PADT (Andean Projects for Technological Development), the Andean Pact, which has specific programmes for car industry and metalmechanics, Central American Common Market, the Amazonic Pact, CARICOM (a programme of reciprocal aid between less developed countries in the area) and SELAC (Latin American Economic System) which assists 26 countries in the area.<sup>178</sup>

The development of Venezuela depends largely on international power relations, on the compatibility of the Venezuelan interests with those of the international system, on its alliance with other underdeveloped countries (particularly Latin Americans), and on internal class alliances, e.g. political parties, the working class, and different economic sectors within the country. However, the development process also depends to a great extent on its capacity to diversify industrial production and to achieve higher levels of productivity - both quantitatively and qualitatively. This has to be done bearing in mind that the Venezuelan industrialisation process still depends largely on high-priced imports.<sup>179</sup> These imports prove costly to the country not only

because of their high price per unit but also because of the large volume of imports which is not matched by a similar volume of exports. The above is an indication that the country has not been able to supply the demand of the internal market - either quantitatively or qualitatively - and this has been one of the causes of the country's under-development in the past and until the present date.

Within this process of economic development higher education plays an important role. Higher education should prepare human resources able to foster and assist the necessary changes required to achieve a level of production which can satisfy the basic needs of the population. National expertise should also be able to improve the quality of production so as to compete successfully in the Latin American market and in the rest of the world.

The development plans proposed by the democratic governments in the Plans of the Nation, particularly since the elaboration of the IV Plan of 1969-1974, have placed special emphasis on agricultural and basic industrial development such as: oil, iron and steel production, petrochemicals and aluminium, metalmechanics, naval industry, car industry, agroindustry and other areas of economic integration leading to the development of an autonomous domestic technology. (100)

#### 1.4.4.2 The 1980's

##### 1.4.4.2a The Economy

The plans to diversify the Venezuelan economy begun to gain momentum as a result of the economic development of the preceding years characterised by oil exports. During this period the country benefitted from highly priced oil exports and was thus able to sustain a reasonable prosperity inspite of the fact that the terms of exchange in the international market were not particularly advantageous for the nation as the VI National Plan points out when referring to the Venezuelan economy during the period 1970-1979:

"The above mentioned international situation resulted in highly priced imports and in an increased external debt and, consequently, in growing inflation. However, additional income obtained from oil exports allowed us to meet these contingencies and the economy was geared towards a new developmental stage". (101)

However, the same report points out that in the 1980's the situation was likely to deteriorate as no additional income from oil exports was expected.

"As far as availability of resources is concerned it should be pointed out that we must be aware that in the coming years the price of oil exports is not likely to increase as it did in the 1970's. This will be an important constraint in achieving our previous Gross National Product growth rate". (102)

If oil revenue could no longer be the only source of income for the government to sustain social welfare then the only alternative was to diversify the economy as suggested in the aforementioned Plan:

"However, if finances show an improvement and this is accompanied by an improved use of internal resources it will then be possible to activate the economy and thus increase the Gross National Product". (103)

#### 1.4.4.2b Population

The above provides an indication of the importance of expanding Venezuelan industrial development. It does not only mean a better use of natural resources but it is also likely to reduce Venezuela's dependence on oil exports. However, it also involves a great challenge: greater social needs of a population whose growth rate was of 3.5% in 1961-1969 (104) and increased in 1971-1980. (The Venezuelan population was of 12.3 millions in 1971 and of 16.4 millions in 1980). (105) According to the VII National Plan the tendency is for the population growth rate to remain stable or to increase. (106). But population growth has advantages and disadvantages. While on the one hand it means more social provisions e.g. health and education, on the other, it means that Venezuela could also make good use of an available young population which - through education - can directly participate and profit from the benefits of the country's resources.

TABLE 3

VENEZUELAN POPULATION ESTIMATES BY AGE-GROUPS  
(in thousands)

Age	1980	1981	1982	1983	1984	1985
TOTAL	16,458,4	16,988,2	17,529,4	18,081,7	18,642,7	19,213,2
0-4	2,444,4	2,514,8	2,584,2	2,651,9	2,717,5	2,780,3
5-9	2,097,6	2,161,8	2,231,9	2,304,3	2,376,7	2,449,3
10-14	1,938,9	1,997,9	2,016,6	2,047,3	2,089,0	2,142,7
15-19	1,906,8	1,944,9	1,976,5	1,998,9	2,016,1	2,030,5
20-24	1,670,0	1,731,6	1,791,6	1,850,2	1,904,7	1,952,9
25-29	1,368,2	1,434,3	1,514,3	1,583,7	1,650,2	1,714,6
30-34	1,098,2	1,160,8	1,220,3	1,282,5	1,346,5	1,413,6
35-39	869,5	904,1	948,5	1,003,9	1,066,6	1,131,4
40-44	739,8	754,1	776,3	801,3	829,2	861,4
45-49	618,7	633,1	650,9	669,3	687,3	705,2
50-54	506,6	520,6	537,0	552,4	567,6	583,2
55-59	387,6	399,1	416,6	434,8	458,2	471,0
60-64	289,7	297,1	309,9	323,2	336,5	350,2
65-69	206,1	212,2	220,9	230,5	240,7	251,3
70-74	147,1	149,0	154,4	159,3	164,7	170,9
75 plus	169,2	171,8	179,5	187,7	196,2	204,7

Source: Central Statistics and Computing Office  
 Republic of Venezuela, CORDIPLAN, VI National Plan  
 1981-1985. Talleres Graficos de Cordiplan,  
 Caracas, Venezuela 1981, p.128.

## 1.5 CONCLUSION

Venezuela is a country with vast natural resources and should be able to achieve a significant industrial development. This should enable the nation to satisfactorily provide for the basic needs of its population and furthermore, effectively participate in the Latin American and world economies.

Several socio-economic and political changes have taken place in Venezuela since the return of democracy in 1958. The return of democracy has provided a context where agreements among classes and groups can be successfully reached and therefore provided the social foundations to initiate a process of development based on the proper use of natural resources (human and material) so that it can achieve the standard of living demanded by its participants. It is therefore of paramount importance to combine material resources with an adequate training of manpower in order to achieve maximum benefits for the nation.

5. REFERENCES CHAPTER I

1. Golden Jubilee Seminar Higher Education and Development. A.I.V. New Delhi, 1975.
2. Meier, Gerald Leading Issues in Economic Development. Studies in International Poverty, 2nd ed. Oxford University Press, U.S.A. 1970, p.5.
3. Penrose, E., Review of Economy. Hogen's The Economics of Development, in Journal of Develop. Studies, v.6, London, 1968 p.169-70.
4. Wilker, C.K., The Soviet Model and Underdeveloped Countries. University of North Carolina Press, (undated), p.8.
5. Dowd, D. 'Some Issues of Economic Development and of Development Economics', Journal of Economic Issues Vol. 17, No.3, p.153.
6. Hahn, F.H. and Mathews, R. 'The Theory of Economic Growth: a Survey', in Surveys of Economic Theory, St. Martin's Press, New York, 1966 Vol.2, p.110.
7. Morgensten, Oskar On the Accuracy of Economic Observations. Princeton University Press. Princeton, New Jersey, 1950.
8. Bendix, R. Nation-Building and Citizenship, Doubleday. New York, 1969, p.300.
9. Myrdal, Gunnar Economic Theory and Underdevelopment Regions, Duckwork. London, 1957, pp.24-26.
10. Myrdal, Gunnar, Economic Theory and Underdevelopment Regions, Duckworth. London, 1957, p.13.
11. Ibid., p.13.
12. Gerschenkron, Alexander Continuity in History and Other Essays The Belknap Press. Cambridge, Massachusetts, 1968, and Economic Backwardness in Historical Perspectives Frederick A. Praeger Publishers. London, 1965.
13. Bernstein, H. Underdevelopment and Development Penguin. Harmondsworth, Middlesex, England, 1973 p.26.
14. Cardoso, F.H. and Faletto, E. Dependency and Development in Latin America University of California Press. London, 1979 p.8.

15. Redfield, R. The Folk Culture of Yucatan. University of Chicago Press. Chicago 1942 and also, in Hoselitz, B. Sociological Factors in Economic Development, Free Press of Glencoe. Glencoe, 1960, and Germani, Gino Politica y Sociedad en una Epoca de Transicion. Paidos. Buenos Aires, 1965.
16. Hirschman, A.O. The Strategy of Economic Development Yale University Press. Yale, 1958 pp.125-126.
17. Cardoso y Faletto, Op.cit. pp.9-10.
18. Heintz, Peter Analisis Contextual de los Paises Latinoamericanos Berkeley, Mimeographed edition. (undated).
19. Cardoso, F.H. and Faletto, E., op. cit. p.10.
20. Rostow, W.W. The Stage of Economic Growth, a Non-Communist Manifest. University Press. Cambridge 1960.
21. Moore, W. Economy and Society. Random. New York 1955.
22. Kerr, Clark Industrialism and Industrial Man. Harvard University Press. Cambridge, 1960.
23. Cardoso and Faletto, op. cit. p.11.
24. Cardoso and Faletto, op. cit. p.11.
25. Ibid.
26. Cardoso and Faletto, op. cit. p.12.
27. Ibid.
28. Cardoso and Faletto, op. cit. p.21.
29. Ibid., p.14.
30. Cardoso and Faletto, op. cit. p.22.
31. Cardoso and Faletto, op. cit. p.23.
32. Brito Figueroa, F. Historia Economica y Social de Venezuela U.C.V. Ed. de la Biblioteca. Caracas, 1979 Vol.I pp.126-134.
33. Rios de Hernandez, J. El Proceso de Conformacion, Frustrado y Crisis de la Formacion Social Venezolana, in Formacion Historico Social de Venezuela, CENDES. Caracas, 1981 p.52.
34. Ibid, p. 137.
35. Ibid, pp.64-65.



36. Ibid, p.67.
37. Rios de Hernandez, J. op. cit., p.62.
38. Rios de Hernandez, J. op. cit. p.64.
39. Gil Fortoul, Jose Historia Constitucional de Venezuela Carl Heymann Editor. Berlin, 1907, pp.60-61.
40. Rios de Hernandez, J. op. cit. p.67
41. Gil Fortoul, op. cit. p.169.
42. Salcedo Bastardo, Historia Fundamental de Venezuela, U.C.V. Caracas, Venezuela, 1970, pp.151-167.
43. Ibidem.
44. Ibid. p.157.
45. Criollos was the name given to the white population of Spanish parents but born in Venezuela.
46. Mantuanos was a name given to the criollos because they used to wear mantas or shawl in the Church.
47. Rios de Hernandez, J. op. cit. p.93
48. Ibid. p.93
49. Brito, Figueroa, F. op. cit. Vo.I, p.164.
50. Rios de Hernandez, J. op. cit., p.94.
51. Brito, Figueroa, F. op. cit. Vol.I, p.191.
52. Cardoso, F.H. and Faletto, E. Dependencia y Desarrollo Siglo Veintiuno Ed. Mexico, D.F., 1979 pp.42-43.
53. Brito, Figueroa, F. op. cit. p.192-218.
54. Cardoso and Faletto, op. cit. p.24
55. Brito, Figueroa, F. op. cit. pp.225-244.
56. Rios de Hernandez, J. op. cit. p.107.
57. Rios de Hernandez, J. op. cit. p.109.
58. Brito, Figueroa, F. op. cit. Vol.I, pp.289-301.
59. Brito, Figueroa, F. op. cit. Vol.I, p.298.
60. Ibid., p.303.
61. Ibid. pp.303-304.

62. Caudillo is a local political leader.
63. Brito Figueroa, F. Op.cit. Vol.II, p.410.
64. Salcedo Bastardo, Op.cit. p.479.
65. Brito Figueroa, F. Op.cit. Vol.II p.367 and Salcedo Bastardo, Op.cit. pp.470-471.
66. Brito Figueroa, F. Historia Economica y Social de Venezuela, Caracas, 1979. Vol.I, pp.303-304.
67. Ibid., p.305.
68. Ibid.
69. Salcedo Bastardo, J.L. op. cit. p.480.
70. Salcedo Bastardo, J.L., op. cit. pp.480-481.
71. Fierro Bustillos, Lourdes and Yoston Ferregni, "El Proceso de Estructuracion Capitalista de la Formacion Social Venezolana" in Formacion Historico Social de Venezuela, CENDES, Caracas, Venezuela, 1981, PP.121-122.
72. Brito Figueroa, F. op. cit., Vol.II pp.471-478.
73. Salcedo Bastardo, F. op. cit. p.480.
74. Brito Figueroa, F. op. cit., Vol.II, pp.467-468.
75. Ibid., pp.465-466.
76. Ibid., pp.470-473.
77. Ibid., Op.cit. Vol.III p.841.
78. Ibid.
79. Iron began to be exported in 1950. Oficina Central de Informacion. La Nacionalizacion del Hierro. OCI, Caracas, Venezuela, 1975 p.22.
80. Brito Figueroa, Op.cit Vol.III pp.720-721.
81. Brito Figueroa, F. op. cit. p.745.
82. Ibid.
83. Fierro Bustillos, L. and Yoston Ferrigni, op. cit., p.169
84. Brito Figueroa, F. Op.cit., Vol.III p.745.
85. Pro-Venezuela Lista de Empresas Norteamericanas en Venezuela Mimeo. Caracas, Venezuela (undated).

86. Brito Figueroa, F. op. cit. Vol.III pp.745-733; Fierro, B. and Yoston Ferrigni, op. cit. pp.172-173.
87. Planes de la Nacion 1960-1965, 1963-1966, and 1965-1968 in Republica de Venezuela Mensajes Presidenciales, Caracas, Venezuela, Vol.VI, 1971, pp. 29-90; 215-227; 247-292 and 374-428.
88. Banco Central de Venezuela. Economic Report, Caracas, Venezuela, 1967.
89. Republica de Venezuela, IV Plan de la Nacion 1970-1974, Caracas, Venezuela 1970.
90. Republica de Venezuela, V Plan de la Nacion 1975-1980, Caracas, Venezuela, 1976.
91. Ferrigni, Yoston Estadio de Consolidacion Capitalista de la Sociedad Venezolana CENDES, Caracas, Venezuela 1981, p.178. In Centro de Estudios de Desarrollo, Formacion Historico Social de Venezuela.
92. Republica de Venezuela, IV Plan de la Nacion, Caracas, 1970.
93. Centro de Estudios del Desarrollo. Formacion Historico Social de Venezuela, CENDES. Caracas, Venezuela, 1981 p.192.
94. Republica de Venezuela, CORDIPLAN, VI Plan de la Nacion 1981-1985. Tall. Graficos Cordiplan, Caracas, Venezuela, 1981, Vol.I, p.6.
95. Organic law which grants the State the ownership of Industry and Trade of Hydrocarbon in Presidential Decrees and Addresses of President Carlos Andres Perez Nacionalizacion Petrolera en Venezuela Ed. Centauro. Caracas, Venezuela 1976, pp.79-104.
96. Gaceta Oficial de la Republica de Venezuela, No.30,577 16 December 1974 in Information Central Office La Nacionalizacion del Hierro O.C.I. Caracas, Venezuela, 1975 pp. 37-43
97. V Plan de la Nacion 1975-1980 Op.cit. and VI Plan de la Nacion 1981-1985, Caracas, Venezuela. Op.cit.
98. Central Bank of Venezuela, Economic Report 1978. Caracas, Venezuela, 1978.
99. Statistical Annual 1977. Central Headquarters of Statistics and Computing, Caracas 1979; Indicadores de Coyuntura. Central Headquarters of Statistics and Computing, Caracas, September 1983, No.18.
100. VI Plan de la Nacion 1981-1985, Op.cit. Caracas, Venezuela, 1981, Vol.I.

101. Republic of Venezuela, VI Plan de la Nacion Op. cit. Vol.I, p.5.
102. Ibid. p.3
103. Ibidem.
104. Republic of Venezuela, CORDIPLAN, VI National Plan 1970-1974. Talleres Graficos de Cordiplan, Caracas Venezuela, 1981, Vol.I, p.198.
105. Republic of Venezuela, CORDIPLAN. VI National Plan 1981-1985. Talleres Graficos de Cordiplan, Caracas, Venezuela, 1981, Vol.I.
106. Republic of Venezuela, CORDIPLAN. VI National Plan 1981-1985. Talleres Graficos de Cordiplan, Caracas, Venezuela 1981, Vol.I, p.9.

CHAPTER II

CHANGES IN VENEZUELAN HIGHER EDUCATION SINCE 1958



## CHAPTER II

### 2.1 INTRODUCTION

This chapter makes special reference to changes occurred in Venezuelan Higher Education since the return of democracy in 1958.

The most notable change in Venezuela in the political and socio-economic sphere since 1958 has been the return of democracy. Other changes, however, have occurred in Venezuelan society during this period. The most relevant ones are connected with the creation of the necessary conditions for the economic development of the country. Although oil has continued to be the most important factor in the national economy other economic activities have been encouraged in order to diversify the economy and create further job opportunities. This accelerated process of diversification of the economy has led to the use of foreign technology which has resulted in a more complex and demanding economic structure increasingly requiring a more specialised labour force. The role of education in this process, therefore, has been a permanent preoccupation of the present process of national development.

### 2.2 CHANGES IN HIGHER EDUCATION

At the time of the overthrow of the dictatorship in 1958 Venezuela was going through a period of economic

boom due to highly priced oil exports. This economic advantage, however, was greatly diminished because of an inefficient public administration; on the other hand, agriculture, animal breeding and industry, despite their good prospects, had not improved. In education there was a large number of children at primary level who were not receiving basic education<sup>'1'</sup>; secondary education was highly privatized, elitist, and university oriented<sup>'2'</sup>. Primary and secondary levels were characterised by a bookish type education.<sup>'3'</sup>

Higher education was constituted by national universities and private universities and a Pedagogical Institute which, like craft education, did not have a recognised place in Higher Education<sup>'4'</sup>, even though its entry requirements were either a qualification as primary teacher or a secondary school certificate.

Private universities in Venezuela were recognised as higher education institutions with university level by the 1953 University Act.<sup>'5'</sup> Although the laws of 1946 and 1953 granted the universities academic autonomy they remained under the administrative and organisational control of the State.<sup>'6'</sup> Academically, they maintained the Republican pattern, in which the most important studies are Law, Medicine, Civil Engineering, and since 1936, Economics and Trade Administration.<sup>'7'</sup>

Universities have not played an important role in the Venezuelan economic development. This has been



largely due to the fact that the economy has been geared towards oil exports while universities have placed more emphasis on the traditional courses of study mentioned above.<sup>6</sup> Although in 1956 the government embarked in the initial stages to develop a siderurgical and a petrochemical industry this was not considered as part of a plan which included university reforms geared to the training of human resources to assist economic development in this area. Entry requirements to national universities included a Secondary School Certificate, and a registration fee plus other expenses such as an examination entry fee<sup>7</sup> and other services. This meant that higher education could only be afforded by well-to-do students.

#### 2.2.1 Changes During the Government Junta

During this short period - 1958 to 1959 - the government tried to solve many of the problems of education. One of such attempts was a policy of democratisation of education at all levels.<sup>10</sup> This attempt was particularly important during the expansion period and it allowed thousands of children to enter primary and secondary education. The same phenomena could be appreciated in higher education (further discussed in Chapter III of this study). The Minister of Education, Rafael Pizani, in his account and report of 1958 stated:-

"The provisional government faces the urgent need to solve the problem of hundreds of thousands of children deprived of education; the millions of

illiterates deprived of any help from the previous government; the abandonment of craft, industrial, technical and commercial education; the crisis situation faced by the whole secondary education in Venezuela; the guilty ignorance of the needs of rural education; the disorganisation of higher education in the country as a whole; the closing down of secondary school institutions and universities; the systematic harassment to teachers; the constant contempt for all cultural activities and the improvement of the spiritual well-being of people and their values which affected the whole political life of the country." (11)

However no reforms were made and no specific national policy for education was envisaged. This could be partly explained by the provisional character of the government and by the fact that a constitutional government was expected to be elected shortly. The process of expansion of Higher Education developed as a greater number of options in existing institutions but no steps were taken to adapt the curriculum to meet the new national demands. At the end of 1958 a new law of universities was approved and it granted universities full academic autonomy. The same law of 1958 redefines the objectives of Universities and the role they should play in the development of the country. It should be made clear that, at that time, the term 'higher education' was not used and instead the Law of Universities refers to 'university education'.

#### 2.2.2 1958 University Act

The most important aspects of the 1958 University Act refer to academic autonomy and the definition of the role universities should play in the

development of the country. Universities were granted organisational, administrative, academic and financial autonomy. This allowed the universities: (i) to organise the institutions according to their own needs and development; (ii) to nominate their own governing bodies, eg. co-govermental bodies; and (iii) to appoint their own teaching staff and administrative and services personnel. It also allowed Universities to choose their own curriculum, grant degrees, and administer their own financial resources. It also stated that national universities should have an annual state subsidy which should be no less than 1.5% of the government income. Private universities have no financial link with the State.<sup>'12'</sup> The law established that universities should be a service to the community and should contribute to further the citizens' development initiated in previous levels of education. It should also train professional and technicians according to the developmental needs of the country.<sup>'13'</sup> The law of 1958 establishes that university education should be considered as a Human Right and therefore free for all<sup>'14'</sup> and the only entry requirement should be a secondary school certificate and therefore all secondary school leavers should have access to higher education with no limitations other than the students aptitude and interests.

The National Constitution of 1961 establishes that the State will provide the necessary resources to give free education to all citizens regardless of their

social status.<sup>'18'</sup> In order to comply with the demands of the Law of Universities and provide education for all the government has had to create new institutions of higher education and expand the existing ones.

### 2.2.3 The Creation of Institutions of Higher Education

At the beginning of 1958 Venezuela had three national universities: the Central University in Caracas, the University of Los Andes in Merida and the University of Zulia in Maracaibo; two private universities: the University of Santa Maria and the Catholic University Andres Bello in Caracas; and one Pedagogical Institution.

Until 1970 the tendency was to create new universities: autonomous, experimental and private. The institutions of higher education created since 1958 are: the University of Oriente and the reopened University of Carabobo (1958); the University/Experimental-Centre Lisandro Alvarado in Barquisimeto in 1962; the private Metropolitan University in Caracas in 1965; the Experimental University Simon Bolivar in Caracas in 1967. Other institutions of higher education created during this period were the Experimental Pedagogical Institute in Barquisimeto in 1959 and the Polytechnic of Barquisimeto in 1967.

In 1970 Venezuela had thirteen institutions of higher education: four autonomous universities, three experimental national universities, three private

universities, two Pedagogical and one Polytechnic.

In 1970 the government began to explore new forms of economic expansion. Some of these attempts consisted in the exploitation of new economic resources and the introduction of new technology in industry while emphasis was placed on the need to achieve a national technological level leading to an autonomous development and a more advantageous position in the international export and import market. These economic policies have led governments to look for an alternative higher education system which can supply human resources able to assist the country's economic development. Since 1970 a greater emphasis is placed on the creation of institutions of higher education other than universities which will be able to produce specialised technicians in a shorter period than that required for a university degree.

From 1970 until the present date fifty seven new institutions of higher education have been created in Venezuela. These are: eight universities, three polytechnics, eighteen Technological institutions, twelve university colleges, four military institutions, four Pedagogical institutions and eight private universities. In summary, sixty seven institutions of higher education have been created in Venezuela during this period. (see Appendix 3).

#### 2.2.4 Courses and Specialisms

For the purpose of this research the years under study will be divided into two periods (i) from 1958 to 1970 and (ii) from 1970 until the present date. We can see below that the second period offers a much greater choice of specialisation than the first.

Until 1970 the Venezuelan Higher Education system had eight areas of study. These were: 1. Basic Sciences; 2. Technology; 3. Agricultural Sciences; 4. Health Sciences; 5. Education; 6. Law; 7. Social Sciences and 8. Humanities.

These main areas of study had the following specialisations:-

##### 1. Basic Sciences

Chemistry, Physics, Mathematics, Statistics and Accounting and Computer Sciences.

##### 2. Technology

Civil engineering, Electrical engineering, Industrial engineering, Mechanical engineering, Petrochemical engineering, Mining engineering, Chemical engineering, Geodesy, Geology, Metallurgy and Architecture.

##### 3. Agricultural Sciences

Agronomy, Forestry, Zoology, Veterinary studies.

##### 4. Health Sciences

Medicine, Nursing, Nutrition and Food science, Community Medicine, Bio-analysis, Pharmacy, Odontology.

##### 5. Education

6. Law

Law and Political science and Administration.

7. Social Sciences

Business administration, Public accounting, Entrepreneurial administration, Administrative sciences, International studies, Economics, Sociology, Anthropology, Journalism, Industrial relations, Geography and Social work.

8. Humanities

Library studies, Archives, Philosophy. Psychology, Humanities, History, and Modern Languages.

Altogether they constituted forty nine specialisations and courses.

From 1970 - and as a consequence of the new development programmes which recommended the creation of new institutions of higher education - the number of courses and specialisations increased considerably. There is also a re-organisation of the areas of study as follows:-

1. Basic sciences;
2. Engineering, Architecture and Technology;
3. Agricultural and Sea sciences;
4. Health sciences;
5. Education;
6. Humanities;
7. Social sciences;
8. Military and Art sciences. (see Appendix 4).

From 1970 until the present date the number of specialisations has increased to 150.

### 2.2.5 Registration Requirements

Until 1970 secondary school leavers registered directly in the institution and course they wished to pursue. In 1970 the National Council of Universities created the National Pre-registration Office which from then on was in charge of pre-registrations and distribution of students in institutions according to the students choice as indicated in their application forms. Private institutions do not participate in this distribution process.

In addition to the distribution of students amongst institutions by the National Council of Universities some institutions require an admission examination. In some institutions the admission examination consists only of a test of academic aptitude; in others, students have to pass the academic aptitude test plus a psychological test, or a medical examination, or an interview or all of them. Other institutions have preparatory<sup>(16)</sup> courses.

Entry requirements by institutions can be divided into two groups:-

- (a) Institutions which do not require special entry examinations among which are the four national autonomous universities: Central University, Carabobo, Los Andes and Zulia; two experimental national universities: Lisandro Alvarado and Oriente and the Pedagogical Institute in Caracas.
- (b) Institutions with special entry requirements which



include the rest of the higher education institutions, both state and private.

#### 2.2.6 Distribution of Areas of Study by Institutions

Seven out of the eight different areas of study in higher education are taught in universities, the exception being military studies which is taught in military academies.

Engineering, Architecture and Technology are only taught in University Polytechnics. Pedagogical Institutions train teachers in specific subjects. University Technological Institutes teach Engineering, Architecture and Technology, Agricultural and Sea sciences and Social sciences. University colleges teach in the areas of Engineering, Architecture and Technology, Agricultural and Sea sciences, Health sciences, Education and Social sciences.

Private University institutions teach the same areas as those in the state university.

#### 2.2.7 Higher Education by Region

From 1970 onwards there has been an attempt to regionalise higher education in Venezuela so that it could assist the particular needs of the regions and contribute to regional development. For this purpose the country has been divided into 9 education regions as follows:-

1. Capital region;
2. Central region;
3. Region of Los

Llanos; 4. West-Central region; 5. Region Zuliana; 6. Region of Los Andes; 7 and 8. Region of Guayana.

#### 2.2.8 Distribution of Higher Education Institutions by Region

1. Capital Region: seven universities, two Polytechnics, four Technological Institutes, three Pedagogical Institutes, eight University colleges, and eight Private University Institutes. In total, there are thirty two institutions of higher education in the region.
2. Central Region: has a total of eight institutions of higher education: two universities, five Technological colleges and one Pedagogical Institute.
3. Region of Los Llanos: has one university and one Technological college.
4. West Central Region: has seven institutions of higher education: one university, one Polytechnic, three Technological Colleges, one Pedagogical Institute and one University college.
5. Region Zuliana: has three universities, one Technological college, two University colleges.
6. Region of Los Andes: has three Universities and two Technological colleges.
- 7 and 8. North-East Region, Islands, and Guayana: has three universities (with colleges in the three regions), one Pedagogical Institute, one Polytechnic, three Technological colleges, and one university college. In each one of the regions there is a

sub-division of the Open University.

### 2.2.9 Degrees and Length of Courses by Institutions

Higher Education Institutions in Venezuela can be divided into two groups according to the length of the courses they offer. (a) Long courses and (b) Short courses.

#### 2.2.9.1 Higher Education Institutions with Long Courses

By long courses we mean those which last four, five, six or seven years or eight, nine, ten, twelve, thirteen or fourteen semesters. In both cases the number of years or semesters mentioned above is the minimum.

Institutions: the institutions with long courses are: the universities, the Pedagogical Institutes, the Polytechnics and the Military Academies.

The duration of a course may vary among different institutions of higher education or within the same type of institutions. (See Appendix 5).

Degrees Institutions of higher education with long courses award degrees of Licensee and Engineer in an specific subject (See Appendix 5); other courses award a title which refers to the particular expertise such as: Geologist, Architect, Urbanist, Pharmacist, Teacher, Economist, Social Worker, Sociologist, Anthropologist, Lawyer, Lieutenant.

In some cases there are institutions which award different titles even when the description of the course is the same as that of a different institution which awards a different degree. This again happens among different institutions of higher education and within the same type of institutions.

#### 2.2.9.2 Higher Education Institutions with Short Courses

In this category we have the Technological University Colleges and private University Institutions. The latter have characteristics similar to the Colleges as regards their areas of study and the length of studies. Some universities also award degrees for short courses.

As is the case in long courses the duration of the short courses varies among different institutions and within the same type of institutions. (See Appendix 5)

Degrees: The most common degree is that of Higher Technician in an specific subject. However, other titles are awarded such as Analyst, Technologist, Technician, Inspector, Intendent, Educationist, Teacher. As is the case in long courses different titles are awarded for the same course in different institutions and within the same type of institutions (See Appendix 5).

Other Degrees: Some Venezuelan universities award the degrees of Master and Ph.D. in some specialisations.

## CONCLUSION

This chapter particularly emphasizes two major changes occurred in Venezuela since the beginning of the democratic period in 1958:

a) The beginning of the expansion policy of Higher Education as part of the process of democratization of education. The expansion of Higher Education aimed to give access to all applicants as a Human Right;

b) Higher Education is given the important role of training professional and technicians required for national economic development.

The two changes mentioned above are particularly relevant to the analysis of government's and students' expectations regarding Higher Education.

REFERENCES CHAPTER TWO

1. Mudarra, Miguel Angel Historia de la Legislacion Contemporanea en Venezuela Ed. Ministry of Education Caracas, Venezuela 1962 p.260.
2. Uslar Pietri, Arturo, quoted by Miguel Angel Mudarra Historia de la Legislacion Contemporanea en Venezuela Ed. Ministry of Education, Caracas, Venezuela, 1962, p.289.
3. Mudarra, Miguel Angel Historia de la Legislacion Escolar Contemporanea en Venezuela Ed. Ministry of Education. Caracas, Venezuela 1962, p.243.
4. Ibidem.
5. National University Act, 28 September 1946. Decree No. 408.  
National Education Act on the Unified School and the 1953 University Act in Mudarra, Miguel Angel, op. cit. pp.200, 208, 243 and 244.
6. "La Universidad y la Revolucion" Speech at the Economists Society on 10 September 1973, in Uslar Pietri, Arturo Del Estado, la Economia, la Universidad y los Ranchos BETA C.A. Caracas, Venezuela, 1974 p.28.
7. Uslar Pietri, Arturo Venezuela, un Pais en Transformacion Italiana C.A. Caracas, Venezuela March 1958. p.12.
8. Mudarra, Miguel Angel, op. cit. p.244.
9. Mudarra, Miguel Angel Historia de la Legislacion Contemporanea en Venezuela Ed. Ministerio de Educacion Caracas, Venezuela 1962, p.258.
10. Republic of Venezuela, Ministerio de Educacion, Report 1958. Caracas, Venezuela, 1959.
11. 1958 University Act, Art. 13. In Ministerio de Educacion, Departamento de Planificacion, Nuevos Aportes a la Reforma de la Educacion. M.E. Publishers. Caracas, Venezuela, 1971 pp.188-217.
12. Ibid. Art.3.
13. Ibid. Art.11.
14. Republica de Venezuela, Ministerio de Educacion y Turismo Constitucion 1961. Imprenta Nacional. Caracas, Venezuela, 1961, Art.78.

CHAPTER III

VENEZUELAN HIGHER EDUCATION AND THE ATTITUDES OF STUDENTS  
IN THE SELECTION OF CAREERS

## CHAPTER III

3.1 INTRODUCTION

As it has been mentioned in the previous chapter, with the return of democracy in Venezuela began a process of democratization of education at all levels. Democracy also brought about a process of economic development envisaged to achieve economic autonomy by safeguarding national production and making it less dependent on exports. The process of economic development has demanded qualified manpower able to assist the new economic structure at different levels and this has led to the expansion of Higher Education Institutions and to the creation of new courses of study as required by national planning and priority areas of economic development.

The process of democratization of education envisaged the higher education system as a group of autonomous institutions. Autonomy, however, varies from one institution to another, e.g. the Law of Universities grants more autonomy to some institutions. The degree of autonomy of a particular institution influences the policy that that institution has regarding entry requirements and consequently one institution or a group of institutions differ from one another in their admission policies.

In this chapter we intend hopefully to elucidate the characteristics of the policy of expansion of higher education. The study will rely for this purpose on an



analysis of the different admission policies of Venezuelan higher education institutions from the beginning of the democratic period in 1958 until 1980.

The chapter is divided into two parts:

Part A: describes some fundamental characteristics of the Venezuelan Higher Education system.

Part B: analyses data connected with admission policies and the expansion of higher education. Part B also emphasizes the attitude of students toward their choice of study and relates it to those courses of study which have been regarded as priority areas in the national development plans.

## PART A

### 3.2 THE VENEZUELAN HIGHER EDUCATION SYSTEM

The Venezuelan Higher Education System includes:

- Universities
- Polytechnics
- Pedagogical Institutions
- Technological Colleges
- University Colleges
- University Institutes
- University Military Institutes<sup>1)</sup>

Universities are governed by the Law of Universities; Institutes and Colleges of Higher Education are governed by the University Regulations for Institutes

and Colleges and by their own internal regulations which describe them as an organisation, structure, or academic-administrative-governmental system and establishes their functions and study programmes. These institutions are national or private according to their financial support, ie. state funded or privately funded. '2'

State university education is free '3' and private university education is financed by students fees.

Higher education institutions offer short and long courses of study aimed to prepare manpower according to the socio-cultural and economic needs of the country. '4'

National universities are divided into autonomous and experimentals. '5'

Autonomous universities are independent and responsible for their own planning and study programmes which should be in agreement with the recommendations of the National Council of Universities. '6'

Experimental universities are autonomous but remain under state control through the Ministry of Education. Their planning and programmes are guided by the National Council of Universities which supervises the functioning of all higher education institutions which depend of the Ministry of Education. '7'

Private universities are under state supervision through the Ministry of Education and the National Council of

Universities. Their autonomy allows them to create courses of study aimed to meet the social needs of the local community where they are located provided they have the approval of the National Council of Universities. (8)

### 3.2.1 Entry Requirements

Students who have obtained a Certificate of Secondary Education are eligible for a place in any institution of higher education. In general, the offer of a place it is not subject to the marks obtained in secondary education or to his aptitude for the chosen course of studies. A Certificate of Secondary Education with a major in Science facilitates entrance to technical and scientific studies and a major in Humanities to studies other than the above.

Some institutions have special entry requirements such as qualifying examinations and aptitude tests. These special examinations are generally required by private institutions and in some experimental universities. (9) Autonomous universities have free access and applicants choose their studies according to their own preferences.

### 3.2.2 System of Studies

Some institutions divide their courses in academic years; others, in credits. Long courses last four or more years or eight or more terms (1 term = 6

months). Short courses last from two to three years or four to six terms.<sup>'10'</sup>

### 3.2.3 The Curriculum

The curriculum is divided in two areas: a basic or general area and a specialized area. Some courses have no divisions of any kind. The period of time allocated to the basic or general area varies from one institution to another even for the same course of study but in most cases it has a duration from one year (2 terms) to two and a half years (5 terms). The especialization area takes up the rest of the established period of studies.<sup>'11'</sup>

### 3.2.4 Degrees

All higher education institutions have full courses of study and a degree is obtained after the satisfactory completion of the course. Universities grant degrees of Licenciante, Economist, Engineer, Odontologist, Pharmacist, Doctor in Medicine, Lawyer to graduates in the different areas and of Master and Doctor to post graduates.<sup>'12'</sup> The degree of Higher Technician is granted in other institutions of Higher Education.

### 3.2.5 Priority Areas for Economic Development

Since 1970 national planning has been pointing out those areas which are vital to achieve autonomous economic development and in which skilled manpower is

needed. Those areas are: agriculture, oil production, iron and steel manufacturing, petrochemicals, aluminium, metalmechanics, naval industry, car industry, and agro-industry<sup>'13'</sup> in the General Area of Engineering, Architecture and Technology and Agriculture and Sea Sciences. Engineers and higher technicians are required in all the above mentioned areas.

In line with the suggestions outlined in national planning many institutions of higher education have been created since 1970 but despite the large number of new institutions<sup>'14'</sup> and an increasing enrolment, (see Table 2 in this Chapter) the number of graduates has not been large enough to meet the target set by the government, as it is mentioned in Chapter V of this study. In addition, the quality of graduates is well under the expectations of industry.<sup>'15'</sup> The above is an indication that the higher education system is not adequately fulfilling its role of preparing manpower to assist the autonomous development of the country.

### 3.2.6 Inconsistencies of the System

Different higher education institutions are not organised into a coherent whole. This lack of unity results in a large number of disarticulated and independent institutions<sup>'16'</sup> without a common curriculum which makes it difficult for students gradually to achieve higher levels of education (non-graduate to Ph.D. level).

There is a clear division among higher education institutions between those which emphasize the theoretical aspects of an area of study and those which emphasize the practical aspect. Generally, universities tend to stress theory and colleges and polytechnics tend to stress practice. University entry requirements do not require from the applicant to have previously attended any other institute of higher education. In addition, neither universities nor any other higher education institution has a policy of practical training in industry but prefer to carry out the practical aspect of the training in their own laboratories and study-centres which results in a complete lack of practical experience of graduates and great difficulty when they have to apply their skills as professionals in a real situation.

## PART B

### 3.3 FREE-CHOICE OF INSTITUTIONS AND COURSE OF STUDIES

The expansion of Venezuelan Higher Education has included a free-choice policy which allows students to enrol in the institution and course of study of their preference. So far it has been noticed that Secondary school leavers have shown a strong preference for traditional studies or studies with social prestige. Students have no restrictions in their choice of studies and as a result there is a large enrolment in traditional studies and a reduced enrolment in those priority areas

which would presumably lead to an independent national economic development. (See table 1 below)

TABLE 1

DISTRIBUTION OF ENROLMENT IN VENEZUELAN UNIVERSITIES  
BY AREA OF KNOWLEDGE IN THE PERIOD 1979-1980

Area of Study	Univ. Enrolment	%	Enrolment Colleges & Institutes	%	Total Enrolment in H.E.	%
Basic Sciences	6.509	2,73	-	-	6.509	2,18
Engineering Architecture & Technology	41.058	17,21	13.463	22,33	54.521	18,24
Agricultural & Sea Science	8.431	3,53	3.355	5,57	11.786	3,94
Health Sciences	25.984	10,89	305	0,51	26.289	8,80
Education	24.693	10,35	20.697	34,33	45.390	15,19
Economic & Social Sc.	63.029	26,42	11.769	19,52	74.798	25,03
Humanities	4.319	1,80	-	-	4.319	1,44
Basic Area	64.578	27,07	10.694	17,74	75.272	25,18
TOTAL	238.601	100%	60.283	100%	298.884	100%

Source: UPSU Statistical Bulletin No.6, Caracas, November 1979.

The large annual demand for courses of study with social prestige is one of the main reasons why these courses are still run by universities. Free access to these courses has led to the majority of applicants being enrolled in traditional and prestigious studies and only a minority in those institutions which offer studies leading to a degree of higher technician in areas connected to industry. (See table 2 below)



TABLE 2

## ANNUAL ENROLMENT IN VENEZUELAN HIGHER EDUCATION (1950-1980)

Years	Total	Universities		University Colleges & Institutes	
		No.	%	No.	%
1950-51	6.901	6.453	93,50	448	6,50
1951-52	1.993	1.671	83,84	322	16,16
1952-53	5.100	4.758	93,29	342	6,71
1953-54	7.279	6.945	95,41	334	4,59
1954-55	7.480	7.113	95,09	367	4,91
1955-56	7.532	7.193	95,50	339	4,50
1956-57	9.443	9.121	96,59	332	3,41
1957-58	11.003	10.657	98,86	346	3,14
1958-59	16.795	15.936	94,89	859	5,11
1959-60	22.088	20.652	93,50	1.436	6,50
1960-61	24.907	22.969	91,12	2.211	8,88
1961-62	30.489	28.062	92,04	2.427	7,96
1962-63	33.571	30.766	91,64	2.805	8,36
1963-64	36.999	34.202	92,44	2.797	7,56
1964-65	40.427	37.719	93,30	2.708	6,70
1965-66	45.879	43.049	93,83	2.830	6,17
1966-67	50.376	47.099	93,49	3.277	6,51
1967-68	56.137	52.599	93,70	3.538	6,30
1968-69	62.449	58.674	93,96	3.775	6,04
1969-70	70.816	66.218	93,51	4.598	6,49
1970-71	85.675	80.598	94,07	5.077	5,93
1971-72	95.294	88.505	92,88	6.789	7,12
1972-73	115.462	107.541	93,14	7.921	6,86
1973-74	159.269	145.462	91,33	13.807	8,67
1974-75	193.262	165.238	85,50	28.024	14,50
1975-76	221.581	185.518	83,72	36.063	16,28
1976-77	247.518	202.422	81,78	45.096	18,22
1977-78	265.671	218.392	82,20	47.279	17,80
1978-79	282.074	230.719	81,79	51.355	18,21
1979-80	298.884	238.601	79,83	60.283	20,17

Source: OPSU Statistical Bulletin No.6, Caracas, November 1979.

### 3.3.1 Preference for Autonomous Universities

The policy of free access and free choice of institutions and studies has been maintained mainly by the four autonomous universities. Although experimental universities and polytechnics tend to adopt the same

policy of free access, special entry examinations are required in some areas of study<sup>17</sup> and this has led applicants to opt for autonomous universities where they can be assured of a place without previous examinations. Consequently, there has been a high concentration of students in Autonomous Universities as it can be seen in Table No.3

TABLE No.3

COMPARATIVE ENROLMENTS: AUTONOMOUS AND EXPERIMENTAL UNIVERSITIES,  
NATIONAL UNIVERSITIES AND GENERAL ENROLMENTS FOR THE YEARS  
1964-65, 1970-71, 1971-72, 1972-73, 1973-74, 1974,-75,  
1975-76, 1976-77 and 1978-79.

Year	UE	NUE	AUE	EUE	NAU	NEU	7	8	9	10
64-65	38,731	33,655	32,171	1,484	4	2	83.06	95.59	3.83	4.41
70-71	80,598	68,305	60,753	7,552	4	3	75.37	89.00	9.37	11.00
71-72	88,505	81,006	70,762	10,244	4	3	79.95	87.35	11.57	12.65
72-73	107,541	100,598	88,598	12,000	4	3	82.39	88.00	11.15	12.00
73-74	145,462	130,102	116,706	13,396	4	3	80.23	89.70	9.21	10.30
74-75	165,238	147,112	130,500	16,612	4	4	78.97	88.71	10.05	11.29
75-76	185,518	166,155	145,668	20,487	4	5	78.52	87.67	11.04	12.33
76-77	202,422	184,946	152,136	32,810	4	6	75.15	82.26	16.21	17.74
78-79	230,719	210,529	158,530	51,999	4	8	16.71	75.30	22.53	24.79

Source: Reports from the Ministry of Education, 1965.  
Caracas, Venezuela, 1966.

C.N.U. - O.P.S.U. Statistical Bulletins 1973, 1974,  
1975 1976, 1977, 1980. Caracas, Venezuela.

Key: UE : University Enrolments  
 NUE : National Universities Enrolments  
 AUE : Autonomous Universities Enrolments  
 EUE : Experimental Universities Enrolments  
 NAU : Number of Autonomous Universities  
 NEU : Number of Experimental Universities  
 7 : % of AUE compared to UE  
 8 : % of AUE compared to NUE  
 9 : % of EUE compared to UE  
 10 : % of EUE compared to NUE

Note This table was compiled by the author of this study.

Table 3 above shows that Autonomous Universities  
account for the highest enrolment. There are 4 (10)

Autonomous universities since 1958. Experimental Universities (2 in 1962<sup>(19)</sup> and 8 in 1980) have a reduced enrolment and this suggests that students are reluctant to apply to his type of universities and still prefer courses of study in traditional and prestigious institutions.

### 3.3.2 Free Choice and Low Performance

It should be added that although universities do offer a variety of courses of study there is no clear policy leading to place students according to their aptitudes and in courses of study which have been regarded as priority careers in the national development plans. Students' own choice of studies still remains as the main criteria of selection regardless of the students' aptitude for the courses. This policy results in a high rate of drop-outs. Students who cannot cope with the course requirements and perform poorly tend to abandon the course and seldom graduate. Dr. Luis Beltran Prieto refers to this problem in his book El Estado y la Educacion en America Latina. In his analysis of the Venezuelan process of democratization of education he states:

"The process of democratization of education is not achieved solely by increasing the number of places in educational institutions. Experience shows that an increasing number of university students drop out half-way through their studies and the actual number of graduates does not reach 20%.<sup>(20)</sup>

Data obtained from Reports of the Ministry of

Education and the University Planning Office (O.P.S.U.) support the statements of the afore mentioned author as can be seen in the following Table.

TABLE No. 4

COMPARISON BETWEEN FIRST YEAR UNIVERSITY ENROLMENTS AND NUMBER OF UNIVERSITY GRADUATES IN 1966-67/1970-71, 1970-71/1974/75 and 1973/74/1977-78

Years	Enrolled in 1st Year	Years	No. of Graduates	% Success
66-67 <sup>(1)</sup>	27,113	70-71	5,159	19.02%
70-71 <sup>(2)</sup>	35,606	74-75	7,986	22.42%
73-74 <sup>(3)</sup>	66,635	77-78	10,782	16.18%

Sources: 1. Reports from the Ministry of Education Caracas, Venezuela, 1968.

2. O.P.S.U. Statistical Bulletin, Caracas, Venezuela, 1975, 1979.

3. Ibid, 1975, 1979.

Note: (a) All courses of study, except Medicine, have a duration of at least 5 years.

(b) This Table was compiled by the author of this study.

Table 4 above shows that after five years of study an average of twenty percent of students who enrolled in their first year in the periods 1966-67, 1970-71, and 1973-74 actually graduated.

It can therefore be assumed that the Free-Choice policy applied in the expansion plans of higher education institutions does not succeed in placing students according to their aptitudes and furthermore it

diminishes the possibility that students might take up courses of study which could well be amongst those which have been nominated as priority courses for economic development. This Free-Choice policy, therefore, only results in a waste of time for those students who have chosen a course of study only because they "think" they can successfully complete it.

Dr. Beltran Prieto points out that

"The most popular admission policy in Venezuela is the so-called "Open Doors". This policy accepts all students on the assumption that those who don't have the aptitude will fail in the first years of study or will voluntarily drop-out. From the above," goes on the author, "it can be concluded that our Higher Education system lacks appropriate counselling and selection mechanisms and uses a short-term procedure which gives the illusion of a democratic education<sup>(21)</sup>"

#### 3.4 FAILURES IN COUNSELLING AND SELECTION PROCEDURES

The lack of a selection policy and a counselling service has led to students being placed in courses of study regardless of their aptitude or the priority assigned to some areas of study.

In 1962 the Minister of Education pointed out:

"Many failures in our education system originate in technical errors in the processes of observation, counselling and selection of students throughout the education process .... It is of fundamental importance to expand the internal provision of counselling services in the Universities. Inadequate knowledge of the students' social background and psychology is at the root of the students' failure, of arbitrary allocation of places in Faculties and Colleges, of concentration in some courses and few students in

others which are more relevant to the individual and society. All this leads to a drop in the standards of education and disappointment and frustration on the part of the students and, in many cases, as it can be observed, to a disorientation of youth." (22)

The consequences of this lack of an adequate policy and guidance to solve the problem are later stressed in 1974 by the Minister of Education who pointed out:

"The Higher Education subsystem provides for more than 180,000 students. The majority of students have not chosen courses of study relevant to the actual needs of the country". (23)

However, government statements have not been followed by education policies designed to solve higher education problems. In the meantime, students attitude towards priority courses of study leading to assist national economic development has not changed.

### 3.5 HIGHER EDUCATION FREE-CHOICE POLICY AND ITS CONSEQUENCES

#### 3.5.1 Individualistic Choices in the Selection of Careers

Even when the higher education system is able to offer the courses of study necessary to provide the professionals required for national autonomous economic development it cannot guarantee that it will produce the quantity and quality required because the policy of free access to higher education does not take into account the need for higher technicians who can be trained in short

periods of time. This has encouraged individualistic choices and resulted in a high concentration of students in traditional careers in universities and low enrolment in institutions offering short courses of study (as is shown in Table No.2 in this chapter) in detriment of studies which are more closely related to national industrial development. Table No.5 below supports the above.



Table No.5

UNIVERSITY ENROLMENT BY AREAS OF KNOWLEDGE AND COURSES OF STUDYBetween 1964-65 and 1978-79

Courses	Periods						
	64-65	66-67	73-74	74-75	75-76	76-77	78-79
General Total	38,831	49,832	145,462	165,238	185,518	202,422	230,719
Area: Basic Cycle							
Total	677	3,113	18,806 <sup>a</sup>	37,586 <sup>b</sup>	42,455	55,172	73,030
Area: Basic Sciences							
Total	1,280	1,513	4,779 <sup>a</sup>	6,068 <sup>b</sup>	6,184	6,485 <sup>c</sup>	4,733
Biology	571	789		2,057	1,952	2,056	2,037
Physics & Maths.	229	308		2,514	2,667	2,675	1,280
Chemistry	480	481		1,497	1565	1,572	1,416
Area: Engineering, Architecture and Technology							
Total	7,008	6,892 <sup>d</sup>	25,749 <sup>e</sup>	23,424	27,902	26,585	33,564
Architec. Computing Eng.	1,223	1,655	3,808	3,055	4,322 <sup>f</sup>	4,192	4,318
Civil Eng. Construction Eng.	4,213	1,981	4,819	8,267	7,529	5,693	7,361
Mining Eng.	18	5	14	297	318	333	282
Oil Eng.	313	298	662	1,401	1,453	1,435	1,236
Systems Eng.	-	-	162	767 <sup>g</sup>	980	448	451
Electric Eng.	167	919	2,113	1,306	3,556	3,000	3,441
Electronic Eng.	-	-	569	630	520	536	739
Geodesic Eng.	149	289	129 <sup>h</sup>	101	99	121	308

Table No.5 (cont.)

UNIVERSITY ENROLMENT BY AREAS OF KNOWLEDGE AND COURSES OF STUDYBetween 1964-65 and 1978-79

Courses	Periods						
	64-65	66-67	73-74	74-75	75-76	76-77	78-79
Area: Engineering, Architecture and Technology (cont.)							
Industrial Eng.	491	481	1,406	1,388	2,321	1,943	2,900
Mechanic. Eng.	419	1,044	2,658	2,908	3,527	3,440	4,148
Metallurg. Eng.	-	88	-	341	367	393	190
Chemical Eng.	15	19	1,744	2,071	2,416	3,440	4,414
Technical Courses	-	-	-	223	233	1,223	1,369
Area: Agricultural and Sea Sciences							
Total	2,655	3,097	4,801	5,299	6,102	7,898	7,506
Agronomic Eng., Agricultural Eng. and Vegetal Product.	1,591	1,765	2,360	2,653	3,563	4,288	4,623
Forestry	251	220	361	178	138	348	171
Veterinary, Zootechnics & Animal Product.	739	1,112	2,080	2,190	2,022	2,735	2,246
Technical Courses	-	-	-	278	379	527	466

Table No.5 (cont.)

UNIVERSITY ENROLMENT BY AREAS OF KNOWLEDGE AND COURSES OF STUDYBetween 1964-65 and 1978-79

Courses	Periods						
	64-65	66-67	73-74	74-75	75-76	76-77	78-79
Area: Health Sciences							
Total	7,725	9,079	17,297	15,819	18,707	23,309	24,782
Bioanalysis	461	811	1,272	1,276	1,168	1,806	1,913
Nursing	-	63	161	123	136	157	199
Pharmacy	1,027	1,428	4,007	2,892	2,673	3,077	2,551
Medicine	5,152	5,391	9,364	8,743	12,038	14,968	16,470
Nutrition & Dietetics	71	154	140	194	211	786	588
Odontology	1,014	1,232	2,353	2,488	2,320	2,515	2,940
Technical Courses	-	-	-	103	161	-	121
Area: Social and Economic Sciences							
Total	15,869	20,491	46,406*	53,882	56,404	55,182	58,690
Administ. Accounting & Manage- ment	2,756	5,570	15,369	20,539	21,595	22,593	20,561
Social Media	394	653	644	2,148	2,040	1,857	2,257
Law	6,483	6,766	10,033	12,922	11,623	12,851	14,587
Economics	2,621	2,867	4,658	7,691	8,623	8,117	8,841
Statistics and barristerial sciences	487	602	-	1,025	990	850	1,011
International Studies & Administ.	230	231	-	683	596	501	608

Table No.5 (cont.)

UNIVERSITY ENROLMENT BY AREAS OF KNOWLEDGE AND COURSES OF STUDYBetween 1964-65 and 1978-79

Courses	Periods						
	64-65	66-67	73-74	74-75	75-76	76-77	78-79
Area: Social and Economic Sciences (cont.)							
Political Studies	-	-	-	-	858	429	650
Geography	74	113	79	463	493	617	522
Regional Planning	-	-	-	-	-	-	11
Psychology	1,943	2,079	536	2,772	2,387	2,263	2,400
Industrial Relations	55	329	2,763	3,452	3,849	1,631	2,255
Sociology & Anthropology	662	843	-	1,268	1,793	1,867	2,067
Social Work	238	551	-	1,017	877	831	1,034
Technical Courses	-	-	-	365	480	775	1,886
Area: Humanities and Education							
<b>Total</b>	<b>3,617</b>	<b>5,647</b>	<b>25,020<sup>a</sup></b>	<b>21,709<sup>b</sup></b>	<b>26,353<sup>c</sup></b>	<b>23,969<sup>d</sup></b>	<b>20,414</b>

1. Of a total of 3,113 students in the Basic Cycle 1,507 were enrolled in Engineering.
2. Of the total of students enrolled in the Basic Cycles 7,814 were in the Health Sciences and 2,373 in Engineering.
3. There is no detailed information on specialisms.
4. There is no detailed information on specialisms.
5. This number groups together Geology and Geodesics.
6. The information for this year gives a total number of 1,796 students enrolled but does not provide detailed information about their choice of studies.

7. The information for this year mentions a total of 25,749 students enrolled in Engineering but the sum of specialisms is inconsistent with this number.
8. Of the total of students enrolled in the Basic Cycle 5,582 were enrolled in Medicine and 7,966 in Engineering.
9. This figure includes 304 students without any specification about their course of study.
10. Includes System Analysis and Systems Engineering.
11. This figure includes 1,067 students without any specification about their choice of career.
12. Includes 41 students enrolled in Urbanism.
13. The figure includes 1,067 students without any specification about their choice of career.
14. The figure includes 182 students without specialism.
15. The figure includes 18 students enrolled in Hotel Catering and Tourism.
16. The figure includes 3,822 students without any specification about their career or area of knowledge.

Sources: Ministry of Education. Reports 1965 and 1967. Caracas, Venezuela and C.N.U.-O.P.S.U. Statistical Bulletins for the years 1973, 1975, 1976, 1977, 1979 and 1980, Caracas, Venezuela, and C.N.U.-O.P.S.U. Boletines Estadisticos Years 1973, 1975, 1976, 1977, 1979 and 1980, Caracas, Venezuela.

Note: The Table was compiled by the author of this study.

### 3.5.2 Concentration of Enrolment in Traditional Courses of Study

Table 5 above shows that the university enrolment for 1978-79 was of 230,719 students i.e. 81.79% of the total enrolment in 67<sup>(24)</sup> higher education institutions. In other words, 230,719 students were enrolled in 13<sup>(25)</sup> out of 67 higher education institutions, and 158,530 of them were enrolled in the four Autonomous Universities<sup>(26)</sup> (see Table 3 above). It is also worth emphasizing that during that same period the Universities were offering over 70<sup>(27)</sup> courses of study in different areas of knowledge, however, 100,552 students (43.58%) were enrolled in only seven of them: Architecture, Civil Engineering, Medicine, Trade Administration, Law, Economics and Education (see Table 5) which, although important, are not crucial to achieve national economic development. The concentration of students in about 10% of the courses of study offered shows that it is not enough to create and offer courses of study which are relevant to economic development (as planned in the State policy envisaged to achieve economic development) but it is also necessary to motivate students (who have long been used to choose traditional and prestigious careers) to take up these new courses and to establish a policy leading to a more compensatory distribution of students amongst careers.

The students' preference for traditional courses

of study goes as far back as the beginning of the democratic period in 1958. As it can be seen in Table No.5 in the period 1964-65 26,065 students (67%) out of a total of 38,831 were concentrated - as they are now - in the same traditional courses. In 1964-65 universities were offering thirty-one<sup>(28)</sup> different courses of study. The increasing number of career choices (including technical options such as Agricultural Engineering, Vegetal Production, Zootechnics, Animal Production, Mechanic Construction, Metalmechanics, among others) has not motivated Secondary School leavers who wish to pursue Higher Education to take up these new courses. On the contrary, long established courses of study such as Industrial Relations, Sociology, Anthropology, Law, Administration, Psychology and Economics continue to attract the majority of students who find an unrestricted support for their expectations in the university policy of "Open Doors".

In summary, the "Open Doors" policy has not changed students' attitude and has, on the contrary, reinforced the shortcomings long affecting the Higher Education subsystem, namely, a reduced number of graduates, the majority of whom graduate in traditional courses of study unrelated to the plans leading to autonomous development as envisaged by State. Chapter V further discusses the problem of graduates in Higher Education.

### 3.5.3 Inconsistencies in the Distribution of Students by Courses of Study

The way in which the expansion of Higher Education in Venezuela has developed, namely, as a policy of Free-Choice of studies without due regard to development plans has failed to achieve a rational distribution of students by institutions of Higher Education in general or by courses of study specifically. For example, in 1978-79 the Area of Engineering, Architecture and Technology offered 22 courses of study, however, Architecture and Civil Engineering gathered 34.80% of the students in that area. On the other hand, Mining Engineering, Oil Engineering, Electronic Engineering, Geodesics, Geology and Metallurgy gathered only 8.21% of the enrolment in that same area. The technical courses accounted for 4% of the enrolment. (see Table 5 in this chapter).

Another example is the case of the Area of "Agricultural and Sea Sciences". This area offered 10 different courses of study in 1978-79. It had 3.25% of the total university enrolment distributed as follows: Forestry 2.28%; Technical courses (four) 6.21% (see Table 5 in this chapter). Again, the majority of students (91,51%) are concentrated in the two traditional courses in this area: Agronomy and Veterinary.

While courses such as Mining and Oil Engineering, Electronic Engineering, Geodesics and



Metallurgy in the area of Engineering, Architecture and Technology accounted for 8.21% of the enrolment and the area of Agriculture and Sea Sciences for 3.25% in 1978-79 the area of Economics and Social Sciences concentrated 25.55% of the enrolment in that same period. Furthermore, in that same year enrolments in Law accounted for 6.32%; Economics for 3.83% (higher than the total for Agriculture and Sea Sciences); Administration for 8.91% and Education and Humanities for 12.36%. Another example is the area of Basic Sciences (offering four specialisms) which that year accounted for 2.05% of the total national enrolment in higher education institutions. Appendix 4 of this study shows that the tendency observed in 1978-79 did not change significantly in the period 1979-80, as regards students' choices of careers.

#### 3.5.4 Rejection of Short Technical Courses

The data supplied in Table 5 also shows the students' lack of interest in short technical courses. This rejection has special characteristics amongst those students who take up courses in institutions of Higher Education other than the universities.

In 1978-79 forty-eight out of sixty-seven institutions of Higher Education other than the universities offered short technical courses. The distribution of enrolment is shown in Table 6 below.

Table No.6

ENROLMENT IN INSTITUTIONS OF HIGHER EDUCATION OTHER THAN  
UNIVERSITIES BY AREA OF KNOWLEDGE  
YEARS 1978-79 and 1979-80

Area of Knowledge	1978-79	1979-80
Total	51,355	60,283
<u>Basic Cycle</u>	7,188	10,694
Engineering, Architecture and Technology	10,438	13,463*
Agriculture and Sea Sciences	3,373	3,355
Health Sciences	240	305
Education	20,343	20,697
Social and Economic Sciences	9,743	11,769

Source C.N.U.-O.P.S.U. Statistical Report No.2  
Caracas, Venezuela, August 1980.

\* This figure includes enrolments in five years courses in Polytechnics.

Note This table was compiled by the author of this study.

The low enrolment figures (18.21% and 20.17% for the years 1978-79 and 1979-80, respectively) show the lack of interest amongst students for technical courses of study. It should be added that the majority of students are enrolled in the areas of Health, Education and Social Sciences while the minority (26.90% and 27.90%) opts for courses in the areas of Engineering, Architecture and Technology and Agriculture and Sea Sciences. (See Table 6)

Students' performance in these institutions is far from successful. For example, between the period 1972-1973 and 1978-1979 these institutions increased their enrolment from 7,921 students in 1972-73 to 51,355 in 1978-79 but the number of graduates in this same period was only 13,503 i.e. 31% of the students enrolled in the first year. When referring to students' attitude towards technical courses Dr. Arturo Uslar Pietri says:

"We have an old weakness, as old as the Colonial period, and that is the idea that all education ends up in a doctorate and whoever is not a Doctor is disqualified ... This is a complex problem. We have fallen into purely quantitative considerations and, further, completely alien to national interest. We have reached the following conclusion: every Venezuelan must have a university degree ... Nobody wants to opt for a technical career because he considers that he will be socially disqualified. We persist in the idolatry of the Doctor in detriment of the country". (27)

From the data analysed it can be concluded that although the policy of free access to higher education is predominant in all institutions of higher education it tends to be more widely applied in autonomous universities while other institutions and experimental universities have tended to ask for special entry requirements. This has resulted in:

- a) Concentration of students in autonomous universities
- b) low enrolment in other higher education institutions

On the other hand the policy of free choice of studies on the part of the student has resulted in:

a) Students who lack the aptitude or maturity for the course of studies they have chosen tend to stay for longer periods at the institution and therefore their training becomes more costly.

b) Students who lack the aptitude for the course of studies they have chosen at first tend to change to another course until they find a course suitable to their aptitude or drop out wasting considerable time.

### 3.6 FURTHER PROBLEMS OF THE EXPANSION POLICY

As it has been mentioned earlier the above problems result in a waste of time for the students and in a disadvantage for all those applicants who, perhaps having the aptitude, were not able to obtain a place. Due to the high demand for places in Higher Education institutions the National Council of Universities has adopted a policy of pre-registration. This policy is intended to distribute applicants according to the number of places available in higher education institutions.

#### 3.6.1 The National Pre-Registration Policy

In 1973 a policy of national pre-registration for Higher Education studies was established.<sup>(30)</sup> This policy has not provided secondary school leavers - who wish to pursue higher education studies - with adequate guidance regarding choices of courses suitable to their

aptitudes or motivation to take up courses of study which are considered relevant to assist the process of autonomous economic development. The pre-registration policy has been restricted to the distribution of students according to the availability of places in higher education institutions. However, as the demand is greater than the number of places available students who can't get a place have to wait for at least a year to re-apply. Students who do get a place join the course of their choice and, as it has been said earlier in this chapter, students' choices tend to concentrate on traditional courses unconnected to development needs. Appendices 6 and 7 show that out of 99,342 applicants to higher education courses in 1980, 50,843 (51.18%) obtained places and the remaining had to join a waiting list. The Appendices also show that students tend to concentrate on traditional courses of study and a reduced number opt for priority courses leading to train manpower able to assist economic development.

It can therefore be concluded that the policy of pre-registration does not succeed in establishing a rational distribution of students according to their aptitudes and to national requirements for human resources and as a consequence it does not benefit the students or satisfy national social needs. On the other hand, students who do get a place in Higher Education Institutions do not have the advantage of a curriculum which responds to their interests and needs.

### 3.6.2 The Curriculum

The inadequacy and lack of flexibility of the current Higher Education curriculum and its inconsistency with the nation's and students' needs constitutes a problem for students who can only obtain an academic degree if they have completed their course of studies, that is, after a period of two or three years for short courses or five years for long careers. If a student interrupts his studies before graduating, works for a period of time, and then re-registers his work experience does not count as a credit even when it might be directly related to the course of studies he is pursuing. This is especially true and critical in technical specialisms. Therefore, even when students need to work they prefer to complete their studies before joining the labour force in order to avoid difficulties such as a change in the curriculum which might invalidate the subjects they have already approved.

Furthermore, when students do make the right choice of studies - ie. according to their aptitude - higher education institutions do not have a curriculum relevant to production and therefore the acquired proficiency is inadequate and very often useless when students join the industry as professionals.

The origin of the problems and characteristics of the Venezuelan Higher Education Curriculum, however, lie elsewhere as it is explained below.

### 3.6.3 Lack of Flexibility and Consistency of the System

Even when there is a policy of credits which allows students who have opted for short courses to pursue higher degrees at universities if they so wish, this policy does not operate in practice because of the lack of unity among different institutions which often have different curriculums. Credits are arranged by subjects but the lack of a central body which can coordinate a curriculum for similar or related courses of study makes it difficult for this policy to work. An example of the above is institutions which offer similar courses of studies but have different syllabuses. In other cases, a subject which in the university is covered in one term (6 months) and is equivalent to two credits in another institution the same subject is covered in three terms (18 months) and has a greater number of credits. Although this might not be a disadvantage when it results in a greater number of credits the reverse is not true. Therefore, even when the contents of a subject are the same they are not interchangeable and this results in a disadvantage for the student. This difficulty leads students who wish to obtain the highest degree in their studies to enrol in the universities from the beginning and disregard institutions which offer shorter courses of study.

In summary, the lack of flexibility and consistency of the curriculum, characteristic of the Venezuelan Higher Education system, does not contribute to

a change of attitude in students who realise that its disadvantages are far greater than its advantages and thus opt for traditional careers. Consequently, the possibilities of training human resources according to national needs become more and more remote. Additionally, this lack of flexibility and consistency leads to a waste of material resources and financial problems.

#### 3.6.4 Costs

The independent nature of all institutions of higher education in Venezuela means that each institution has its own staff and material resources all of which raises the cost of this level of education. Similarly, each institution has a separate governing body. This duplicity of staff, buildings, teaching resources, equipment etc. not only raises the cost of education but it also prevents making the most of available resources. For example, when one institution lacks some particular teaching resource it has to do without it even when it might be available in another institution because of the numerous bureaucratic difficulties in lending or sharing equipment.

Higher education has been considered as having an important role to play in the national plans leading to autonomous economic development.<sup>(31)</sup> These plans envisaged a diversification of the economy by further exploiting natural resources and industrialization. In order to achieve this target it is essential that the



country can rely on a national team of technicians and professionals able to develop appropriate domestic technologies. Higher education would be responsible for training qualified manpower to assist this development process. However, this level of education in Venezuela has developed into a number of independent institutions with little or no relation amongst them or to the rest of the education system. Its expansion has followed this same unconnected pattern and has not taken into account a unifying criteria which would give cohesion to the system as a whole. On the contrary, Higher Education lacks curricular cohesion and its expansion policy - which grants students unrestricted freedom to take up courses of their own choice - has led to further concentration of students in traditional and prestigious courses of study unconnected to priority areas of development. In summary, the expansion of Higher Education has not solved its old problems of adequately fulfilling its role of training skilled manpower to assist national economic development and, on the contrary, has led to the following new ones:

- Courses of study unconnected to national reality.
- Lack of guidance towards and information about new priority courses of study.
- Inconsistency between long and short courses of study and difficulty in transferring from one to another.
- Poor quality of education.
- Waste of educational resources amongst institutions.

### 3.7 CONCLUSION

This chapter stresses that the expansion of Higher Education has tended to reinforce students' preferences for courses of study unconnected to national socio-economic development plans. On the other hand students who have opted for courses of study in the areas of Engineering and Technology or Agriculture and Sea Sciences - nominated as priority areas of study - have not chosen courses connected with economic development. Furthermore, students who do choose careers connected with national industrial development - as envisaged by State plans - are not well prepared to meet industrial demands. (See Chapter Five of this study where it refers to the economic consequences of Higher Education expansion). This is due to the fact that the expansion of Higher Education has been carried out without adequate policies leading to place students in careers which while connected to national economic development plans also respond to the expectations and aptitude of students and lead to produce the professionals required for national industrial development.

REFERENCES CHAPTER THREE

1. See Appendix No.1.
2. Law of Universities., Art. 8. Ministry of Education, Planning Department in Nuevos Aportes a la Reforma Educativa M.E. Publishers, Caracas, Venezuela 1971, pp.188-217.
3. Ibid. Art. 11.
4. C.N.U.-O.P.S.U. Oportunidades de Estudio en las Instituciones de Educacion Superior de Venezuela, 1981, Caracas, Venezuela.
5. Law of Universities, Arts. 9 and 10. Ministry of Education, Planning Department Nuevos Aportes a la Reforma Educativa M.E. Publishers, Caracas, Venezuela, 1971. pp.188-217.
6. Ibid. Art. 9.
7. Ibid. Art. 10.
8. Ibid. Arts. 8 and 173.
9. C.N.U.-O.P.S.U. Oportunidades de Estudio en las Instituciones de Educacion Superior en Venezuela Año 1980. Caracas, Venezuela, 1980.
10. Ibidem.
11. Ibidem.
12. C.N.U.-O.P.S.U. Statistical Bulletin No.6, Caracas, Venezuela 1979 p.42.
13. IV National Plan, 1970-1974; V National Plan 1975-1980; VI National Plan 1981-1985, Caracas, Venezuela. C.N.U.-O.P.S.U. Oportunidades de Estudio, 1981, p.5.
14. See Appendix 3.
15. Republica de Venezuela CORDIPLAN VI Plan de la Nacion 1981-1985. Talleres Graficos de CORDIPLAN, Caracas, Venezuela, 1981 Vol.II.
16. Herrera Campins, L. President of Venezuela. Address to the Congress of the Republic, Caracas, Venezuela 12 March 1980, p.273.
17. C.N.U.-O.P.S.U. Oportunidades de Estudio en las Instituciones de Educacion Superior de Venezuela 1980, Caracas, Venezuela 1980.

18. C.N.U.-O.P.S.U. Statistical Report No.2. Caracas, Venezuela, August 1980, pp.15-17.
19. Ibidem.
20. Prieto, F., Luis Beltran El Estado y la Educacion en America Latina (2nd Edition) Monte Avila. Caracas, Venezuela 1978 pp. 256-257.
21. Ibidem.
22. Ministry of Education Memoria y Cuenta de 1962. Caracas, Venezuela 1963, p.x.
23. Ministry of Education Memoria y Cuenta de 1974. Caracas, Venezuela 1975, p.xxxix.
24. C.N.U.-O.P.S.U. Statistical Bulletin No.2. Caracas, Venezuela, August 1980, pp.15-17.
25. Ibidem.
26. C.N.U.-O.P.S.U. Statistical Bulletin Vol.I, Caracas, Venezuela, November, 1980 No.7 p.104.
27. C.N.U.-O.P.S.U. Oportunidades de Estudio en las Instituciones de Educacion Superior en Venezuela Ano 1980. Caracas, Venezuela 1980.
28. Republica de Venezuela, Ministry of Education, Memoria y Cuenta, 1965. Caracas, Venezuela 1966. Table No.218.
29. Pena, Alfredo Conversaciones con Arturo Uslar Pietri El Ateneo, Caracas, Venezuela 1978, pp.100-101.
30. International Symposium on Higher Education Informe Nacional de la Republica de Venezuela, Lima, Peru, 17-22 November 1980, p.18.
31. Law of Universities, Art. 3, op. cit.

CHAPTER IV

RELATION BETWEEN HIGHER EDUCATION AND PRECEDING LEVELS  
OF EDUCATION IN VENEZUELA

## CHAPTER IV

4.1 INTRODUCTION

A brief description of the educational levels precedent to Higher Education is considered in this chapter. Emphasis is made in the way Secondary Education is linked to Higher Education, pointing out how the expansion that Higher Education has had affects the development of Secondary Education, especially in the selection of the major areas of subject matters (Menciones) and careers. This chapter also examines Higher Education policies designed to overcome the problems resulting from the disconnection among levels of education.

Chapter IV is divided into two parts: Part A describes the preceding levels to Higher Education in Venezuela emphasizing Secondary Education and its characteristics in 1980. Part B deals with the problems resulting from the disconnection between Secondary and Higher Education.

PART A4.2 PRECEDING LEVELS OF HIGHER EDUCATION

Venezuelan Primary and Secondary education levels are going through a transitional stage (between a traditional model and a reformed model introduced in the

academic year 1980/81). These reforms were officially started with the introduction of a new level - Basic Education - and backed by a government Decree<sup>'1'</sup>. Due to this transitional stage it is still necessary to refer to two co-existing models in Primary and Secondary Education.

#### 4.2.1 The Traditional Primary Education Model

Traditionally, Primary Education has been compulsory from the age of 7. Primary Education lasts for a period of six years divided into grades, each grade with a duration of no less than one year.<sup>'2'</sup> To proceed from one grade to another the student requires a qualification of 10 points or more in a mark scale of 1 to 20.<sup>'3'</sup> This final qualification is based on the student's year performance and a final examination.<sup>'4'</sup>

Primary Education is aimed at (a) providing the student with general knowledge, (b) developing in the student individual and social habits which will facilitate his socialization into work and society, and (c) preparing the student, according to his abilities, to proceed to further education.<sup>'5'</sup>

#### 4.2.2 Secondary Education

Secondary Education has been undergoing several reforms since 1980, when the Ley Organica de Educacion was approved. In 1958 Secondary Education was divided into Secondary Education, Teachers' Training and -Technical

Education. '6' Each division had a basic period of two years. '7' Nowadays, the Secondary level is constituted by a Common Basic Cycle of three years and a Diversified Cycle of a duration of no less than two years.

The Common Basic Cycle is a continuation of the general knowledge background initiated in Primary Education and also prepares the student for the Diversified Cycle. '8'

The Diversified Cycle has two main aims: it prepares the student to proceed to Higher Education and trains technicians and professionals for development. In order to achieve the above mentioned aims several new areas of subject matters (Menciones) have been introduced. (In addition to the traditional areas of Sciences and Humanities.). The creation of these new areas of study has been intended to motivate students to take up technical studies.

Both cycles are divided in years; each year has a number of subjects. To proceed from one year to another the student must have passed an examination in all the subjects of the year he is currently studying. Pass marks are equal or higher than 10 points in a mark scale from 1 to 20. This qualification is based on the students' year performance and a year examination.



#### 4.2.3 The Reformed Model

The main characteristics of the educational reform at undergraduate level are laid down in the Ley Organica de Educacion, 1980. The Law establishes that the reform - started in the academic year 1980/1981 - merges the traditional Primary level with the Secondary Common Basic Cycle.<sup>'9'</sup> This merge gives origin to the present Basic Education.

#### 4.2.4 Basic Education

Basic Education is compulsory and lasts for 9 years. In the reformed model compulsory education is thus extended.<sup>'10'</sup> Basic education aims at: (a) contributing to the integral education of the student by developing his skills and his scientific, technical, humane and artistic abilities and (b) initiating the students in the training of disciplines and techniques which will enable them to perform a socially relevant activity and to give them educational and vocational counselling.<sup>'11'</sup>

#### 4.2.5 Secondary Diversified Education

In line with the above mentioned reforms in Basic Education the Diversified Cycle is now called Secondary Diversified and Professional Education. It lasts for a period of no less than two years. Its aims are: (a) to continue the educational process initiated in the preceding level; (b) to widen the integral and

cultural education of the student; (c) to provide the student with a context which will facilitate a decision about further studies and work; (d) to train him in a productive work and (e) to guide him in his choice of higher education studies. <sup>(12)</sup>

At the end of their Secondary Education students obtain a Secondary School Certificate or a degree of Intermediate Technician. Both qualifications enable them to proceed to Higher Education. <sup>(13)</sup>

Secondary Education in Venezuela has been especially important because it has to provide students with information and knowledge necessary to perform well in Higher Education studies and to make judicious career choices. So far, Secondary Education has been unsuccessful in motivating students to pursue technical careers which will assist the economic development of the country. On the contrary, the students' tendency has been to opt for traditional university courses. <sup>(14)</sup>

## PART B

### 4.3 DISCONNECTION BETWEEN SECONDARY EDUCATION AND HIGHER EDUCATION

As a result of the students' tendency to enter traditional courses of study in universities a larger concentration of them is found in the so-called "menciones" (subject matter areas) of Sciences and

Humanities of the Diversified Cycles of the Venezuelan Secondary Education as these lead straightly to the traditional careers offered by the universities.<sup>13</sup> This tendency is reinforced because the access to Higher Education - especially to the universities - is oriented by the policy of free choice<sup>14</sup> that does not take into account the academic aptitudes of secondary school leavers nor the country's need to train human resources to carry out national development plans. In general there is no effective policy leading students to careers other than the traditional.

Students register in the "Menciones" of Sciences and Humanities as these widen their possibilities to enter any of the options of their preference in Higher Education. It can be said, then, that the main motivation students have to select a subject matter area (Mencion) in the Diversified Cycles of Secondary Education comes from the universities and the courses of study they offer. This, as it has been pointed out in Chapter Three of this thesis, has produced a high concentration of students in specialisms which are not considered by the development plans. On the other hand, we find a reduced number of students in other institutions and careers that train and form professional and technicians which are required for national development.

As Higher Education in Venezuela has developed, in its process of expansion, into a number of independent institutions - with little or no relation amongst them -

and unconcerned of national interests to set up entrance policies and to place students in institutions and courses of study as well as to establish a sound relationship between the different levels of the educational system. This situation has made it very difficult for Secondary Education to adjust as Higher Education develops, transform itself and expands without considering any unifying criteria between the two educational levels with serious consequences for this level of education. As Mrs. Ruth Lerner states:

"The different requirements each faculty, each school poses and the changes introduced each academic year turns the first course of Higher Education into a well of failures and frustrations for approximately half of the students. If the connection Secondary Education/Higher Education is not achieved, it is possible that the problems of Secondary Education will pass to Higher Education with more serious consequences than the present ones, increasing the critical situation that is affecting the latter."<sup>17</sup>

#### 4.3.1 The Higher Education Basic Cycle

The problems derived from the lack of connection between the Higher and Intermediate levels of education has led some Higher Education institutions to carry out measures which intend to solve these problems to the detriment of the academic emphasis which should be made in the careers from their beginnings. The afore mentioned educationalist, Mrs. Lerner when referring to this, says:

"Higher Education centres, at present, try to set up one or two-year propedeutic courses with the aim to establish the continuity of the educational system and to level the different cultural back-

ground of the students. This implies - on the part of Higher Education - the renunciation to its own interests, to faculties, schools or groups in order to achieve a rational and harmonious planning." (18)

Then Mrs. Lerner goes on pointing out that:

"Propedeutic courses are useless repetitions of baccalaureate programmes as well as exaggerated requirements designed to turn into means of eliminating students." (19)

#### 4.3.2 Characteristics of Propedeutic Courses

Propedeutic courses in Venezuelan Higher Education institutions have several denominations such as:

- Basic Cycle
- Basic Course
- Propedeutic Course
- Levelling Course
- General Studies (20)

The first four are, generally, preparatory courses leading to qualify for University courses of study. They are not intended to select students nor to place them in courses of study according to their performance. These preparatory courses only seek to complement Secondary Education.

General Studies is a basic course for all the students who have been accepted in the first term or first year of any Higher Education institution. Although they differ from the first four propedeutic courses in the sense that they are attended by students who have already

been accepted in a Higher Education institution their aim is more or less similar to the former i.e. it seeks to reinforce and complement the Diversified Cycle in order to meet the academic demands of Higher Education courses. As Ruth Lerner points out, these courses, in general, are "useless repetitions of the contents of the Diversified Cycle".

#### 4.3.3 Duration of Courses

The duration of the preparatory courses varies from one institution to another and from one course to another, but in general, they last from one to two and a half years or from two to five terms according to the programme of study of each institution. The length of these courses is closely related to the period of study required for a particular course of study at university level. The period of time spent in the preparatory course is part of the total length of the course at university level. E.g. if a course of study has a duration of five years it may be divided as follows:

Basic course	:	2 years
Professional studies	:	3 years
Total	:	5 years

This "Basic Courses" policy has been applied in several higher education institutions for both short and long courses, eg. a short course (2 or 3 years) has a basic course of at least 1 year.<sup>(21)</sup> Basic compensatory

courses therefore is a policy designed by Higher Education institutions to overcome the inadequacies of secondary school leavers who have already been accepted by the university. This policy, therefore, does not solve the problem of training professionals as required by development plans as no advice regarding students' aptitude for a course or information about priority courses of study is provided and students only join these courses once their choice of career has been made. In other words, the choice of studies is previous to the preparatory course. A policy aimed to establish an adequate continuity between secondary and higher education should make Higher Education the level responsible to provide information to Regional Secondary Education institutions about their courses and demands so that secondary education contents and methodology can be adapted to Higher Education requirements. Higher Education institutions should also be responsible to provide information about their courses of study and the relevance of these for national development.

#### 4.4. CONCLUSION

While Venezuelan Higher Education continues its expansion creating entrance problems, due to the fact that demand surpasses the number of places available (as pointed out in Chapter Three when referring to the National Pre-registration process), disconnected from precedent educational levels and unconnected of the needs

of national development, no educational policies that could give cohesion to the system are established and which would make Higher Education the level that because of its links to national circumstances and its organization would become the guidance of the educational system as it is stated in the Venezuelan Universities Act.

"Besides establishing the internal pedagogical norms which permit the harmonious continuity of university teachings with the education provided in the former educational levels, the universities will point out the fundamental links to improve the general quality of the country's education".<sup>(22)</sup>

The President of the Republic in his first Address to Parliament in 1980 referred to the expansion of Higher Education disengaged from national reality and from the educational system when stated:

"With relation to Higher Education, the subsystem presents a notorious disconnection from the rest of the educational system as well as a low response from that sector to satisfy the needs of national reality. A variety of institutions of Higher Education exist all over the country but their functioning does not follow either a coherent or continued line which would bring about satisfactory achievement."<sup>(23)</sup>

This leads to the conclusion that the expansion of Higher Education as a policy of democratization without establishing rational policies based on the interests of national development does not contribute to make of education a process able to effectively assist national economic development.



Note: Appendix 8 of this study attempts to provide a Secondary Education curricular model which would adjust to the alternative Higher Education policy suggested in this study.

REFERENCES CHAPTER FOUR

1. Republic of Venezuela, Decreto No.646, Gaceta Oficial No.32,005, 13 June 1980. Ed. Romor, Caracas, Venezuela, Art.5.
2. Republic of Venezuela. Ley de Educacion, Gaceta Oficial No.24,813, 1955. Ed. La Torre, Caracas, Venezuela. Arts. 23 and 24.
3. Ibid. Art. 95.
4. Decree No.245. Gaceta Oficial No.25,677, 6 June 1958. Ed. La Torre, Caracas, Venezuela, 1958 in Art.99 Ley de Educacion, 1955.
5. Republic of Venezuela, Ley de Educacion, op. cit. Art. 23.
6. Ibid. Art.18.
7. Almea, Ruth Lerner de, La Diversificacion de la Educacion Secundaria. Cultural Venezolana S.A., Caracas, Venezuela, 1972 p.182.
8. Republic of Venezuela, Ministry of Education Plan de Estudio de la Educacion General, Caracas, 1968 (Mimeo), p.3.
9. Republic of Venezuela, Decreto No.646, 13 June 1980, Caracas, Venezuela.
10. Republic of Venezuela, Ley Organica de Educacion, Gaceta Oficial No.2,635 Extraordinario, 28 July 1980, Caracas, Venezuela, Art.9.
11. Ibid. Art.21.
12. Ibid. Art.23
13. Ibid. Art.24.
14. C.N.U.-O.P.S.U. Tendencias de la Educacion Superior en Venezuela, Caracas, Venezuela, August 1978, p.21.
15. The "Mencion" in Sciences allows students' access to any scientific or technical career, and the "Mencion" in Humanities is a requirement to any career of the Social Sciences area, Humanities or Teaching.
16. Prieto Figueroa, L.B. El Estado y la Educacion en America Latina Monte Avila, 2nd edition, Caracas, Venezuela, 1978, p.257.

17. Almea, Ruth Lerner de, La Diversificacion de la Educacion Secundaria. Cultural Venezolana, S.A. Caracas, Venezuela, 1972, p.214.
18. Ibid.
19. Ibid.
20. C.N.U.-O.P.S.U. Oportunidades de Estudio en las Instituciones de Educacion Superior de Venezuela, Caracas, Venezuela, 1980.
21. Ibid.
22. Ley de Universidades, 1970. Caracas, Venezuela, Art.146, in Republica de Venezuela, Ministerio de Educacion, Nuevos Aportes a la Reforma Educativa Imprenta del Ministerio de Educacion, Caracas, Venezuela, 1971 pp.188-217.
23. Campins, Luis Herrera, Presidente de la Republica. First address to Parliament. Imprenta Nacional, Caracas, Venezuela, 12 March 1980, p.273.

CHAPTER V

HIGHER EDUCATION GRADUATES AND ECONOMIC DEVELOPMENT IN  
VENEZUELA

## CHAPTER V

5.1 INTRODUCTION

The preceding chapters of this study have dealt with several relevant aspects connected with the main purpose of this thesis: Chapter Two pointed out that the return of democracy in Venezuela led to changes intended to achieve national economic development. The economic strategy planned sought to obtain from the government a compromise to use the income obtained from oil exports in developing a number of programmes intended to diversify the economy through a nationwide process of industrialization. In this process, education - and in particular Higher Education - was to have the responsibility of training manpower to assist the development programmes.

The return of democracy also brought about a significant expansion of education at all levels. As it has been discussed in Chapter Three the expansion of Higher Education developed into a number of independent institutions, with different curricula, and unconcerned of national interests. A lack of willingness on the part of the students to change their attitude toward new courses of study more relevant to development plans has been reinforced by a curriculum which remains entirely disconnected from the needs of the nation.

The lack of curricular unity in Higher Education has contributed to the failure of this level of education

to play its role as the guidance of preceding levels of education, particularly Secondary Education as it has already been discussed in Chapter Four. On the contrary, the lack of curricular unity has reinforced secondary school leavers' tendency to make individual choices of study unconnected to national reality.

The data on Higher Education graduates in this chapter provides a broad perspective of the consequences derived from a Higher Education system which is divided into unconnected institutions, lacking curricular unity and unconcerned of national needs.

The data in this chapter corresponds to the following periods:

1960 - 1966

1967 - 1973

1974 - 1978

Some economic consequences derived from the expansion of Higher Education are described at the end of the chapter.

## 5.2 PERIOD 1960-1966

The most reliable source of data of the professional population during this period is the National Census of 1961. The Census established that in that year there were 29,541 university graduates in Venezuela. In order to help us arrive at a relevant analysis the distribution of graduates, by area of study, will first be

considered, in particular to see tendencies and preferences in studies in 1961.

Of a total of 29,541 graduates, 923 had degrees in Basic Sciences; 9,517 in Engineering, Architecture and Technology; 1,334 in Agricultural Studies; 9,084 in Health Sciences; 7,219 in Social Sciences and 1,019 in Humanities and Education. The remaining 445 graduates were distributed in various other studies as can be seen in Table A-1.

TABLE A-1

VENEZUELAN UNIVERSITY GRADUATES  
BY AREA OF STUDY AND SPECIALISM  
(1961)

<u>Area/Specialism</u>	<u>Graduates</u>	<u>%</u>
<u>Basic Sciences</u>	923	3.13
<u>Engineering, Architecture and Technology</u>	9,517	32.22
Architecture	651	2.20
Land Surveying	524	1.77
Construction	99	0.33
Civil Engineering	4,538	15.36
Mechanic Engineering	630	2.13
Electric Engineering	140	0.47
Mining Engineering	899	3.04
Others	1,631	5.52
Geology	405	1.37
<u>Agricultural Sciences</u>	1,334	4.52
Agriculture	923	3.12
Veterinary	411	1.39
<u>Health Sciences</u>	9,084	30.75
Pharmacy	1,529	5.17
Bioanalysis	872	2.95
Medicine	5,291	17.91
Odontology	1,392	4.71
<u>Social and Economic Sciences</u>	7,219	24.44
Law	4,256	14.40
Economics	2,963	10.03
<u>Humanities</u>	1,019	3.44
Other Studies	445	1.50
TOTAL	29,541	100.00

Source: National Census, 1961.

Note: This table has been compiled by the author of this study.



### 5.2.1 Concentration in Classical Careers

As it can be seen in Table A-1 above, there was a marked preference for Engineering (32.22%), followed by Health Sciences (30.75%) and in third place Social Studies (24.44%). It seems significant that choices in Basic Sciences only represent 3.13% well below choices in Health Studies and Engineering. It is also significant that Civil Engineering represents 47.68% of choices in the area of Engineering well above any other choice in the same area including Mining and Geology which graduated very few students. Civil engineers represented 15.36% of the total professional population of the country. Although in 1961 Engineering had the highest percentage of graduates in higher education, doctors in Medicine had the highest percentage by specialization (17.91% of the general total and 58.95% of the Social Sciences Area group.) Economics followed with 10.03% of the total number of graduates in higher education. Table A-1 above, shows that Doctors, Civil Engineers, Lawyers and Economists were the largest professional groups in the country.

The 1961 National Census gave a broad quantitative picture of graduates in the country and enough information to allow policy planning in higher education intended to prepare manpower for national social and economic development. This planning was aimed at specific goals which would assist the country's development.

As it has been mentioned before, in 1961 the largest professional groups were concentrated in the services area: health, construction, law and public and commercial administration. A sample of graduates from the most representative national university - the Universidad Central de Venezuela - shows that the distribution of graduates coincides with the distribution of professionals in the Service area as can be seen in Table A-2 below.

Table A-2

GRADUATES FROM THE UNIVERSIDAD CENTRAL DE VENEZUELA  
BY SPECIALISM 1950 - 1963

Specialization	Graduates	%
Medicine	3,344	30.28
Economics	2,042	18.49
Engineering	1,577	14.28
Law	1,434	12.99
Humanities	782	7.08
Odontology	468	4.24
Pharmacy	415	3.75
Architecture	340	3.07
Agronomy	284	2.58
Veterinary	222	2.02
Basic Sciences	135	1.22
TOTAL	11,043	100.00

Source: Report, Universidad Central de Venezuela, Summary of graduates, Caracas Venezuela.

Note: This table has been compiled by the author of this study.

Table A-2 above, shows that Medicine, Economics, Engineering and Law are the most popular specializations and well above any other choice of studies. It is worth

noting that up to this date Civil Engineering had the largest number of graduates in the general area of Engineering; agricultural and veterinary studies represent only 4.60% of the total - a very low figure for Venezuela which has large tracts of cultivable land. Basic Sciences had only 1.22% of the total which shows the lack of interest in this area of studies. This small percentage is specially significant if it is taken into consideration that no requirement other than an interest to pursue a higher education degree was required for enrolment.

During the first period (1960-1966), 17,861 students were graduated and no significant variation could be observed in their distribution as compared to that of 1961.

Table A-3

DISTRIBUTION OF UNIVERSITY GRADUATES BY AREA OF STUDY  
PERIOD 1960 - 1966

Area of Study	Graduates	%
Social and Economic Sciences	7,604	42.58
Health Sciences	4,27	24.78
Engineering, Architecture and Technology	2,559	14.33
Education	2,064	11.55
Agricultural and Sea Sciences	661	3.70
Humanities	354	1.98
Basic Sciences	192	1.08
TOTAL	17,861	100.00

Source: Statistical Reports and Memoirs of Venezuelan Universities, Period 1960-1973.

Note: This table has been compiled by the author of this study.

Table A-3 above, shows the distribution of graduates by area of study during the period 1960-1966. It can be seen that the most popular areas of study continue to be Economics and Social Sciences, Health Sciences and Engineering, Architecture and Technology. Although choices are broadly the same it can already be noticed some changes within the areas of Economics and Social Sciences, e.g. there is a larger number of students in Social and Economic Sciences than in Health and Engineering. This tendency had already been noticeable in

1963 when it could be observed that Economics and Law accounted for 31.48% of graduates in the country (see Table A-2) and in 1961 with a 24.44% of graduates in the same area at national level (National Census of 1961 (see Table A-1)).

Table A-3 also shows an increase in the area of Education which became one of the four major areas of study leaving behind both in absolute and relative terms areas such as Agricultural and Sea studies which had so far had the largest number of graduates among the less preferred areas.

The most relevant area among the three predominant groups - as regards the economic development of the country - is Engineering, Architecture and Technology. This area provides graduates and experts needed in production. However, when analysing the distribution of graduates in this area (see Table A-4) we find that Civil Engineering still has the largest number and proportion of students with 1,153 graduates in a group of 2,559 (45.05%). If we compare this number of graduates with those of other specialisms in Engineering such as Mines, Metallurgy, and oil (of paramount importance for the industrialization of the country in the fields of Petrochemicals and Manufacture of Iron and Steel) we find out that the number of Civil Engineer graduates is five times larger than those graduated in oil production, thirteen times larger than those graduated in Chemistry and oil, thirty seven times larger than those graduated in

Mining and eighty seven times larger than those graduated in metallurgy.

Table A-4

DISTRIBUTION OF HIGHER EDUCATION GRADUATES  
BY AREA OF STUDY AND CAREERS FROM 1960 TO 1966

Area	Graduates	%
<u>Basic Sciences</u>	192	1.08
Biology	75	
Physics, Maths.	24	
Chemistry	93	
<u>Health Sciences</u>	4,427	24.78
Pharmacy	439	
Medicine	2,778	(62.75% in its area)
Bioanalysis	403	
Nutrition & Dietetics	127	
Odontology	680	
<u>Technologies</u>	2,559	14.33
Architecture	298	
Civil Engineering	1,153	(45.05% in its area)
Metereology	56	
Mechanic Eng.	192	
Chemical Eng.	45	
Electrical Eng.	140	
Oil	205	
Chemistry & Oil Eng.	86	
Geology	51	
Mining Eng.	31	
Metallurgy	13	
Geodesy	33	
Geodesy, Mines & Metallurgy	123	
Land Survey	26	
Industrial Eng.	107	
Forestry	87	
<u>Agricultural and Sea Sciences</u>	661	3.70
Veterinary	193	
Agronomy	381	
<u>Education</u>	2,064	11.55

Table A-4 (cont.)

DISTRIBUTION OF HIGHER EDUCATION GRADUATES  
BY AREA OF STUDY AND CAREER FROM 1960 TO 1966

Area	Graduates	%
<u>Economic and Social Sciences</u>	7,604	42.58
Economics	1,347	(17.71% in its area)
Sociology & Anthropology	270	
Administration & Accounting	1,283	(16.87% in its area)
Social Work	108	
Industrial Relations	12	
Law	3,425	(45.04 in its area)
International Studies	116	
Journalism	177	
Psychology	760	
Statistics	72	
Geography	34	
<u>Humanities</u>	354	1.98
Philosophy	43	
Humanities	184	
History	90	
Library & Archives	37	

Source: Statistical Report and Memoirs of Venezuelan Universities, 1960-1973.

Note: This table was compiled by the author of this study

5.2.2 Absence of Relevant Educational Policies During the Period 1960-1966

It should be noted that during the period 1960-1966 graduates from secondary education had a choice of forty two specialisms in higher education. Information

from the publication Oportunidades de Estudio en Venezuela states that the courses of study offered in 1961 were as follows:



Table A-5

CHOICE OF HIGHER EDUCATION COURSES OF STUDY IN VENEZUELA

1961

-----  
Areas  
-----

Agricultural and Sea Sciences	Agronomy Veterinary
Basic Sciences	Biology Physics and Mathematics Chemistry
Architecture, Engineering and Technology	Architecture Civil Engineering Industrial Engineering Electrical Engineering Mechanical Engineering Chemical Engineering Mining (oil) Engineering Geological Engineering Mining Engineering Metallurgical Engineering Geodesic Engineering Land Surveying (*) Construction (*) Meteorology (*) Hydrology (*)
Health Sciences	Pharmacy, Medicine, Bioanalysis, Odontology, Nutrition (*)
Social and Economic Sciences	Economics International Studies Statistics and Barristerial Sc. Administration and Accounting Geography Sociology and Anthropology Journalism
Humanities and Education	Philosophy, Humanities, Education, Psychology, Library Studies and Archives Social Work, Law

-----  
(\* ) Short courses (two or three years).

Source: Ministry of Education. Higher, Secondary and Special Education Central Office. Oportunidades de Estudios en Venezuela Ed. Ministry of Education, Caracas, Venezuela 1961, p.46.

Note: This table has been compiled by the author of this study.

As it can be seen in Table A-5 above, the choice of careers in the area of Engineering, for example, included specialisms intended to train professionals to assist the development programmes of industrialization. However, this larger choice of careers was not accompanied by a policy designed to rationally distribute students amongst careers. A restricted information leaflet was distributed to students but there was no other provision to guide or motivate students in their choice of studies. Personal reasons and expectations, (and therefore choices of traditional studies) prevailed over national interest and development plans as it can be seen in the figures below:

Table A-6

DISTRIBUTION OF VENEZUELAN HIGHER EDUCATION GRADUATES  
IN SOME CAREERS FROM 1960 TO 1966

<u>COURSES OF STUDY</u>	<u>GRADUATES</u>
Law	= 3,425
Medicine	= 2,778
Education	= 2,604
Economics	= 1,347
Administration & Accountant	= 1,283
Civil Engineering	= 1,153
Psychology	= 760
Odontology	= 680
TOTAL	14,030

Source Statistical Reports and Memoirs of Venezuelan Universities, Period 1960-1966.

Note: This table was compiled by the author of this study.

The total in Table A-6 represents 78.55% of the total number of graduates during the period under study.

### 5.3 PERIOD 1967-1973

From 1960 to 1966, higher education in Venezuela was mainly carried out in the Universities, two Pedagogical Institutes and a Technological Institute. During this period two universities, a Pedagogical institute and a Technological Institute were created but there were no significant changes in the number or variety of courses offered and the tendency remained to pursue the traditional studies popular in 1958.

Attempts to create new higher degree courses in the Universidad Central de Venezuela, eg. Land Surveying, Construction and Hydrometereology attracted only a very small number of students.

#### 5.3.1 Expansion and Traditionalism

From 1967 to 1973 new specializations were created in the area of Engineering, Technology and Architecture: Hydrometereology, Geophysics and Mechanic Manufacturing. The first two had a duration of 5 years and the latter of 3 years. In the area of agriculture a three year course in Zootechnic was initiated. During this period (1967-1973), these new studies did not significantly increase demand for specialisms offered in higher education and enrolment concentrated as before in

traditional courses of study. As it can be seen in Table B-1 below, at the end of this period students still concentrated in the same type of studies as in the previous period.

Table B-1

DISTRIBUTION OF GRADUATES BY AREA OF STUDY AND CAREERS  
FROM 1967 TO 1973

Area	No. of Graduates	%
<u>Basic Sciences</u>	560	1.57
Biology	291	
Physics and Math.	76	
Chemistry	193	
<u>Health and Sciences</u>	7.854	22.02
Pharmacy	941	
Doctors	4.516	
Bioanalysis	844	
Nutrition and Dietetics	150	
Odontology	1.308	
Nursing	95	
<u>Technologies</u>	5.553	15.57
Architecture	967	
Civil Engineering	1,435	
Hydrometeorology (Eng.)	36	
Hydrometeorologists	16	
Mechanic Engineering	925	
Chemical Engineering	343	
Oil Engineering	209	
Electrical Engineering	918	
Geology	86	
Mining Engineering	33	
Metallurgy (Eng.)	67	
Geodists	83	
Geophysic Engineering	10	
Land Surveying	2	
Industrial Engineering	377	
Higher Technician in Mechanic Manufacturing	46	
<u>Agricultural and Sea Sciences</u>	1.988	5.57
Veterinary	668	
Agronomy	1,069	
Forestry	146	
Zootechnics	105	
<u>Education</u>	5,896	16.53

Table B-1 (cont.)

DISTRIBUTION OF GRADUATES BY AREA OF STUDY AND CAREERS  
FROM 1967 TO 1973

Area	No. of Graduates	%
<u>Economics and Social Sciences</u>	12,708	35.64
Economics	1,321	
Sociology and Anthropology	734	
Administration and Accounting	3,145	
Social Work	425	
Industrial Relations	295	
Law	4,833	
International Studies	159	
Journalism	539	
Psychology	1,013	
Statistics	134	
Geography	110	
<u>Humanities</u>	1,097	3.07
Philosophy	100	
Humanities	464	
History	280	
Library and Archives	253	
TOTAL	35,656	100.00

Source: Statistical Report and Memoirs of Venezuelan Universities, 1967-1973.

Note: This table was compiled by the author of this study

Table B-1 above also shows that the majority of graduates corresponded to only eight courses of study out of the forty five offered. Their distribution in the different areas of study is as follows:

Table B-2

DISTRIBUTION OF VENEZUELAN HIGHER EDUCATION GRADUATES  
IN SOME CAREERS BETWEEN 1967 AND 1973

<u>COURSES OF STUDY</u>	<u>No. OF GRADUATES</u>
Education	5,896
Law	4,833
Medicine	4,516
Administration	3,145
Civil Engineering	1,435
Economics	1,321
Odontology	1,308
Psychology	1,013
<b>TOTAL</b>	<b>23,467</b>

Source: Statistical Report and Memoirs of Venezuelan Universities, 1960-1973.

Note: This table has been compiled by the author of this study.

This total represents 65.82% of the total number of graduates (35,656) in the period 1967-1973.

Sixteen different specialisms were offered in the area of Engineering, Architecture and Technology but the majority of graduates (83.23%) corresponded to only five specialisms distributed as below:

Table B-3

VENEZUELAN HIGHER EDUCATION GRADUATES IN SOME CAREERS IN  
THE AREA OF ENGINEERING, ARCHITECTURE AND TECHNOLOGY  
BETWEEN 1967 AND 1973

<u>COURSES OF STUDY</u>	<u>No. OF GRADUATES</u>
Civil Engineering	1,435
Architecture	967
Mechanic Engineering	925
Electrical Engineering	918
Industrial Engineering	377
<b>TOTAL</b>	<b>4,622</b>

Source: Statistical Report and Memoirs of Venezuelan Universities, 1960-1973.

Note: This table has been compiled by the author of this study.

Specialisms in oil, geology, metallurgy, mining and geophysics had a very small number of graduates, a total of four hundred and five, i.e. 7.29% of that area.

This is apparent not only in Engineering and Technology but also in the area of Agriculture and Sea Sciences where two new careers, Forestry and Zootechnics, increased their intake only very slowly. Forestry is specially significant because it started in 1960 and still does not attract secondary school leavers who prefer the more traditional studies, Veterinary and Agronomy. Gradually, other specializations acquired a certain amount



of prestige eg. Architecture, Mechanical Engineering and Industrial Engineering.

Various other specializations offered to students - and of special relevance for national economic development - remained with very low intakes during the period under study. This can be seen in Table B-4 below which shows the number and distribution of graduates in those studies in the period 1960-1966/1967-1973.

Table B-4

COMPARATIVE NUMBER OF VENEZUELAN HIGHER EDUCATION  
GRADUATES IN SOME CAREERS IN THE PERIODS  
1960-66 AND 1967-73

Studies	1960-1966	1967-1973
Hydrometeorology	56	16
Hydrometeorology (Eng.)	-	36 *
Chemical Engineering	45	343
Mining (Oil) Engineering	205	209
Geologists	51	86
Mining Engineering	31	33
Metallurgy (Eng.)	13	67
Geodists	33	83
Geophysics (Eng.)	-	10 *
Land Surveying	26	2
Higher Technician in Mechanic Manufacturing	-	46 *
Forestry (Eng.)	87	146
Zootechnics	-	105 *

\* Created during the period 1960-1973.

Source: Statistical Reports and Memoirs of Venezuelan Universities, 1960-1973.

Note: This table has been compiled by the author of this study.

### 5.3.2 Persistence of Traditionalism

This large number of graduates concentrated in few traditional careers and the reduced number of graduates in new courses of study - more directly connected with production and national development - is a consequence of the way in which Higher Education has expanded. As it has been mentioned before Higher Education has developed into a number of independent institutions without considering any unifying criteria which would allow for a rational distribution of students amongst Higher Education courses of study. In Chapter Three of this thesis - when discussing secondary school leavers' tendency to choose traditional careers - it was pointed out that the offer of a greater number of courses does not by itself motivate students to take up new options. Criteria has to be established and policies laid down in order to achieve a rational distribution of students and appropriate entry requirements. These criteria must take into consideration national development plans and priority careers needing a larger number of professionals, otherwise, the students' tendency to concentrate in only few careers will prevail regardless of their relevance for national development. Individual choices, more often than not, lack a broad-based perception about national development needs and the possibilities and scope of the courses offered. The disconnection between Higher Education and the preceding levels of education as well as the lack of a counselling

service to assist students in their choice of career has also contributed to their disorientation.

All this points out to the urgent need to develop a Higher Education curriculum in the areas of Engineering and Technology and Agriculture and Sea Sciences which will facilitate the training of the professionals needed for national autonomous development.

#### 5.4 PERIOD 1974-1978

Higher education was considerably expanded in Venezuela in 1971. By 1971<sup>(1)</sup> the number of Universities had increased to eleven from eight that existed in 1970. The other institutions of higher education which had so far been constituted by two Pedagogical institutes and one Technological College increased to 31<sup>(2)</sup> during the period under study, including state, private and military institutes. This expansion was a response to the increasing demand for higher education coming from the larger number of secondary school leavers in the country.

##### 5.4.1 New Institutions and Careers

The expansion in the number of higher education institutes was accompanied by a greater variety in the type of courses of study offered. In the area of Economic and Social Sciences, for example, the universities created courses on specific techniques related to industry, public administration, co-operatives, social work, and journalism leading to the degree of Higher Technician, and courses on

Management and Administration and Political and Administrative Studies leading to a Bachelor degree. In the area of Health Sciences a new course was created aiming to achieve a degree as Higher Technician in X-Rays. In the area of Agriculture and Sea Sciences two courses were created: one in Sugar techniques and another in Marine Sciences, the latter at a Bachelor degree level. Finally, the area of Engineering, Architecture and Technology was expanded by the creation of courses on Technical and Electronic Manufacturing, System Analysis and Computing, and Computing Engineering.<sup>'3'</sup>

The creation of "institutes of higher education other than the universities"<sup>'4'</sup> represented a great innovation in the Venezuelan higher education system. These institutes - with the exception of the Pedagogical institutes - aimed at producing different levels of technicians, eg. courses of two or three years leading to the degree of higher technician and five years courses for engineering in specific areas.

University Colleges These colleges started with fifteen different courses of study. Nine of these courses were in the area of Economic and Social Studies (administration); five in the Educational area; and one in the Health area. (see Table C-1) All these courses run until 1976. From 1976 onwards new courses were created eg. in the Technology area: Electricity, Geology, Hydrocarbons, Instrumentation, Mechanics, Metallurgy and Manufacture of Iron and Steel, Mining, Public Works and Naval Technology.

In the area of Agriculture and Sea Studies courses were initiated in Agricultural techniques, Processing of Sea products and Zootechnics. '5'

TABLE C-1

COURSES OF STUDY OFFERED BY VENEZUELAN UNIVERSITY COLLEGES  
UNTIL 1976

-----  
Area: Social and Economic  
Sciences  
-----

Personnel Administration  
Public Administration  
Administration of Human  
Resources  
Costs Accounting  
Informatics  
Marketing  
Organization and Methods  
Budgeting  
Automatic Data Processing

Area: Education  
-----

School Administration  
Education of Gifted  
Children  
Psychopedagogy  
Learning Resources  
Occupational Therapy

Area: Health  
-----

Physiotherapy  
-----

Source: O.P.S.U. Boletin Informativo 1977

Note: This table has been compiled by the author of this study.

University Technological These were also expanded from 1971 onwards. In 1976 the University Technological offered a total of 23 specializations distributed as follows: Area of Agriculture and Sea Studies 2; Technology 10; Education 2; Economic and Social Sciences (administration) 9. '6'

TABLE C-2

COURSES OF STUDY OFFERED BY VENEZUELAN UNIVERSITY  
TECNOLOGICAL INSTITUTES UNTIL 1976

-----  
Area: Social and Economic  
Sciences  
-----

Administration  
Foreign Trade  
Comercialization  
Informatics  
Marketing Research  
Advertising  
Public Relations  
Insurance  
Tourism

Area: Education  
-----

Teachers of Handicapped  
Children and Children  
with Learning Difficulties  
Teachers of Deaf Children  
and Children with Language  
Problems

Area: Engineering,  
Architecture &  
Technology  
-----

Civil Construction  
Industrial Design  
Public Works Design  
Electricity  
Electronics  
Instrumentation  
Applied Mathematics &  
Physics  
Mechanics  
Metallurgy  
Chemistry

Area: Agriculture & Sea  
-----

Agriculture  
Food Technology  
-----

-----  
Source: O.P.S.U. Boletin Informativo 1977, Caracas,  
Venezuela.

Note: This Table has been compiled by the author of this  
study.

A main difference between the University Technical  
colleges and University colleges was that the former were  
geared, at least until 1976, to provide studies which  
would assist the production sector of the economy. After  
1976 this type of courses was increased.

Polytechnics Until 1976 the polytechnics offered courses  
similar to those run by the universities ie. of the same  
duration and in similar areas, eg. Electrical Engineering,  
Electronic Engineering, Mechanical Engineering and

Chemical Engineering. The new level of Higher Technician represented an innovation during the period under study.

#### 5.4.2 Concentration of Graduates in Traditional Careers

As it has been mentioned before in the analysis of the period 1967-1973 the Universities were responsible for the preparation of professionals and technicians required to assist the economic and social development of the country. However, from 1971 onwards, other institutions of higher education were created and alternative means to achieve a higher education degree were made available to secondary school leavers. The present analysis, therefore, also includes the graduates from other institutions during the period 1974-1978. The total number of graduates during this period was 59,790. 46,675 (78.06%) correspond to university graduates and 13,115 (21.94%) to graduates from the other 31 institutes of higher education (Pedagogical institutes, Polytechnics, Technological and University colleges).<sup>7</sup> The Table below shows the distribution of these graduates by area of study.



Table C-3

HIGHER EDUCATION GRADUATES IN VENEZUELA BY AREA OF STUDY  
YEARS 1974, 1975, 1976, 1977 AND 1978

Years	1974	1975	1976	1977	1978	Total	%
<u>Areas</u>							
Econ & Soc. Sciences	3,610	3,143	4,435	4,653	4,683	20,524	34.33
Education	1,485	1,524	3,514	3,896	3,222	13,641	22.82
Technology	1,516	2,080	2,395	2,593	3,101	11,685	19.54
Health Sc.	2,055	1,741	1,682	1,856	1,693	9,027	15.09
Agric. & Sea Sc.	234	548	560	536	842	2,720	4.54
Humanities	206	313	203	256	225	1,203	2.03
Basic Sc.	144	213	176	240	217	990	1.65
TOTAL	9,250	9,562	12,965	14,030	13,983	59,790	100.00

Source: O.P.S.U. Boletines Estadisticos 1974-1979.

Note: This table was compiled by the author of this study

The Table above shows that the area of Economic and Social Sciences accounts for the largest number of graduates. This area, Education, and Health accounted for 72.24% of the total number of graduates. There is an increase in the number of graduates in the area of Technology as compared with the period 1967-1973 (from 15.57% to 19.54%). The area of Agriculture and Sea Sciences however, decreased from 5.57% in 1967-1973 to 4.54% in 1974-1978. Percentages do not show a significant change in the distribution of graduates by courses of study between 1967-1973 and 1974-1978 as it can be seen in the Table below.

Table C-4

HIGHER EDUCATION GRADUATES IN VENEZUELA BY AREA OF STUDY  
DURING THE PERIODS 1967-1973 AND 1974-1978

<u>1967-1973</u>		
<u>Areas</u>	<u>Number</u>	<u>%</u>
Social & Economic Sciences	12,708	35.64
Health	7,854	22.02
Education	5,896	16.53
Technology	5,553	15.57
Agricultural Sciences	1,988	5.57
Humanities	1,097	3.07
Basic Sciences	560	1.57
	<u>35,656</u>	<u>100.00</u>
<u>1974-1978</u>		
<u>Areas</u>	<u>Number</u>	<u>%</u>
Economic & Social Sciences	20,524	34.33
Education	13,641	22.82
Technology	11,685	19.54
Health	9,027	15.09
Agricultural Sciences	2,720	4.54
Humanities	1,203	2.03
Basic Sciences	990	1.65
	<u>59,790</u>	<u>100.00</u>

Source: O.P.S.U. Statistical Reports and Tables of the Venezuelan Universities 1967-1979.

Note: This table was compiled by the author of this study

#### 5.4.3 The Profile of Change

The Table above shows that there was an increase in the number of graduates in the areas of Technology and Agriculture and Sea Sciences — areas closely related to national production. This increase, however, is not very significant if one takes into consideration the comparatively much larger increase in the number of institutions created in this area during the second period. Technology and Agricultural and Sea Studies accounted for 21.14% of the total number of graduates in the period 1967-1973 and for 24.08% in the period 1974-1978. This increase was negligible considering that in 1967-1973 these two areas offered 20 different courses and in the period 1974-1978 the number of courses available had increased to 45, including technical and professional studies in institutions of higher education distributed along the country.

Percentages, however, do not provide us with a clear picture of the changes occurred in the distribution of graduates among different areas in higher education. This is especially true if we look at the figures for Technology and Agricultural and Sea Sciences jointly. In these areas, the percentage of graduates increased in 91.02% as compared to the percentage of graduates in the period 1967-1973. These percentages correspond to 7,541 graduates in the period 1967-1973 and 14,405 in the period 1974-1978 and the difference in number appears much more significant. However, the analysis of the distribution of

graduates by specialization in each area of study gives us a very different picture.

#### 5.4.4 Higher Education Graduates During the Period 1974-1978

Although by the end of this period there were eleven universities and thirty one institutes of higher education, the former continued to produce a much larger number of graduates. Of a total of 46,552 Higher Education graduates 11,978 graduated in the areas of Engineering, Architecture and Technology and Agriculture and Sea Sciences distributed as follows: 9,744 graduates in Engineering, Architecture and Technology and 2,234 in Agriculture and Sea Sciences. The remaining 34,574 graduates were distributed in the areas of Health Sciences, Economic and Social Sciences, Education, Humanities and Basic Sciences, as can be seen in the Table below.

Table C-5

DISTRIBUTION OF GRADUATES IN VENEZUELAN UNIVERSITIESBY AREAS OF STUDY FROM 1974 TO 1978

Year	1974	1975	1976	1977	1978	Total
<u>Area</u>						
Social & Economic Sc.	3,320	2,858	3,794	3,901	3,761	17,634
Technology	1,352	1,774	1,881	2,095	2,642	9,744
Health Sciences	1,986	1,657	1,623	1,797	1,663	8,726
Education	577	622	1,460	1,780	1,836	6,275
Agric. & Sea Sc.	255	561	500	382	536	2,234
Humanities	137	229	203	256	225	1,050
Basic Sciences	144	174	176	220	175	889
TOTAL	7,819	7,986	9,637	10,451	10,782	46,552

Source: O.P.S.U. Statistical Reports 1974-79.

Note: This table was compiled by the author of this study.

It is interesting to note that of the total of 46,552 graduates 28,179 correspond to traditional studies as described below:

Table C-6

DISTRIBUTION OF VENEZUELAN HIGHER EDUCATION GRADUATES  
IN SOME CAREERS FROM 1974 TO 1978

<u>COURSES OF STUDY</u>	<u>No. OF GRADUATES</u>
Administration and Accounting	6,591
Education	6,275
Medicine	4,410
Law	4,376
Economics	2,250
Civil Engineering	1,872
Architecture	1,382
Agronomy	1,023
<b>TOTAL</b>	<b>28,179</b>

Source: O.F.S.U. Statistical Reports 1974-1979.

Note: This table has been compiled by the author of this study.

It is significant that only eight of the sixty five courses of study offered account for 60.53% of graduates. Among these 8 specializations only Agriculture is related to economic production (Venezuela being an agricultural country). This concentration of graduates in only some courses of study is a common feature of the Venezuelan Higher Education system since the beginning of the expansion of Higher Education in 1958.

This tendency can be seen in Table C-7 which shows the distribution of graduates during the period 1974-1978.

Table C-7

UNIVERSITY GRADUATES BY AREA OF STUDY AND SPECIALISM  
IN VENEZUELAN UNIVERSITIES FROM 1974 TO 1978

Area and Specialization	Number of Graduates				
	1974	1975	1976	1977	1978
<u>Basic Sciences</u>	144	174	176	220	175
Biology	42	44	58	66	56
Physics	11	10	23	30	27
Mathematics	17	28	17	38	24
Chemistry	74	92	78	86	68

TOTAL NUMBER OF GRADUATE = 889

<u>Economic &amp; Social Sc.</u>					
				3,901	
Anthropology & Sociology	43	127	269	192	196
Social Communication	83	144	106	102	75
Law	779	688	987	950	972
Economics	335	379	517	501	518
Statistics & Auditing	6	27	28	31	43
International Studies	35	39	37	30	49
Geography	39	7	24	36	28
Psychology	69	150	139	142	156
Industrial Relations	162	159	148	234	287
Social Work	214	25	75	60	64
Entrepreunerial Techniques	91	*	77	65	*
**Public Admin. Techniques			29	33	*
**Cooperative Techniques			21	22	*
Social Work Techniques	5	11	9	10	*
Administration & Accounting	1,507	1,130	1,328	1,301	1,325

TOTAL NUMBER OF GRADUATES = 17,634

UNIVERSITY GRADUATES BY AREA OF STUDY AND SPECIALISM

IN VENEZUELAN UNIVERSITIES FROM 1974 TO 1978

(cont.)

Area and Specialization	Number of Graduates				
	1974	1975	1976	1977	1978
<u>Health Sciences</u>	1,986	1,657	1,623	1,797	1,663
Bio-analysis	278	128	311	295	229
Nursing	24	15	23	25	14
Pharmacy	315	332	283	293	272
Medicine	1,033	808	716	901	952
Nutrition & Diet	105	43	84	81	27
Odontology	231	307	206	202	169
X-Ray techniques	*	24	*	*	*
TOTAL NUMBER OF GRADUATES - 8,726					
<u>Humanities and Education</u>	714	851	1,663	2,036	2,061
Library and Archives	4	65	27	29	20
Education	577	622	1,460	1,780	1,836
Philosophy	20	23	19	26	21
History	24	29	47	35	20
Modern Lang.	*	*	11	30	42
Literature	89	112	99	136	122
TOTAL NUMBER OF GRADUATES = 7,325					

Source: O.P.S.U. Statistical Reports 1974-1979

\* No information about the number of graduates

\*\* No graduates before 1976



TABLE C-7

## UNIVERSITY GRADUATES BY AREA OF STUDY AND SPECIALISM

## IN VENEZUELAN UNIVERSITIES FROM 1974 TO 1978

(cont.)

Area and Specialization	Year of Graduation					Total No. Graduates
	74	75	76	77	78	
<u>Engineering, Architecture &amp; Technology</u>	1,352	1,774	1,881	2,095	2,642	9,744
Land Surveying	2	7	4			13
Architecture	209	274	257	293	349	1,382
Hydrometeorology (Eng.)	6	4	4	10	87	111
Geology	23	7	12	14	73	129
Civil Eng.	261	414	376	410	411	1,872
Electrical Eng.	236	211	256	250	285	1,238
Electronic Eng.	23	54	65	85	104	331
Geodesic Eng.	16	12	18	9	10	65
Geologic Eng.	28	19	12	6		65
Geo-Physic Eng.	1	7	16	10	3	37
Industrial Eng.	111	73	107	91	96	478
Chemical Eng.	125	289	309	352	393	1,468
Mining Eng. (Oil)	43	100	109	116	204	572
Mechanical Eng.	219	228	223	299	394	1,363
Metallurgic Eng.	7	24	20	48	77	176
Mining Eng.	6	5	4	2		17
Systems Eng.	5	11	21	11	4	52
System Analysis	27	14		11	8	60
Computing Eng.					80	80
Computers	2	12	56	62	64	196
Electronic Manuf.		5	6	7		18
Mechanic Manuf.	2	4	6	9		21
<u>Agriculture &amp; Sea Sciences</u>	255	561	500	382	536	2,234
Agronomy	128	260	237	170	228	1,023
Sea Sciences			4	5		9
Forestry Eng.	25	30	26	24	44	149
Veterinary	95	258	211	162	256	982
Zootechnic	7	13	8	5	8	41
Sugar Techniques			14	16		30

Source: O.P.S.U. Statistical Reports 1975, 1976, 1977, 1978, and 1979.

#### 5.4.5 The Outcome of the Expansion

Table C-7 above evidences this concentration: Engineering which offers twenty two different courses of study concentrates 7,323 graduates of a total of 9,744 in only five specializations. The area of Agriculture and Sea Sciences offered six different specialisms and 2,005 students out of a total of 2,234 graduated in only two specialisms. This tendency becomes very serious if one bears in mind that this concentration of graduates in only few specialisms necessarily results in the discredit of the rest of the specialisms and in a very grim prospect of a possible autonomous economic development. This is specially true in those areas connected to production. As it can be seen in Table C-7), specialisms in oil, mining, electronic and mechanic manufacturing, metallurgy and agriculture - which are directly related to the national industrialization process - are also the ones which have the smallest number of graduates while Law studies - in the area of Economics and Social Sciences - produced more graduates in the period under study than Engineering in Geodesy, Geology, Geo-physics, Metallurgy, Mining and Geology as a whole - Studies closely related to national concerns such as oil, mining and metallurgy. It also seems likely that some specialisms in the area of Technology and Agriculture become prestigious and tend to concentrate a greater number of students, e.g. Electrical Engineering, Chemical Engineering and Mechanical Engineering in the area of Technology and Agronomy and

Veterinary in the area of Agriculture as it can be seen in Table C-7 above.

Although there is an increase in the area of Technology this increase is concentrated in only a few specialisms and not evenly distributed among the many specialisms on offer. The disproportion of graduates in technological and administrative areas can be dramatically illustrated by comparing the number of graduates among the most traditional studies in both areas: The data shows that for each graduate in oil engineering there are twelve administrators, eleven educationists, eight lawyers, eight doctors, four economists and three civil engineers which supports the assumption that the expansion of higher education has not succeeded in training the professionals required to achieve national economic development.

In summary, during the period under study University graduates concentrated in the areas of Economic and Social Sciences and Technology. The areas of Social Sciences, Education and Health accounted for 70.10% of graduates; Agriculture and Sea Sciences for 4.79%; Basic Sciences for 1.90% and Technology for 20.93%. Although Technology shows a very promising percentage of graduates they are not evenly distributed among the different specialisms - most of them concentrated in the more traditional technological studies to the detriment of those specialisms more directly connected to industrial development such as mining, metallurgy, manufacture of iron and steel, and oil, regarded as priority courses of

study as mentioned in Part A, Chapter Three of this thesis. Studies leading to the degree of Higher Technician in Mechanic and Electronic manufacturing show the lowest number and percentage of graduates. This is also true in the area of Agriculture and Sea Sciences and gives a grim perspective as regards the plans for an autonomous national economic development.

#### 5.5 ECONOMIC CONSEQUENCES OF HIGHER EDUCATION EXPANSION

Soon after the Higher Education expansion policy was put into practice (as part of the democratization process of education) universities became the main attraction for secondary school leavers. This tendency was reinforced by a) a larger number of universities among higher education institutions and b) the possibility they offered to pursue prestigious careers such as Medicine, Law, Economics and Education. This policy, however, was not accompanied by an admission procedure envisaged to rationalise entry to higher education studies on the basis of social needs or professional requirements as established in the State development plans. Similarly, no account was made of the possibility that an excessive number of graduates in careers unconnected to national social needs would develop into problems of unemployment and underemployment as well as a deterioration of national welfare and economic development. The negative consequences of the expansion policy were soon to be felt.

The Minister of Education in 1970 stated:

" ... how can it be said that the University is responding to national needs when hundreds of university graduates are unable to find employment and therefore unable to produce a single bolivar\*. Is this because they have chosen careers such as Sociology, Psychology or Law which are over-subscribed? The sight of parents seeking jobs for their offsprings is alarming. The conflict of university graduates whose parents don't have a similar educational level results in disappointment and frustration for the graduate and for the parents who once thought that their son's degree - obtained at the cost of great family sacrifice - would solve him a lifetime problem. Meanwhile, the University goes on graduating people who will only enlarge the already considerable number of frustrated graduates". (6)

In spite of these statements an amendment to the University Act did not include any policy leading to solve the problem derived from the alienation of the university from national reality. On the contrary, in that same year several Higher Education institutions were created, e.g. experimental universities and a large number of polytechnics, technologicals and University colleges (7) which increased the number of options at higher education level but, because they were not properly implemented, did not significantly improve the quality of graduates so far achieved by other Higher Education institutions nor solved the problem of shortage of graduates in priority careers.

These new institutions established themselves independently from other higher education institutions and therefore increased the already existing disconnection and lack of coherence of the system as a whole. Entry

---

\* Bolivar = Venezuelan national currency

requirements in these new institutions were similar to the traditional qualifications required by universities i.e. the Secondary School Certificate. Additionally, as there was no curricular unity at this level of education these new institutions did not fulfil a specific role or contributed in any way to narrow the gap between secondary school qualifications and university academic requirements. Thus the tendency to join universities and traditional courses of study was not diminished.

#### 5.5.1 Educational Expansion versus Economic Production

The creation of new higher education institutions obviously increased the choice of higher education courses but the lack of an educational policy consistent with national development plans rendered this expansion useless to implement the strategies designed to achieve national autonomous development. This was mentioned in 1978 by J.J. Marta Sosa who pointed out that:

"The expansion of the Higher Education system has a positive aspect and this is that it has significantly undermined the monopoly held by a ruling elite over knowledge and certain forms of professionalism. In this sense, Higher Education expansion has a democratic potential. This is particularly noticeable in the increased demand for Higher Education courses of study - a sector long monopolized by the ruling elite. Although this problem has not yet been completely overcome it already shows significant changes such as an increased number of students with a working class background. But, generally, education - and particularly Higher Education - is still a link between oil profits and consumerism. The income obtained from oil exports facilitates access to education without participating in production". (10)

As Marta Sosa states Higher Education has

expanded in order to achieve mass education at this level but it has failed to assist the process of economic development.

In the 1971 Year Report the Minister of Education points out:

"Our conception of education has two essential aims: a) that it should be part of a global strategy to transform society and b) that it should be harmonious with national economic targets. This latter aim is a vital challenge. We are convinced that education goes hand-in-hand with development and that today, more than ever, it should constitute a fundamental factor of change. Within this context education should contribute to socio-economic and cultural independence, which although grounded on scientific knowledge is intended for man and for the people's liberation. '(11)'

But these statements were not followed by the establishment of policies designed to achieve the above mentioned targets. No change has yet been achieved and Higher Education continues to produce graduates in the same traditional careers and remains, generally, unconcerned of national development plans which led the Minister of Education in 1974 to make the following remarks:

"Generally, Higher Education is not responding to national requirements. Universities are not matching their efforts to those of the nation, and furthermore, is wasting valuable resources by creating and duplicating schools or faculties which do not contribute to the needs and priorities of development." '(12)'

Meanwhile Higher Education keeps on developing according to its traditional pattern. No educational

policies that could give cohesion to the system have been established and which would make Higher Education the level that because of its links to national reality would give guidance and cohesion to the educational system as a whole. The failure of this level to effectively contribute to the solution of national problems has had repercussions in national economic development as it is stated in several official documents, e.g. the 1981-1985 VI National Plan which - when referring to economic development - states:

"The difficulties encountered by the national economic sector, particularly in those decisive areas leading to autonomous development (agriculture and industry), were due to some general and some specific factors. Among the general factors contributing to the difficulties mention should be made ... of the shortage of skilled manpower which led industry to employ unskilled labour in the newly created productive structure. This resulted in one of the most worrying problems found in the period under study (1970-1980) and this is the slow development of productivity and, in some cases, its deterioration". (13)

Later on when referring to the agricultural sector in the same period it states:

"In the case of the agricultural sector, in spite of governmental measures intended to assist the sector (credits, a rise in the producers' price, condonation of debts and improvement of the material structure) the organisational structure of production, the lack of skilled manpower ... and technological backwardness acted as serious obstacles to achieve an expansion of production and/or increase its productivity". (14)

This same report (VI National Plan) mentions the poor quality and reduced amount of Venezuelan industrial



production which makes it unsuitable for export. The report states:

"The difficulty to increase exports of manufactured goods is due, among other things, to the poor quality of industrial production and low productivity which makes it non-competitive".<sup>(15)</sup>

The shortcomings of the Venezuelan industry, partly due to lack of skilled manpower able to improve existing production, also points out to the inadequacy of Higher Education to meet the technological demands of industrial development. The failure of the Venezuelan Higher Education level, therefore, is not only connected to the quantity of graduates produced but also with their quality. Consequently, improvements in Higher Education training are urgently needed both to assist national industry and to compete with foreign technology. Foreign technology, though necessary, should be gradually replaced by domestic technology and thus contribute to autonomous development as it is suggested in the VI National Plan when it states:

"On the other hand, Venezuela has traditionally tried to acquire heavy machinery by buying whole technological packages. This means that the design, engineering and production of equipment and parts has been produced, to a large extent, in external markets. This practice has on the one hand prevented the creation of a domestic technological basis and the development of a domestic industrial programme and on the other, has prevented Venezuelan industry from participating in the supply of equipment for its own development projects undermining the possibility of activating global development".<sup>(16)</sup>

The negative results of Higher Education expansion and its lack of consistency with national

economic needs have led to frequent statements stressing the need for an educational policy which will facilitate the training of the required human resources. The President of the Republic in his first address to Parliament in 1980 referred to the expansion of Higher Education in these terms:

"Another key problem is the inconsistency between the educational system and the demands for skilled manpower in the job market. In fact, accelerated industrial development has resulted (because of inadequate Higher Education policies) in increasing inconsistencies between the industrial sector's demand for skilled manpower and the training of professionals. As a consequence of this inconsistency there is a shortage of skilled manpower and technical expertise and growing unemployment further increased in the later years by population growth and migrations of unskilled population".<sup>(17)</sup>

## 5.6 CONCLUSION

The analysis attempted in this Chapter stresses two main characteristics of Venezuelan Higher Education graduates during the period under study: a) the reduced number of graduates in courses of study relevant to national economic development, and b) the unsatisfactory qualifications of graduates in the areas of Engineering and Technology and Agriculture and Sea Sciences to work effectively in industry.

The former is a result of the expansion policy applied during the democratic period in Venezuela which allows students to choose careers according to their own preferences; the latter is the consequence of a Higher

Education policy which develops without taking into account students' individual expectations and aptitudes or the needs for national autonomous development and consequently does not help the students nor contribute to national economic development.

The following chapter summarizes the general conclusions of this study.

REFERENCES CHAPTER FIVE

1. C.N.U.-O.P.S.U. Boletin Informativo 1977
2. Ibidem.
3. C.N.U.-O.P.S.U. Boletin Estadistico. Caracas, Venezuela, November, 1979 pp.57-59.
4. By "institutions of higher education other than universities is meant polytechnics, Pedagogical Institutes, Technological colleges, and colleges.
5. C.N.U.-O.P.S.U. Boletines Estadisticos 1976, 1977, 1978 and 1979.
6. C.N.U.-O.P.S.U. Boletin Estadistico 1977. Op.cit.
7. C.N.U.-O.P.S.U. Statistical Reports 1974, 1975, 1976, 1977, 1978, 1979.
8. Republic of Venezuela, Ministry of Education, Memoria y Cuenta de 1970 Caracas, Venezuela, 1971. Introduction, pp.XLVII-XLVIII.
9. C.N.U.-O.P.S.U. Statistical Report No.2, Caracas, Venezuela. August, 1980 pp.15-17.
10. Marta Sosa, J.J. Los Problemas de la Educacion Superior en Venezuela. Ed. Papeles Universitarios. Caracas, Venezuela, April, 1978 p.31.
11. Republic of Venezuela. Ministry of Education Report and Memoirs 1971 Caracas, Venezuela 1972, pp.I-27-I-28.
12. Republic of Venezuela. Ministry of Education Report and Memoirs 1974 Caracas, Venezuela 1975, pp.XXIII-XXIV.
13. Republic of Venezuela. CORDIPLAN, VI Plan de la Nacion 1981-1985. Desarrollo Global. Talleres Graficos de CORDIPLAN, Caracas, Venezuela, 1981, Vol.I p.7
14. Ibid. pp.7-8.
15. Republic of Venezuela, CORDIPLAN, VI Plan de la Nacion 1981-1985 Desarrollo Sectorial, Talleres Graficos de Cordiplan. Caracas Venezuela, 1981 Vol.II p.7.
16. Ibidem.
17. Herrera Campins, President of Venezuela First Address to Congress, Caracas, 12 March 1980, pp.273-274.

CHAPTER VI

GENERAL CONCLUSIONS

CHAPTER VIGENERAL CONCLUSIONS

- a) Venezuela's Resources
- b) The Role of Higher Education in Venezuela
- c) The Expansion of Higher Education in Venezuela
- d) Curricular Diversity and Admission Policies
- e) Students' Guidance
- f) Conclusion

## 6.1 VENEZUELA'S RESOURCES

Since the return of democracy in 1958 Venezuela's social context has provided suitable political conditions for agreements to be made concerning the launching of socio-economic development plans consistent with national needs.<sup>'1'</sup> Venezuela's natural resources (renewable and non-renewable)<sup>'2'</sup> are a key factor in the satisfaction of national needs and in Venezuela's participation in international markets. National needs can be met, to a large extent, by national production but the country also requires to import goods which are not nationally produced. It becomes necessary, therefore, to diversify the economy in order to increase productivity and be able to supply the internal market as well as to export the surplus and thus import the goods which are not home produced. Furthermore, in order to satisfactorily advance in the industrialization process, industrialization plans should consider investments in technological and scientific areas so that industry can successfully catch up with modern advances in these fields. Reinvestments in sophisticated research projects should also be considered.

## 6.2 THE ROLE OF HIGHER EDUCATION

Although Higher Education is not a determinant factor in the achievement of the economic targets set by the government development plans it is nonetheless true that it plays an important role in that process: the

training of manpower able to assist the technical and scientific activities involved in that process. On the other hand, there are several ways of solving the problem of shortage of qualified manpower in the country. One is to bring foreign experts as the need arises; another is to send students abroad to be trained. However, if one takes into consideration that the country is aiming at an autonomous development the need to have an efficient Higher Education system becomes apparent. This duty becomes even more obvious if one takes into account that a high proportion of the national budget is annually invested in this level of education to fulfil this role.<sup>(3)</sup> (See Table 1 in this chapter). It is therefore necessary that the Higher Education system should be able to train these professionals and to train them in close connection with national reality making the best possible use of current economic national income.

### 6.3 THE EXPANSION OF HIGHER EDUCATION

Since 1958 the State has been involved in a policy of expansion of Higher Education with a twofold purpose: a) to provide Higher Education for all who wish to pursue studies at this level as a human right and b) to train professional and technicians able to assist the process of economic development. However, this level of education has expanded into a number of unconnected institutions with no curricular unity amongst them. More seriously, the largest and most important Higher-Education



institutions have used their autonomy to plan their own curriculum and programmes of study disconnected from other institutions of Higher Education and from national reality. This lack of coordination has led to an inconsistency between national development plans and Higher Education programmes of study.

#### 6.4 CURRICULAR DIVERSITY AND ADMISSION POLICIES

The lack of unity amongst Higher Education institutions has resulted in a lack of continuity between different levels of education and in a diversity of admission policies, e.g. while some institutions of higher education have several entry procedures leading to a selection of students, others offer unrestricted access to their courses. Some institutions restrict access to courses of study according to students' performance in particular areas, others distribute students according to availability of places and chance; some institutions give priority to courses of study which have been nominated as crucial areas of knowledge for economic development and some leave this choice to students' individual preferences. It is suggested that this problem arises mainly because of the lack of a curriculum which - though different in some aspects - is consistent regarding its main objectives.

## 6.5 STUDENTS GUIDANCE

The inconsistency of Higher Education policies has resulted in the failure of this level of education effectively to assist the national process of economic development. The absence of a counselling service to assist students in their choice of career has led students to choose, a) institutions and courses of study which offer easy access; b) traditional careers; c) careers with social prestige or d) careers with good economic prospects. Furthermore, the reduced number of graduates in priority courses of study do not often work in priority areas of development. It seems that the students' criterium in their choice of studies is the social prestige attached to a career or the social and economic benefits it may bring. However, many of these expectations are likely to end in disappointment as opportunities in the labour market for traditional careers are greatly reduced. On the contrary, areas nominated as priorities for economic development offer considerable opportunities of employment. An inadequate curriculum in the areas of Engineering and Technology and Agriculture and Sea Sciences, (directly connected with priority areas of economic development) prevents Higher Education from producing graduates able to assist the productive sector either in quantity or in quality.

## 6.6 CONCLUSION

It can be concluded that the expansion of Higher Education in Venezuela has resulted in a larger number of institutions lacking curricular unity and consistency and this has led to: institutions lacking the curricular diversity characteristic of the Higher Education level has resulted in:

- a) difficulties for students to transfer from one institution to another or from one course to another;
- b) lack of academic articulation between long and short courses of study which leads students to choose long courses of study in detriment of short courses leading to the degree of Higher Technician.

Additionally, Higher Education is disconnected from preceding levels of education and there is no curricular continuity between the Secondary Diversified Cycle and courses at higher education level. This leads to:

- a) Students' failures in courses of study at higher education level. The higher education level does not provide the necessary guidance to preceding levels of education and consequently the Secondary School contents do not prepare students to adequately perform at higher levels of education;

- b) Difficulty in establishing common criteria in admission policies;
- c) The creation of basic preparatory courses in institutions of higher education intended to cover the academic gap between Secondary and Higher Education levels. This lead to:
  - i. An unnecessary extension of some courses of study;
  - ii. Insufficient training in the specialism from the very beginning of the course;
  - iii. Repetition of subjects already taught at secondary school level.
- d) A progressive disconnection between secondary and higher education subjects;
- e) Lack of information about courses of study at Higher Education level.

The disconnection of Higher Education from national reality - particularly the productive sector - has the following consequences:

- a) Inadequate training of professionals and technicians. The graduates lack sufficient knowledge about current industrial technology leads to problems both for the graduate and the industry;
- b) It slows down the process of industrial development because graduates only have practical experience on the job.

- c) It diminishes the possibility of achieving a much needed scientific and technological development.

This all leads to the conclusion that the Venezuelan Higher Education system is alienated from national circumstances and this cannot be solved by partial measures which solve the problem of one or a couple of Higher Education institutions but fall short of solving the problems of the system as a whole.

The experience gained during the period of expansion of Higher Education - characterised by little or no connection amongst institutions and lack of connection with national economic needs - points to the need to lay down a policy for this level of education which will facilitate the training of the required human resources needed to assist in the plans of national autonomous economic development.

Chapter VII suggests an alternative solution to the problems analysed in this study.

REFERENCES CHAPTER VI

1. "Furthermore, Venezuela has the necessary maturity and democratic stability needed to achieve a consensus about common aims, and the strategies and policies to meet the challenge of development".  
(In Republic of Venezuela, CORDIPLAN VI Plan de la Nacion 1981-1985. Talleres Graficos de Cordiplan, Vol.I, p.17.)
  
2. " ... it is worth pointing out that there are many positive factors leading to advance the process of social and economic development. These are: vast national energy resources, abundant natural resources, large investments, an acceptable social capital, human resources, and an adequate population size in relation to space and natural potential".  
(In Republic of Venezuela, CORDIPLAN Plan de la Nacion 1981-1985. Talleres Graficos de Cordiplan, Vol.I, p.17.)

Table 1  
DISTRIBUTION OF THE EDUCATIONAL BUDGET AMONGST HIGHER EDUCATION  
INSTITUTIONS OF VENEZUELA FROM 1964 TO 1980

B U D G E T

Year	National	Education	H.Education	Nat. Univ.	Other Inst.
1964	1,674,976,744	176,930,232	45,325,581	43,093,023	2,232,558
1965	1,764,465,116	203,116,279	56,694,418	54,232,558	2,441,860
1966	1,865,000,000	226,813,953	66,418,604	63,604,651	2,813,953
1967	2,035,813,953	256,883,720	74,162,790	69,744,186	4,000,000
1968	2,557,697,674	287,000,000	85,511,627	80,139,534	5,372,093
1969	2,366,511,627	324,000,000	102,720,930	96,697,674	6,023,255
1970	2,392,093,023	388,046,511	122,534,883	116,023,255	6,511,627
1971	2,969,302,325	439,116,279	132,930,232	124,232,558	8,697,674
1972	3,134,418,604	520,302,325	159,534,883	144,116,279	15,418,604
1973	3,458,604,651	660,000,000	236,418,604	217,930,232	18,488,372
1974	9,887,906,976	850,302,325	320,720,930	283,046,511	37,674,418
1975	9,273,953,488	1,120,232,558	425,441,860	368,697,674	56,744,186
1976	10,365,348,837	1,324,023,255	476,186,046	401,534,883	74,651,162
1977	11,789,186,046	1,606,302,325	646,883,720	556,744,186	90,139,534
1978	11,909,930,232	1,728,488,372	713,023,255	600,488,372	112,534,883
1979	11,850,720,930	2,023,813,953	909,023,255	770,232,558	138,790,697
1980	16,895,720,930	2,406,418,604	1,083,139,534	943,534,883	139,604,651

Source: National Budget Central Office

Summary of the Budget Law 1980

Table compiled from Summary of the Budget Law 1980, in  
 C.N.U.-O.P.S.U.

Statistical Bulletin No.7, Vol.2.

Caracas, Venezuela, November 1980, p.40.

Note: Budget calculated in American Dollars (4,30 Bolivares  
 until 1980).

CHAPTER VII

POLICY SOLUTION



## Chapter VII Policy Solution

- 7.1. Introduction
- 7.2. Some alternatives for Higher Education in Venezuela
  - 7.2.1. Policy for grants abroad
    - 7.2.1.1. Policy for grants and the transfer of technology
    - 7.2.1.2. The costs of the grant policy
    - 7.2.1.3. Studies abroad and national conscience
  - 7.2.2. The Open Univeresity
    - 7.2.2.1. The Open University and the training of Professionals in Venezuela
- 7.3. Foreign Models
  - 7.3.1. The North American model
  - 7.3.2. The Cuban model
    - 7.3.2.1. The students
    - 7.3.2.2. Parents and guardians
    - 7.3.2.3. Political parties
    - 7.3.2.4. The teachers' unions
    - 7.3.2.5. Economic institutions
- 7.4. Conclusions
- 7.5. Recommendations
  - 7.5.1. Organisation
    - 7.5.1.1. Admission
      - 7.5.1.1.1. Advantages
      - 7.5.1.1.2. Difficulties
  - 7.5.2. Administration
    - 7.5.2.1. The Directorate of Interinstitutional Relations
    - 7.5.2.2. The Planning Office
    - 7.5.2.3. Advantages
    - 7.5.2.4. Difficulties
  - 7.5.3. The Curriculum
    - 7.5.3.1. Basic studies stage
    - 7.5.3.2. Applied studies stage
    - 7.5.3.3. Advantages
    - 7.5.3.4. Difficulties
  - 7.5.4. Finance
    - 7.5.4.1. Advantages
    - 7.5.4.2. Difficulties

References Chapter VII

### 7.1. Introduction

In this chapter are discussed some of the alternative solutions which have been implemented in Venezuela to solve the problem of training professionals and technicians to a level where they are capable of making a contribution towards the autonomous economic development of the country. Some higher education policies implemented in other countries and the possibility of their application in Venezuela are also discussed. Finally, some policies are recommended the implementation of which would help Higher Education in Venezuela to achieve its aim of training its human resources in accordance with the needs of national development.

### 7.2. Some alternatives for Higher Education in Venezuela

From 1970 onwards the Government created universities, polytechnics, technical schools (tecnológicos) and colleges of higher education (colegios universitarios), offering a variety of careers relevant to the economic development of the country. It was hoped that these would attract a massive number of students. The Government also put into practice a policy for grants for university studies abroad and created the Open University. It was hoped that these measures would train the professionals and technicians necessary to achieve the economic development of the

country.

#### 7.2.1. Policy for Grants Abroad

In view of the fact that the number of students registering for the University careers which the State needed was not as high as desired, the Government proceeded to put into practice a policy for providing grants to train abroad the human resources required for national development. This policy was put into practice from 1974 (1) through a plan for grants called "Gran Mariscal de Ayacucho". It consisted of sending students to do undergraduate and/or postgraduate courses in institutions of higher education in other countries, preferably in highly developed countries such as the United States, England, France and Germany. It was felt that in this way the students could acquire important technical knowledge for promoting the development of Venezuela, especially in areas related to economic development, where the country currently has the greatest problems.

##### 7.2.1.1 Policy for grants and transfer of technology

Although it might facilitate the transfer of technology into the country, this plan for grants is not at present an alternative which is likely to produce the best benefits for Venezuela. On the one hand, the policy has been put into practice without

making provision to ensure a) that grants were given to the most capable pupils and b) that grants were given to study for the careers which the country needed. The plan, therefore, has the same problems as the country's own higher education, because many students choose traditional careers which are least needed by the country, whilst others take up careers in which they fail to qualify because they lack the appropriate aptitude.

However, even if this grants policy did select students effectively, and if these were sent to study for careers related to Venezuela's requirements, the policy would not be conducive to solving problems relating to the shortage of professionals capable of working efficiently in areas of the country's economic production. Furthermore, grant-holders are sent to highly developed countries where technological developments are related to the production requirements and interests of the country where they are studying, and so they are trained to work in areas that either do not exist in Venezuela or where, if they do, the country lacks the technological infrastructure necessary to apply the knowledge obtained in solving the problems of the national productive sector. Thus, rather than benefitting Venezuela's national interests, the policy of sending students abroad risks creating many disadvantages. One of these lies in the fact that students, once they have graduated, may not find appropriate work in Venezuela and opt to return to the country where they studied

or go to any other country that offers possibilities of work more appropriate to the studies they have undertaken. Even in the cases where students in such a situation decide that they do not wish to leave the country, their only other option is to remain in Venezuela and accept any kind of employment, which may not necessarily make use of the knowledge acquired in their studies abroad. Thus the policy of grants has not produced the desired social benefit.

#### 7.2.2.2 The costs of the grants policy

In addition to the risks and possibilities involved in this grants policy for the achievement of a transfer of technology which would benefit Venezuela's national production, there is the problem of its costs. To implement this policy the government must pay for accommodation, food, clothing, books, language courses and tickets, in addition to registration fees for hundreds of students each year. The country was able to afford these costs thanks to high oil revenue and the stability of the bolivar as national currency. But things have begun to change since 1982; oil revenue has fallen and the bolivar is no longer stable against the US dollar. It has been devalued significantly and this has escalated the costs of the grants for studies abroad. This has forced the government to think seriously about continuing this policy, which in turn leads to consideration of

the need for more appropriate policies for Higher Education, policies more in accordance with the needs of national economic development and which would thus contribute to resolving the educational problems which cannot be solved through this grants policy.

#### 7.2.1.3. Studies abroad and national conscience

In addition to the problems of the transfer of technology and the costs of a policy for grants abroad, there is the problem of shaping the national conscience.

Although students abroad may have valuable social experiences which may benefit Venezuelan society, if those experiences were applied to the country, it is also possible that those students might lose their national identity and acquire attitudes of rejection for their own country, or become distanced from the Venezuelan national reality, to ignoring its social problems, or becoming alienated from their social reality and to experience difficulties in re-adapting to it. It is even possible in some cases that although they may be familiar with the social reality of Venezuela, they will choose to remain in the country where they have studied in order to enjoy a better standard of living in a society which offers them better opportunities in the professional and social fields. Therefore this policy for grants

to train the human resources required by the country for its autonomous economic development offers only limited possibilities of achieving the desired benefits and therefore should be rejected as a solution to the problem of training professionals and technicians.

#### 7.2.2. The Open University

The Open University was introduced by the Government as an alternative in Venezuela's Higher Education in October 1977. (2) It took as its model the Open Education of England. It was felt that the use of this model would help overcome the existing problems in the training of human resources to contribute to the autonomous national economic development.

The career options offered by the Open University are the same as those offered by the country's traditional institutions of Higher Education, but as it has had a policy of open admission, the same situation which affects traditional institutes of Higher Education has affected it also, namely, that students have concentrated upon the most prestigious professions which are not part of those which are priorities for the economic development of the country.

7.2.2.1. The Open University and the training of professionals in Venezuela

The policy of open admission to Higher Education in Venezuela has created a problem of concentration of students in professions that are not a priority in terms of Venezuela's autonomous development. In addition there is a problem related to the quality of the graduates from the professions, particularly those directly related to the industrial sector, who are often unable to perform efficiently in the field of their specialization because they have not been trained in close contact with that field. This is a consequence of an academic training unrelated to the situation where the knowledge acquired is to be applied. The Open University of Venezuela as a model of long-distance education which relies mainly on radio, television and correspondence as means of education is not an alternative which is capable of overcoming this deficiency in Venezuelan Higher Education. Moreover, this modality has been rejected by school leavers and it has become an alternative for employed adults wishing to obtain a university degree and for graduates who, taking advantage of free time, wish to get another degree of a similar level; in either case, preferences gravitate towards professions such as law, education and administration, traditional careers with which the traditional system of Higher Education is already saturated; thus, both for its selection policies and for its teaching methods, the Open University of



Venezuela must be rejected as an alternative for the solution of the current problems of training the necessary human resources for their incorporation into the priority activities of national economic development.

### 7.3. Foreign Models

The problem of training professionals and higher level technicians in Venezuela has been analyzed by many intellectuals in the country. Some suggest alternative routes which might reconcile the democratization of higher education with training of human resources demanded by national development. They suggest the introduction of foreign models in the belief that their success in other countries might represent the solution needed in Venezuela. Among these authors, Luis Beltran Prieto Figueroa, in his book El Estado y la Educacion en America Latina, already quoted in earlier chapters, where he analyzes the development of higher education in Latin America and particularly in Venezuela, suggests, as an alternative solution to the aforementioned problem, the introduction of the North American model in countries such as Venezuela who aspire to full development. (3)

### 7.3.1. The North American Model

The North American model of higher education in general terms can be characterized as comprising two groups of institutions: State Universities and Colleges, and independent and private Universities and Colleges. (4) The former are supported by the State and are open institutions while the latter are private institutions maintained by foundations, private bodies and ecclesiastical institutions. The fees are so high that they are almost exclusively used by an economic elite. (5) Prieto Figueroa states that North American universities offer a wide variety of careers that broadens the range of possibilities open to potential candidates who can choose freely the career they prefer. This in Prieto Figueroa's view is a proof of the democratic nature of Higher Education in the States and of the way in which that powerful nation is able to train the professionals it requires. (6) This policy of democratization of American Higher Education is characteristic of State Universities (7), which are similar to the autonomous and experimental universities of Venezuelan Higher Education, because of their popular character. Nevertheless, in spite of the variety of professions offered by the North American model, if such a policy were applied in Venezuela it would lead towards a further concentration of students in traditional professions as has already characterized the country through the policy of free

choice. As has already been mentioned this has resulted in very few professionals and technicians being trained in the priority areas of national economic development and a growing number of professionals in areas of work which are becoming more and more restricted in the country. Thus the North American model does not offer a solution to the problem of the democratization of higher education and the training of professionals and technicians leading to economic development in Venezuela. Also, this form of democratization of Higher Education in the States, which is orientated towards incorporating the masses into education, is carried out in parallel with higher education carried out in private universities which are the most prestigious in the country and whose academic level is in tune with the demands of scientific and technological development on a world scale and which the government of the United States is very concerned to continue as its vanguard. Thus the quality and quantity of human resources trained in the country which contribute to its development at its highest level does not really come from the State universities, which have greater numbers. They are trained in the private universities whose students on the whole come from private secondary schools which offer a better quality of education than do the state schools.(8) This means that those who enter these universities are generally students who come from well-to-do families.

Therefore, when Prieto Figueroa proposes the North American model as an alternative for Venezuela, he does not take into account, on the one hand, the problem of the concentration of students in the traditional professions that has occurred as a result of the policy of free choice and the need to establish policies to solve it, or, on the other hand, the need which exists in Venezuela to develop a Higher Education system which offers equality of opportunity to all those able to pursue higher education, and at the same time the need for the quality of that education to be good enough to guarantee graduates effective participation in relevant activities. These are the grounds for rejecting Prieto Figueroa's proposal of introducing the North American model as a solution to Venezuela's Higher Education problem relating to the training of the human resources required to achieve autonomous economic development.

### 7.3.2. The Cuban Model

Following an analysis of the process of the Cuban revolution and the role of education in it, Martin Carnoy in his book Cuba: Economic Change and Educational Reform, concludes that given the results achieved by Higher Education in Cuba, underdeveloped countries can develop by following the Cuban model of Higher Education and can train the human resources required to achieve this aim. Before looking at the possibilities of a

seem possible to apply the same educational model in both countries. However, each country has a different form of government; whereas Cuba has a socialist totalitarian government, Venezuela has a democratic, alternative government. This makes the application of the Cuban model difficult, because, while in a totalitarian system of government, there are strict procedures for overcoming social difficulties and enforcing government plans, in the democratic system respect for the social institutions of the country must prevail and care must be taken that the policy is acceptable to the interested parties and that its application may be carried out with a minimum of social friction.

On the other hand, the introduction of the Cuban model in Venezuela would mean the introduction of profound reforms in Higher Education in Venezuela, because while the Cuban model of Higher Education is constituted basically by the universities, the Venezuelan has, in addition to universities, polytechnics, technical schools and colleges of Higher Education; moreover, while the Cuban model has a centralized system that controls, directs and supervises cooperation of the system at every level, the Venezuelan one has a group of separate institutions which although controlled by a central body (The National Council of Universities), do not depend on it for their functioning; while the Cuban model has an admissions policy which restricts access

to the universities, in Venezuela each candidate freely chooses the career he will follow, all of which raises a range of expectations.

#### 7.3.2.1. The Students

Student organizations would reject the application of a model whose policy of admissions limited the opportunities of candidates who wished to obtain the highest degrees in Higher Education. It is very important for many Venezuelan students not to lose this perspective, which in the Cuban model is only open to those who are admitted to a university after having passed the entrance examination. The need to obtain the highest degree in Venezuelan Higher Education is linked to the desire to get a highly paid job, a desire not only to get a degree in a prestigious career but also to improve the economic status of the graduate in the exercise of his profession. These reasons might cause the students to react in ways which would significantly affect the activities of the country if they were to see their possibilities of achieving their aims in Higher Education thwarted. The most typical reactions in many cases are student strikes, occupation of buildings and street demonstrations which often disrupt the normal running of other social activities in the country.

#### 7.3.2.2. Parents and guardians

If the Cuban model were applied to Venezuela, the restrictions of admission to Higher Education it proposes might produce reactions among the parents and guardians of the students, not only because of the restrictions on their traditional participation in influencing the decisions taken by their children and wards regarding choice of careers but also because the prospects of their children and wards attaining higher degrees which could guarantee a better economic and social status would be limited. Limitations would be different as between families of higher or lower incomes; a policy of this type would not affect the former because there are better chances for their children of going to university either at home or abroad in private institutions.

#### 7.3.2.3. Political Parties

At present political parties exert considerable influence on many social institutions in the country. They would react very strongly against the introduction of a model that limits the opportunities of the masses to achieve their social and economic aspirations through education. Their actions would be felt through the student organizations, through parents and student representatives and also through the teachers unions throughout the country.

#### 7.2.3.4. The teachers unions

In Venezuela each type of higher education institution has trade unions. Thus there are unions for university teachers, for teachers at polytechnics and technical schools, for teachers at colleges of Higher Education and for teachers at colleges of education. Each one of these unions protects the interests of the institution where it originates and would oppose the introduction of a model which consisted only of universities and which would lead to the elimination of other institutions of Higher Education in the country. On the other hand, the unions of university teachers would oppose a centralized model where the State would take on absolute control of the universities and which would restrict university autonomy and the academic freedom which form part of Venezuelan university tradition. Teachers, mainly from the autonomous universities, would take action to reject it and to achieve this would join students in demonstrating in defence of university autonomy and popular education.

#### 7.3.2.5. Economic Institutions

In spite of the advantages offered by an educational model such as the Cuban one for the training of professionals required by Venezuela's productive sectors, the introduction of such an alternative would probably be opposed by the economic



institutions of the country, which would not be prepared to support an alternative which might provoke situations which could create difficulties for the development of the normal activities of different sectors of society. These institutions would not welcome the negative effects these situations would produce.

However, though the factors analyzed might constitute barriers to the application of the Cuban model in Venezuela, it is also possible that some contradictions would be resolved, making its application possible, particularly if it is taken into account that possible reaction against its application would occur mainly during its initial stages. The violent attitudes which students have taken in the past to reject unacceptable policies have to some extent changed, which means that in spite of the contradictions mentioned, the model could be implemented in Venezuela. However, taking into account that the problems of Venezuelan Higher Education concerning the training of professionals and technicians for professions directly related to the requirements of economic development are the result of the absence of a policy contributing to a desirable change of attitude which would guarantee the admission of a majority of candidates to these professions, the Cuban model must be rejected. Its admissions policy establishes a single option for the candidate who has successfully passed the admission exams, but that would not guarantee that the majority of candidates

would choose the professions most needed by the country because they might continue to choose the traditional professions, thus preventing the desired change from occurring.

Thus Carnoy's proposition at the present moment does not constitute a viable alternative for the solution of Venezuela's Higher Education problem of training human resources required for the development of the country. A common purpose between the two countries is not sufficient to achieve autonomous economic development. It is necessary to take into account social, political and economic factors and also the attitudes which would determine the success or failure of the implementation of a similar educational policy in both countries, something Carnoy did not consider in making his proposal.

#### 7.4. Conclusions

Efforts to develop Higher Education in Venezuela have concentrated fundamentally on the idea of achieving total democratization. This aim has been characterized by a policy of free choice which allows candidates who have a Bachelor's degree to be admitted to the profession of their choice without having to fulfil other requirements which would lead them to courses best suited to their abilities and aspirations and which best correspond to the development needs of the country.

Traditional institutions such as universities and those created later such as polytechnics, technical schools and colleges have generally maintained the same policy and have failed to instil in the candidates an awareness of the need to study the professions most needed for the economic development of the country. In view of this the Government has established alternatives such as the Open University and the scholarship programme Gran Mariscal de Ayacucho in an attempt to solve the problem. These alternatives have, however been developed within the context of the same policy of free choice and it has therefore not been possible to take positive steps to solve the problem of training the professionals and technicians the country needs to participate effectively in the activities of economic development through an efficient and diversified industrial development. The alternatives referred to do not have the academic standing to ensure that the training will produce professionals familiar with national reality from the technical and scientific, and also from a social and human, point of view, and who are aware of the destiny of their country and able to give the best of themselves towards its development.

On the other hand, the substitution of an educational model based on the success the model may have had in its country of origin is no real alternative because of the inherent contradictions of any

model resulting from idiosyncrasy and existing interests not only in the context of Higher Education but also in Venezuelan society as a whole. All this reaffirms the need for the introduction of reforms in Venezuela to enable it to overcome the faults which have, to date, prevented Higher Education from effectively fulfilling its role of providing the human resources required by the country to achieve autonomous economic development. It must be taken into account that this need for human resources in the country is also linked to the need of institutions of Higher Education, particularly universities, to carry out research and teaching to the high standards appropriate to this level, not only to achieve prestige in the national and international community but also to achieve the highest levels of scientific and technological development, which are needed to enable countries to make firm progress towards development. The extensive admission of students by institutions of Higher Education in greater numbers than the teaching facilities available can deal with constitutes a serious problem for Venezuela. It has led institutions of Higher Education to invest more resources in teaching than in research and, as a result of the high ratio of students to teachers, the teaching has not achieved the quality which would guarantee the training of better professionals. Massive admission to Higher Education is also characterized by the acceptance of considerable numbers of students who do not have the aptitude for the professions they

choose. This makes teaching even more difficult and creates frustrations for those who cannot complete the course and those who, having the necessary aptitude for particular courses, are refused admission because there are no available places. Furthermore, other students remain registered with the institutions without fulfilling their responsibilities as students simply because they wish to retain their university registration for other purposes.

Measures must therefore be taken to ensure that Higher Education in Venezuela plays a key role in the development of the country, bearing in mind that it is necessary to put aside whimsical attitudes that do not respond to social dynamics and present needs. Greater awareness is needed of the efforts required to achieve the democratization of Higher Education by creating more institutions in every region of the country which requires them, in the certainty that this will lead to a more developed country. At the same time, these efforts should not be allowed endanger the scientific and academic development of these institutions. It is therefore necessary to put into practice policies leading towards the improvement of the academic level of Higher Education, policies which would guarantee the country the training of human resources which would contribute towards the satisfaction of development needs in different historical periods and within which democratization would be characterized by a

rationality which would contribute to the achievement of aims of benefit to the whole of society.

Finally, it should not be overlooked that the growth of Higher Education and its expectations for the future pose the need to study alternative means of improving the economic conditions of institutions, not only in response to the requirements of democratization but also to ensure improved income which the State finds increasingly difficult to provide, in order to fulfil research plans, teaching and the dissemination of knowledge.

For these reasons and in view of the possibility of reforms being introduced in Venezuela's Higher Education system in order to enable it to serve national interests better, we here put forward recommendations which could contribute towards the achievement of the aims proposed by the reform.

## 7.5. Recommendations

### 7.5.1. Organisation

Higher Education in Venezuela should include universities and other institutions already in existence in the country, such as polytechnics, technical schools, colleges of higher education and colleges of education, in addition to military and religious institutes.

#### 7.5.1.1. Admission

In order to solve the problems caused by the policy of free choice, an admissions policy should be established aiming to allocate students according to their aptitudes and according to regional needs and the number of places available at universities and other institutes of Higher Education. To help achieve this regional offices would provide printed information on the careers available in the region. These would be classified as follows:

- A. Careers available in the universities
- B. Careers available in other institutions of Higher Education.

The careers in both A and B would be classified into three groups:

Group 1 Careers with the lowest demand in the region

Group 2 Priority careers with a high demand in the region

Group 3 Careers with the highest priority and maximum demand in  
the region

Students would choose their alternatives: one from each group under universities and one from each one under the other institutes.

Admission would be determined on the basis of:

- a) an average of the marks attained by the candidate in the two

preceding years of study,

- b) a report from the appropriate department of exploration and orientation of the student's institute of secondary education describing the candidate's abilities and aptitudes, and
- c) the results of an aptitude test taken at an appointed place.

Each student would be given a score according to the results obtained from the preceding information on the basis of which the student would be allocated among the a profession from available places. The allocation to different courses would be made in such a way that the students with the highest qualiications would gain access to Group 1 courses, while the requirements would be lower for Group 2 and still lower for Group 3 courses. Requirements would continue to descend from Group 3 in the universities to Group 1 of available courses in the other institutes. Students unable to gain admission could reapply the following academic year.

#### 7.5.1.1.1. Advantages

1. Admission to higher education would be rationalized allowing increased admission to those courses where there is a greator need for professionals.



2. Selection of courses would be made according to the needs of the country.
3. The opportunity would arise for students to choose careers suited to their vocation, capacity, and efforts and this, in turn, would reduce the rate of failure in Higher Education.
4. Effective links would be established between secondary education and Higher Education as a result of the importance given by the former to activities such as exploration, orientation, teaching and evaluation.
5. Students would be encouraged to improve their academic performance in secondary education in order to achieve their goal of gaining admission to the courses of their choice.
6. The same admissions policy could be applied by every institution of Higher Education created in the country.

#### 7.5.1.1.2. Difficulties

1. Students might object to the policy because it subjects applicants for courses to a process of assessment which constitutes a break with traditional procedures. However, the candidate has a right to make six choices, and this may,

on the other hand, contribute towards producing a change of attitude. Policies could, however, be devised to ensure that once students have completed a short course in institutions other than universities they can then go on to university to continue studying. In any event, a favourable reaction from students cannot be expected when these policies are first applied.

2. There may be delays in receiving the results from institutes of secondary education. This would make it difficult to complete the assessment of each candidate, which might lead to the results of the aptitude test becoming the only available instrument upon which to assess the candidate. This problem could be solved by providing each educational region with a computer service, or by using the computer systems already available in most of the universities in the country. This would assist the development of a close academic relationship between these institutions and institutes of secondary education in each region.
3. Difficulties may be encountered in fulfilling satisfactory exploration and orientation in the institutions of secondary education because of a shortage of staff available to carry out these activities. There are, moreover, institutions which do not have such a service, resulting in the lack of

the appropriate data for the candidate's report or delay in sending in the assessment of the candidate. Nevertheless, this difficulty could be overcome with the cooperation of the institutions of higher education, mainly universities, through their Departments of Orientation and Faculties of Education. The latter could use the participation of suitably trained students in the more advanced courses. The students of other faculties could also participate particularly in exploration and vocational orientation.

4. There may be reactions against the policy because access to Higher Education would be limited to the available places in the establishments. However, problems related to the number of places could be resolved by a financial policy which would increase the capacity of the institutions to admit the largest possible number of candidates. (See Section 7.5.4.)

#### 7.5.2. Administration

Higher Education could be divided into educational regions. An educational region would be characterized geographically by the facilities for access to it and communication within it. Within each region there would be a university and other institutions of Higher Education according to the social needs of the region. Each institution of Higher Education would retain its academic

autonomy in the development of its research, teaching and dissemination of knowledge.

7.5.2.1. The Directorate of Interinstitutional Relations

The university and other institutes of Higher Education would have a Directorate of Interinstitutional Relations. Its academic aims would be:

1. To link each institution with others of the same level in the region with the purpose of:
  - a) establishing the curricular nexus to unify the system and gradually establishing the norms for its operation and
  - b) to provide for the resources of each of the institutions to be available to all others in the region.
  
2. To link the secondary with the higher levels of the educational system within the same educational region in order to:
  - a) establish the curricular links between both levels, thus providing for better preparation for, and a more adequate orientation to, the higher level, and
  - b) take advantage of the resources of higher education to improve education at the secondary level.

3. To link Higher Education in every region with that in all other educational regions at the same level in the country and also with institutions of higher education in other countries.

#### 7.5.2.2. The Planning Office

A National Planning Office responsible for the provision of information on national development plans and educational information of importance to educational planning for each region must be set up.

A Regional Planning Office, to be responsible for the collection of information from educational, development and other regional bodies, to give direction to educational plans within the region, is needed.

#### 7.5.2.3. Advantages

1. Information would be directly available which would allow the planning of Higher Education to be kept up to date and in line with the needs of national and regional development.
2. Each institution would maintain its academic autonomy.

3. It would unify Higher Education and link it to the secondary level of the educational system.
4. The resources of each institution would be made better use of to the benefit of the entire Higher Education system.
5. The connection between the curricula of the secondary and the higher educational levels would provide a better preparation for the candidate going on to Higher Education and thus a basis would be created for the gradual elimination of the preparatory courses it now has, resulting in a better use of time in professional training in Higher Education.
6. As a result of the continuity of curricula in courses in each institution up to university level, candidates would be given the confidence to apply to other institutions of Higher Education and to aim for the highest degrees in the universities.
7. There is a financial advantage in making use of the resources of each institution for the academic activities of the entire level, not only the institution itself.

8. It would be realistic in that it would correspond to the needs of the country.

#### 7.5.2.4. Difficulties

1. Teachers might react against the setting up in the universities of information offices for planning. They might see these offices as a form of political control threatening university autonomy and academic freedom. However, if the help provided by these offices proved useful these reactions might gradually disappear.
2. Even though the curricular links between the different types of institutions would be established in order to facilitate movement from one institution to another at the same level, there would be some students who would react against a policy which encouraged pupils to attend institutions other than universities. Nevertheless, this attitude could change once the system began to show signs of working.
3. Initially, it would not be easy for some university teachers to carry out joint activities with teachers of other institutions, particularly because of issues relating to the academic superiority of universities. However, it is possible that these differences would gradually disappear

and the joint activities required by Higher Education and the country would develop.

### 7.5.3. The Curriculum

The establishment of university courses which meet the social and individual needs of Venezuela requires the establishment of a system of teaching which allows for a harmonious relationship between theory and practice to enable it to respond to the existing requirements for the training of professionals. This must be done while taking into account the need to produce capable professionals who satisfy the requirements of the plans for national development, where graduates can overcome the doubts concerning their capacity in their field of work. This can be achieved by putting into practice curricula developed harmoniously between institutions of higher education and the work place. The curriculum for Applied Sciences would develop in two stages: a stage of basic studies and one of applied studies. The courses would vary in length: five years for the long careers and three years for the short careers.

#### 7.5.3.2. Basic Studies Stage

This stage would last for two years in the long courses and one year in the short, three year courses. It would be devoted to



basic theoretical studies of the specialization and general studies in such proportions as would avoid detracting from the requirements of professional training.

#### 7.5.3.2. Applied Studies Stage

This stage would last for three years of the five-year courses and two years of the three-year courses. It would aim to implement the students' basic knowledge acquired in the preceding stage and to give him practical experience in the field of work, i.e., in institutions, organisations, farms or wherever he is going to operate professionally. During this stage the theoretical studies necessary to consolidate the professional and wider training of the students would be included; the proportion of these studies would diminish as the student progressed towards the completion of his course. During the final year the student should have the freedom to dedicate himself and devote more time to the practical aspects of his career within the environment of his field of work.

#### 7.5.3.3. Advantages

1. Continuity of the comprehensive training started at the lower levels of the educational system.

2. Training of professionals according to the existing demands of the country.
3. Systematic integration of institutions of Higher Education and other institutions with simultaneous benefits for all.
4. Increase in the capacity of educational institutions.
5. Improved use of equipment, machinery and the laboratories of commercial and industrial institutions.
6. Reduction in the costs of Higher Education for the State and for the educational institution itself.
7. Increased possibilities of work for graduates.
8. The country would have professionals able to contribute to national development.
9. Facilitation of the transfer of technology and the creation of new technology.
10. Permanent enrichment of the curricular content.
11. Development of the study of Pure Sciences, which would

continue to develop according to scientific and academic criteria established in the universities as part of their academic autonomy.

#### 7.5.3.4. Difficulties

1. The attachment by sectors of the teaching staff to traditional curricula in Higher Education in Venezuela could lead to opposition to the changes proposed. Changes could not therefore be effected within a reasonable period but would have to await the desired changes of attitude.
2. The lack of experience of some teachers in particular fields of work would make it difficult to advise students on practical matters related to organisations or institutions where the students would have to apply their knowledge. This could create difficulties in the implementation of the changes in the curricula proposed above. Nevertheless, this difficulty could be overcome through the implementation of practical training for teachers before starting the implementation of the new curricula policy at the higher levels.
3. The lack of established norms to regulate the relations between professionals in the work place and teachers and

students might produce difficulties for teaching. This would be the case particularly when it is considered that Venezuela has had no previous experience of this in its industries. It is likely, then, that friction will occur both in Higher Education and for those institutions which make their work facilities available to the Higher Education system. This could be avoided by agreements between Higher Education, the industrial sector and government authorities for the establishment of norms leading to harmony in the interests of the different sectors.

4. Reactions against this curricular policy could come from those who consider it to be a technocratic model. The supporters of this thesis believe that technocratic models do not contribute to the training of the type of citizens desirable for a developing society. This could be solved by including in the stages of basic and practical studies, subjects and activities contributing to a comprehensive training started at the earlier levels of the educational system, as described in the Appendix on the stages of the curriculum proposed above. Each institution of Higher Education would be free to decide what subjects to include as a function of its autonomy and academic freedom and according to the principles of citizen training established in the National Constitution.

#### 7.5.4. Finance

The growth of the Venezuelan population, the need to broaden Higher Education in order to give access to it to the most capable candidates and the need to provide the institutions with more and better resources to enable them to offer better quality teaching to the student population, suppose a continuous increment in the costs of Higher Education, and sooner or later these costs, will not be able to be totally met by the State. This could force both the State and the educational institutions themselves, in order to satisfy their financial needs, to impose the payment of high fees on those who are admitted to the higher level. The consequence of this would be the creation of an educational level accessible only to the intellectual elite coming from the wealthiest families of the country. These fees, in turn, would act as obstacles for those of the intellectual elite who did not have sufficient financial resources to achieve their aims in Higher Education. This makes it necessary to offer alternatives to contribute to the financial strengthening of Higher Education in Venezuela in order to ensure equal opportunities for all and a better financial backing for the institutions of Higher Education.

Some finance resources could be obtained as follows:

1. A contribution made by graduates after finishing the course at pre-degree level. The level of contribution would be based upon the cost per student per year, and every person to finish or to drop out would pay 50% of this cost per year or the proportion equivalent to the time spent on the course. Full time students who took more years to complete their course would pay 100% of the cost per student per year for each extra year spent in the institution. Part time students would normally be allowed twice as long and from then onwards they would also pay 100% of the cost for each extra year in the institution.

The funds thus raised would go directly to the institution from which the student was graduating by a system which could be established internally in each institution or through a Higher Education Foundation which would operate for each institution of Higher Education.

2. A tax on Higher Education could be applied to graduates. It would commence after the payment for the years of study had been completed. This tax could be made to cover all graduates from Higher Education in the country, even though they might have graduated before this policy was put into practice. The tax would be collected annually or in monthly instalments through the Treasury and it would be distributed

anually between educational regions according to each of their needs.

3. The institutions of Higher Education could offer services to the government, commercial, and industrial sectors and to the public in general and receive payment accordingly. To achieve this, agencies could be funded for the development of projects in any areas of engineering, design and implementation of projects. Computer services, technical assistance of any sort, programming and in-service course development for graduates in employment could be supplied, not only for professions related to engineering but also in any other fields for which institutions had technical and scientific resources available.
4. Post-graduate courses, masters degrees and doctorates could be offered.
5. Industries in each region could provide a monthly or yearly contribution to stock the libraries and donate equipment and offer scholarships for the support, travel and equipment of students of reduced means.

#### 7.5.4.1. Advantages

1. It would avoid the admission of any student being dependent upon his means.
2. It would encourage students to complete their courses in the normal time-span to avoid increased costs.
3. It would encourage candidates to think carefully before starting a course so as to avoid paying for a course they might not subsequently complete.
4. It would prevent students from dropping out of courses without notifying the institution where they are registered.
5. Institutions of Higher Education would have funds to carry out research projects, to equip laboratories and libraries, to increase services to the community and fulfil other tasks which could increase their academic standing without having to depend exclusively on the budget provided by the State.
6. New possibilities would be opened up to broaden the capacity of the institutions and give access to a greater number of candidates.



7. Better opportunities for study would be offered to low income students, thus avoiding their having to abandon their course to start work.
8. Industrial and commercial establishments in the country would become committed to the responsibilities of financing Higher Education.

#### 7.5.4.2. Difficulties

The implementation of this policy might have to face several obstacles.

1. Objections might be raised regarding the contribution towards costs to be made per student per year to the corresponding institution, because then Higher Education would cease to be free, which would be contrary to the interests of the needy classes. This could however be compensated through the setting up of a system of monthly repayment starting when the graduate starts to receive an income from employment. Similarly, those who withdraw before graduating could pay for their years of study as soon as they were gainfully employed.
2. Graduates might react against the Higher Education tax

mainly because taxes of this nature have never existed in the country; however, these reactions are likely to occur only when the policy is initially applied. The payment of this tax could be compensated by an offer of scientific and cultural programmes produced by the institutions of Higher Education for their graduates and providing many facilities for them.

3. The acceptance of the services offered by institutions of higher education cannot be taken for granted. As there is no tradition for this kind of activity in the country, it lacks prestige and might generate little income. It would thus be necessary to wait until the quality of the services offered could compete with those already in existence in the country and thus contribute towards establishing the necessary confidence so that the required and desired economic benefits for Higher Education would be achieved.

A final recommendation is closely linked with the need to produce an awareness in Venezuelan society which will bring about the achievement of the aims for the development of the country. Politicians, entrepreneurs, parents and guardians, teachers, students and government officials should become aware of the needs of Venezuela and be prepared to fulfil the roles best suited to the benefit of all.

Politicians should realize that Venezuela should not enter into sterile ideological struggles for power in order to impose ideological party lines. It is more important to work together to ensure that whoever is in power every effort is made to achieve the maximum benefits for the country. It is of no advantage for Venezuela to enter into the type of ideological struggle engaged in by world powers. Social and political struggles should be described in objective terms without ideological passion. This could lead to a proper evaluation of the role of each social institutions in terms of national development and in this way contribute towards Higher Education being appreciated as one of those institutions necessary for the development of the country and not as a goal to be reached by each member of society because it is a right which exists in every democratic society.

Entrepreneurs should lay aside their ambitions and think in terms of the needs of the Venezuelan nation. In this way they must contribute towards expanding employment to give work to graduates from the different educational institutions of the country. Entrepreneurs should motivate graduates through forms of compensation and benefits which acknowledge the efforts made by those graduates in contributing towards the aggrandisement and development of Venezuela. The prime need of each candidate to achieve a university degree would then not be just in order to

improve his economic and social standing.

Parents and guardians should take into account that not all individuals are capable of attaining the highest academic levels offered by the country's educational system. More important than making desperate attempts to gain admission into Higher Education is to achieve the kind of training that each person desires and aspires to, and such training is not necessarily achieved at the higher level. It is more important that each individual should satisfy his own aspirations and be useful to society and it is in this direction that parents should guide their children.

Teachers should bear in mind that their best contribution to society is to base their teaching on scientific principles and the need to form citizens capable of using objectivity as their best weapon. If the teaching profession follows this direction we will learn which are the most suitable ways of training the new citizens and what is most necessary for the development of the country.

Students should have in mind that the courses that exist at the higher level do not represent goals to be reached by every individual in society; an individual is valued more for his capacity to perform than for the academic degrees he has. Moreover, what produces most satisfaction in each individual is

to carry out tasks that are personally satisfying and which also produce benefits for those around us him. For this reason admission to traditional careers in Higher Education should not constitute the be all and end all of going to university.

The Government should try to formulate and implement policies which harmonize national interests and enhance the true value of each member of society. It should lay emphasis on the principles of social justice and take a firm position so that social benefits can be enjoyed by all throughout the country. The State should be responsible for the eradication of populist policies which only lead to a society incapable of awareness of reality and which diverts it from the road to development.

## REFERENCES

1. Papeles Universitarios, Continental C.A. Caracas-Venezuela, Octubre de 1977. Año 1. Numero 3. p.82.
2. Prieto Figueroa, Luis Beltran, El Estado y la Educacion en America Latina, 2da.ed.Monte Avila. Caracas. Venezuela, 1978. p.275.
3. Ibid., pp.251-252.
4. Hans, Nicholas. Comparative Education, Routledge and Kegan Paul, 3rd ed. London, 1980. pp.285-286.
5. Ibid.
6. Prieto Figueroa, L.B. op.cit. p.252.
7. Hans, Nicholas. op.cit. p.286.
8. Ibid, p.285.
9. Carnoy, Martin. Cuba: Cambio Economico y Reforma Educativa. Nueva Imagen. Mexico, 1980.

BIBLIOGRAPHY

- Almea, Ruth Lerner de **La Diversificacion de la Educacion Secundaria.** Cultural Venezolana, S.A. Caracas, Venezuela, 1972.
- American Council on Education. **American Universities and Colleges.** Washington, D.C., 1972.
- Aranda, Sergio **La Economia Venezolana,** 3rd edition. Siglo Veintiuno editores. Bogota, Colombia, 1979.
- Banco Central de Venezuela **Economic Report 1967** Caracas, Venezuela, 1967.
- Bendix, R. **Nation-building and Citizenship.** Doubleday. New York, 1969.
- Bernstein, H. **Underdevelopment and Development** Penguin, Harmondsworth. Middlesex, England, 1973.
- Brito Figueroa, F. **Historica Economica y Social de Venezuela Vol.I** 4th ed. Ediciones de la Biblioteca, U.C.V. Caracas, Venezuela, 1979.
- Brito Figueroa, F. **Historica Economica y Social de Venezuela Vol.II** 2nd ed. Ediciones de la Biblioteca, U.C.V. Caracas, Venezuela, 1974.
- Brito Figueroa, F. **Historia Economica y Social de Venezuela Vol.III** 3rd. ed. Ediciones de la Biblioteca, U.C.V. Caracas, Venezuela, 1978.
- Cardoso, F.H. and Faletto, E. **Dependencia y Desarrollo** Siglo XXI ed. Mexico, D.F., 1979.
- Cardoso, F.H. and Faletto, E. **Dependency and Development in Latin America** University of California Press. London, 1979.
- Carnoy, Martin. **Cuba: Cambio Economico y Reforma Educativa.** Editorial Nueva Imagen. Mexico. 1980.
- Centro de Estudios del Desarrollo **Formacion Historico Social de Venezuela** CENDES. Caracas, Venezuela, 1981.
- C.N.U.-O.P.S.U. **Boletin Estadistico** Caracas, Venezuela, 1974.
- C.N.U.-O.P.S.U. **Boletin Estadistico** Caracas, Venezuela, 1975.
- C.N.U.-O.P.S.U. **Boletin Estadistico** Caracas, Venezuela, 1976.

- C.N.U.-O.P.S.U. **Boletin Estadistico** Caracas, Venezuela, November 1979, No.6.
- C.N.U.-O.P.S.U. **Boletin Estadistico** Caracas, Venezuela, August, 1980, No.2.
- C.N.U.-O.P.S.U. **Boletin Estadistico Tomo 1.** Caracas, Venezuela, November, 1980, No.7.
- C.N.U.-O.P.S.U. **Boletin Informativo 1977.** Caracas, Venezuela, 1977.
- C.N.U.-O.P.S.U. **Oportunidades de Estudio en las Instituciones de Educacion Superior en Venezuela Ano 1980** Caracas, Venezuela, 1980.
- C.N.U.-O.P.S.U. **Oportunidades de Estudio en las Instituciones de Educacion Superior en Venezuela Ano 1981** Caracas, Venezuela, 1981.
- C.N.U.-O.P.S.U. **Tendencias de la Educacion Superior en Venezuela** Caracas, Venezuela, August, 1978.
- Decretos Presidenciales y Discursos del Presidente Carlos Andres Perez. **La Nacionalizacion Petrolera en Venezuela.** Ed. Centauro. Caracas, Venezuela, 1976.
- Etzioni, A., Etzioni, E. **Social Change: Sources, Patterns and Consequences** Basic Books, Inc. Publishers. New York, 1964.
- Germani, Gino **Politica y Sociedad en una Epoca de Transicion** Paidos. Buenos Aires, 1965.
- Gerschenkron, Alexander **Continuity in History and Other Essays.** The Belknap Press. Cambridge, Mass., 1968.
- Gerschenkron, Alexander **Economic Backwardness in Historical Perspectives.** Frederick A. Praeger Publishers. London, 1965.
- Gil Fortoul, Jose **Historia Constitucional de Venezuela** Karl Heimann editor. Berlin, 1907.
- Golden Jubilee Seminar. **Higher Education and Development** A.I.V. New Delhi, 1975.
- Heintz, Peter **Analisis Contextual de los Paises Latinoamericanos** (mimeographed edition). Berkeley (undated).
- Herrera Campins, L. President of Venezuela **First Address to the Congress of the Republic.** Caracas, Venezuela, 12 March, 1980.
- Herrick, Virgil and Ralph Tyler, **Toward Improved Curriculum Theory.** The University of Chicago Press. Chicago, 1950.



- Hirschman, A.O. **The Strategy of Economic Development** Yale University Press. 1958.
- Holmes, Brian **Problems in Education**. Routledge and Kegan Paul, London, 1965.
- Holmes, Brian. **Comparative Education: Some considerations of method**. Allen and Unwin. London, 1981.
- Hoselitz, B. **Sociological Factors in Economic Development** Free Press of Glencoe. 1960.
- International Symposium on Higher Education **Informe Nacional de la Republica de Venezuela** Lima, Peru, 17-22 November, 1980.
- **Journal of Development Studies**. London, 1968. Vol.6.
- **Journal of Economic Issues** Vol.17, No.3.
- Kerr, Clark **Industrialism and Industrial Man** Harvard University Press. Cambridge, 1960.
- Marta Sosa, J.J. **Los Problemas de la Educacion Superior en Venezuela** Ed. Papeles Universitarios. Caracas, Venezuela, 1978.
- Maza Zavala, D.F., Malave Mata, Hector y otros autores. **Venezuela. Crecimiento sin desarrollo** 7th edition. Editorial Nuestro Tiempo. Mexico, D.F., 1980.
- Meir, Gerald **Leading Issues in Economic Development, Studies in International Poverty**. 2nd ed. Oxford University Press, U.S.A., 1970.
- Ministerio de Educacion, Departamento de Planificacion **Nuevos Aportes a la Reforma Educativa** M.E. Publishers. Caracas, Venezuela, 1971.
- Ministerio de Educacion **Memoria y Cuenta de 1962** Caracas, Venezuela, 1963.
- Ministerio de Educacion **Memoria y Cuenta de 1965**. Caracas, Venezuela, 1966.
- Ministerio de Educacion **Memoria y Cuenta 1970** Caracas, Venezuela, 1971.
- Ministerio de Educacion **Memoria y Cuenta 1971** Caracas, Venezuela, 1972.
- Ministerio de Educacion **Memoria y Cuenta de 1974** Caracas, Venezuela, 1975.
- Moore, Wilbert **Economy and Society** Random. New York, 1955.

- Morgensten, Oskar **On the Accuracy of Economic Observations** Princeton University Press. Princeton, New Jersey, 1950.
- Mudarra, Miguel Angel **Historia de la Legislacion Contemporanea en Venezuela.** Ed. Ministerio de Educacion. Caracas, Venezuela, 1962.
- Myrdal, Gunnar **Economic Theory and Underdevelopment Regions.** Duckworth. London, 1957.
- Oficina Central de Informacion **La Nacionalizacion del Hierro** U.C.I. Caracas, Venezuela, 1975.
- Ogburn, W.F. and Nimkoff, M.F. **A Handbook of Sociology** Routledge and Kegan Paul Ltd., 5th ed., London, 1964.
- Ogburn, W.F. **On Culture and Social Change** University of Chicago Press. Chicago, 1964.
- Parsons, T., Shils, E., Naegele, K., Pitts, J. **Theories of Society.** The Free Press of Clencoe, Inc. U.S.A., 1961.
- Pena, Alfredo **Conversaciones con Arturo Uslar Pietri** El Ateneo. Caracas, Venezuela, 1978.
- Prieto Figueroa, Luis Beltran **El Estado y la Educacion en America Latina** 2nd. ed. Monte Avila, Caracas, Venezuela, 1978.
- Pro-Venezuela **Lista de Empresas Norteamericanas en Venezuela** (mimeo). Caracas, Venezuela (undated).
- Redfield, R. **The Folk Culture of Yucatan.** University of Chicago Press. Chicago, 1942.
- Republica de Venezuela, **Constitucion 1961.** Imprenta Nacional. Caracas, Venezuela, 1961.
- Republica de Venezuela. **CORDIPLAN. IV Plan of the Nation 1970-1974.** Talleres Graficos de CORDIPLAN. Caracas, Venezuela, 1971.
- Republica de Venezuela **CORDIPLAN V Plan of the Nation 1975-1980** Talleres Graficos de CORDIPLAN. Caracas, Venezuela, 1976.
- Republica de Venezuela **CORDIPLAN VI Plan of the Nation 1981-1985** Talleres Graficos de CORDIPLAN. Caracas, Venezuela, 1981.
- Republica de Venezuela **CORDIPLAN VI Plan of the Nation 1981-1985 Vol.I.** Talleres Graficos de CORDIPLAN. Caracas, Venezuela, 1981.
- Republica de Venezuela, **CORDIPLAN. VI Plan of the Nation 1981-1985 Vol.II.** Talleres Graficos de CORDIPLAN. Caracas, Venezuela, 1981.

- Republica de Venezuela **Decreto No.245** Gaceta Oficial No.25677, 6 June 1958. Ed. La Torre. Caracas, Venezuela, 1958.
- Republica de Venezuela **Decreto No.646** Gaceta Oficial No.32005, 13 June, 1980. Ed. Romor. Caracas, Venezuela, 1980.
- Republica de Venezuela. Direccion de Estadistica y Censos Nacionales de Poblacion. **Censo Nacional de 1960.** Caracas, Venezuela, 1961.
- Republica de Venezuela **Ley de Educacion** Gaceta Oficial No.24813, 1955. Ed. La Torre. Caracas, Venezuela, 1955.
- Republica de Venezuela **Ley Organica de Educacion** Gaceta Oficial No.2635 Extraordinario, 28 July, 1980. Caracas, Venezuela, 1980.
- Republica de Venezuela, Ministerio de Educacion. Memoria 1958. Caracas, Venezuela, 1959.
- Republica de Venezuela, Ministerio de Educacion **Plan de Estudio de la Educacion General** (mimeo). Caracas, Venezuela, 1968.
- Republica de Venezuela, Oficina Central de Informacion **Mensajes Presidenciales** Vol.VI U.C.I. Caracas, Venezuela, 1971.
- Ribeiro, Darcy **La Universidad Latinoamericana** U.C.V. Ediciones de la Biblioteca. Caracas, Venezuela, 1971.
- Rostow, W.W. **The Stage of Economic Growth, A Non-Communist Manifest** University Press. Cambridge, 1960.
- Salcedo Bastardo, Jose Luis **Historia Fundamental de Venezuela** U.C.V. Caracas, Venezuela, 1960.
- **Surveys of Economic Theory** Vol.2. St. Martin's Press New York, 1966.
- Uslar Pietri, Arturo **Del Estado, la Economia, la Universidad y los Ranchos**, BETA C.A., Caracas, Venezuela, 1974.
- Uslar Pietri, Arturo **Venezuela, un Pais en Transformacion.** Italiana C.A. Caracas, Venezuela, Marzo, 1958.
- Wilker, C.K. **The Soviet Model and Underdeveloped Countries** University of North Carolina Press. U.S.A. (undated).

APPENDICES

## APPENDIX 1

PRE-CONDITIONS FOR THE DEVELOPMENT OF THE VENEZUELAN  
CAPITALIST STRUCTURE

The first stage in the development of a capitalist structure in Venezuela occurred between 1920 and 1950, when the conditions considered necessary for the development of Venezuela as a capitalist structure were formulated and implemented. Some of these features were present at the beginning of the period but their development had been slowed by the crisis which followed. These initial features later tended to acquire a further dimension as they combined with new factors connected with the world-wide capitalist system and together they facilitated conditions leading to the development of a Venezuelan capitalist structure.

This stage was characterised by a dialectic between tendencies which strengthened specific processes already begun and new tendencies which represented a new radical process of change. This dialectic resulted in a process of reorganisation which, though not global, led to a qualitatively different society from the one which existed in the first decades of the present century. This period has been acknowledged as one in which the conditions for the creation of a capitalist structure were created and as the most representative of the initial features of that re-organisation.

Venezuela became a focus of great interest for other capitalist countries and a new form of interchange developed with the world capitalist system. In a favourable international situation foreign capital was increasingly invested in the exploitation of Venezuelan oil. The First World War reoriented the world's consumption of energy towards oil and this led to a new apportioning of the control of oil producing areas by leading powers. In addition, a crisis in the Mexican production of oil during most of the first half of the century (the expropriation of oil companies in 1938 was one of the most significant events during that period) encouraged the search for and exploitation of new oil fields.

These events led the United States to develop closer relations with Venezuela. Later on, the Second World War and the Korean War increased the level of oil consumption.

In summary, all these events led to a steady and massive foreign (British, Dutch and mainly North American) capital investment in Venezuela. These foreign investments altered the nature of the link between Venezuela and the world capitalist system and greatly influenced the later socio-historic development of the country.

As Venezuela began to participate in a new international framework new alternatives seemed available

solutions for the structural crisis carried over from the end of the 18th century. However, this crisis was not solved by breaking the colonial tie; on the contrary, from then on the crisis appeared to deepen. The prevailing idea that backwardness could only be overcome through a policy of opening up areas to capitalist development greatly influenced the attempt to construct an agrarian capitalist society which would increase foodstuff production. But neither the capital investment nor the immigrant population needed for this project materialized and the policy failed. The main problem seems to have been insufficient demand from other countries which were also in a process of industrial development and capital investment in this area was consequently intermittent and insufficient.

No alternative solutions to the economic crisis may have emerged from the strategy applied at the end of the 19th century. Nevertheless, many of the measures taken then on behalf of the strategy have remained and influenced the later developments. Such is the case, for example with various codes, regulations, decrees and laws regarding mines which were enforced from 1860 to 1920 and which placed the responsibility for the administration of mineral resources in the hands of the State, which could rent the assets but not give any property rights over them. This approach became more flexible when foreign capital showed interest in the new product. It could be said that from the time that the initial attempts were

made in the 1920's to develop Venezuela as a capitalist society, no other serious similar attempt was made until the 1950's.

From an economic point of view, the clearest signs of this capitalist tendency were those actions designed to encourage and facilitate the conditions that would lead to capital accumulation resulting from the advantage taken of new factors which reinforced the potential of already existing sources of capital accumulation. Commerce, embezzlement of public funds, state credit and various forms of speculation were the basis from which the dominant Venezuelan groups developed an unprecedented capacity for capital accumulation. Thus, capital was available for the development of new economic activities and capital reproduction.

The strength of the dominant class lay mainly in the control of capital and their capacity to increase it by linking their economic interests to export activities, which offered a greater profit margin. As a result class relations were redefined. There was an increase in wage-labour in the areas of construction, specially those related to public works, commercial activity and a limited manufacturing industry. Financing these new economic activities resulted in the growth of a sector of population dispossessed from the means of production who had to sell their labour in response to the growing demand for it.



The new direction taken by the socio-historic process in Venezuela provoked conflicts among sectors of the dominant class and the National Project as defined in the 1860's had to be revised. The result was a National Project seen in terms of a modern industrial capitalist society.

Eventually the State adjusted to the changes in the social structure. Accordingly, with the strengthening of the dominant class, the Venezuelan state became a national liberal state. The profits obtained from increased oil revenues made the state the most important factor in the development of economic conditions favourable to the development of a capitalist structure. Above all, the developing oil industry gave support to the growth of imports and to a greater possibility of acquiring wealth through the embezzlement of public funds. Similarly, state credit became another source of accumulation. The reproduction of capital in this fashion increased the demand for labour force in urban areas where the commercial activities as well as an incipient manufacturing industry were based. Public works sponsored by the state also contributed to increase the waged labour sector and were an important factor in the moderate expansion of the internal market which occurred during this period.

All these changes marked the initiation of a new economic dimension which permitted a quick accumulation and reproduction of capital and the reduction of the

economic importance of the agrarian sector which had been the main source of development until the beginning of the 20th century but which now did not generate enough profit to accumulate capital.

The State played a decisive role in the process of accumulation of capital by ceasing its function as arbiter of economic activity, and instead playing an active role as entrepreneur. Within the state's open market policy for capital and goods (begun in the second half of the 19th century) measures were successfully adopted to improve imports, but nevertheless failed to attract capital investment.

The capacity of the state to obtain credit reached a peak during the last decades of the 19th century and contrasted sharply with its limited resources for meeting even urgent internal problems - for whose solution it had to resort to international credit or to enforced internal loans.

The expansion of the state bureaucracy provided the dominant class with new means of obtaining key positions and wealth through the embezzlement of public funds and influence trading. Capital was also accumulated through buying and selling urban property during the period of urban expansion after World War II.

The capital thus accumulated was mainly directed into services and construction and to a lesser degree towards industrial activity. The latter, though not

important during the period studied, significantly influenced some of the social change observed.

The most important activities of this period connected with capital reproduction were those related to Imports and the distribution of imported goods. Some sections of the dominant class gained control over the import and distribution of specific products and formed monopolies.

There were several relevant factors in the consolidation of commercial activities: (i) a previous connection with international commerce; (ii) the accelerated growth of state income used to finance imports in the absence of a dynamic activity on which to invest productively and (iii) the expansion of the internal market as a result of the increase in wage-paid labour. It is worth noting that activities connected with high-interest lending schemes also flourished during this period.

The 1939 Treaty of Commercial Reciprocity with the United States very clearly exemplified the extent and nature of commercial exchange between the two countries. In this treaty preferential customs duties were granted to some manufactured U.S. products and the United States conceded similar advantages to the main Venezuelan export, oil. This treaty was modified in 1952 and abolished at the end of 1971.<sup>(1)</sup> During the Second World War the level

---

(1) Plan of the Nation, Caracas, Venezuela 1971.

of imports diminished considerably in spite of a substantial increase in oil profits. Once the war was over, the level of imports increased again because of the lack of a national manufacturing industry and an increase of buoyancy of the national currency derived from oil exports.

Capital accumulation had an effect on all economic activities and wage-paid labour demand but this was especially true in the urban areas where most of the public spending was concentrated and which became the most dynamic centres of economic activity (Federal District and oil states). Later on, in the 1950's, and still within a framework of capitalist development, public investment was oriented towards the agrarian sector. A policy of state credit and subsidies to finance a capitalist agrarian sector was launched but implemented only to a limited extent.

Between 1920 and 1950, services in general, commerce and a proliferation of craft work-shops provided a basis for training in waged labour force. After the Second World War and particularly during the 1950's favourable conditions for the re-establishment of international commerce emerged again. It was then possible to increase the import of capital goods and facilitate the establishment of several industries. This marked the beginning of a process of industrialisation and the increase in a waged labour force.

The expansion of a waged-paid sector increased the internal market and led to at least two important transformations. Firstly, with the increased monetarisation of the economy which can be traced from the 1920's, the characteristic lack of a cash economy which had been characteristic of previous years was partly overcome. Obviously it was mainly in the urban areas where this effect was most notable. Later on, and to a lesser degree, this effect was also felt in the rural areas where cash substituted the traditional means of exchange i.e. barter.

Secondly, the expansion of the internal market eventually led to the creation of a national distribution network which tended to reinforce the links among local markets which were loosely connected until then. This whole process was greatly assisted by public works such as roads and communication systems and stimulated the formation of a national market.

In summary, these changes were the basis for the creation and implementation of a nationwide production structure.

But the achievement of a stable national market did not prove to be a sufficient stimulus to the agrarian export sector nor did it expand the production of agrarian products for the internal market. The agrarian sector continued to face unsurmountable obstacles which prevented it from joining the expansive phase characteristic of the

rest of the internal market. This is not surprising considering that since the beginning of the 19th century agrarian products were especially vulnerable to world market forces and although foodstuffs were an important part of exports in the 1920's they never represented a substantial sector in the reproduction of capital. The inefficiency of the agrarian sector was not only apparent in its export capacity but also in its ability to supply the internal market with foodstuffs. An immediate effect of the sharp decline of this sector in the 1920's was to make redundant a large number of peasant workers who migrated to the city where they could find not only employment but also better salaries. The rural-urban migration added to the country's incapacity for self-sufficiency in foodstuffs.

It thus became clear that the agrarian sector was declining in importance as a factor contributing to the development of Venezuela which now strongly relied on its oil industry. However, the large state revenues were enough to maintain the agrarian sector in a stable chronic crisis through subsidising agricultural production from 1920 onwards.

#### Class Relations, Emergence of a Dominant Class and the Development of the Urban Wage-Labourer

The increasing capacity of the dominant class to accumulate capital and the consequent changes in economic activities resulted in new social relations: the

strengthening of a dominant group and an increased waged-labour sector.

The dominant sector formerly involved in agricultural production now turned to the other economic activities, and accordingly tended to organise itself in terms of these new commercial and financial interests. This process brought together producers and merchants of foodstuffs and from then on, these formed a homogeneous group.

Frequent confrontations between the landowners and the merchants resulted. The interests of each, though related, were clearly different. The agro-export sector held the economic power but not the political hegemony.

The strengthening of the dominant class ran parallel to a process by which connections with the international bourgeoisie were strengthened. The most significant indication of their merging interests was the position adopted by the Venezuelan bourgeoisie with regard to foreign investment in the country. They acted as agents for foreign investors, negotiating tariff concessions for them as well as trade licenses and credits and even influenced government decisions in order to obtain the best possible advantages for foreign investments.

The common interests of the dominant class now

required a re-formulation of the National Project and a conceptual re-interpretation of the society. This conceptual re-interpretation became particularly significant within the framework of World War II which made clear the structural weaknesses of the society and the need to take advantage of high-priced oil to build a diversified productive structure capable of reproducing capital.

The outcome of these discussions was the modification of one of the fundamental policies of the project i.e., the one which envisaged agricultural growth as the basis of capital accumulation. The new project, instead, leaned toward industrial development even though, at that time, industrial activities did not rank as the most dynamic. Industrialisation was reinforced by its connection with the international economic system which had redefined the international division of labour and oriented the strategy of capitalist countries towards industrial investment.

The reorganisation of the class structure also brought about changes among the dominated sectors. The general tendency was to increase urban waged labour and reduce the rural-peasant relationship.

During the first two decades of the 20th century the rural peasant population constituted the largest group of workers because of the concentration of land ownership but towards the end of this period new trends contributed



to its decline as a work force. These trends were: the (i) deterioration of the standard of living in rural areas as a result of the crisis affecting agricultural exports and (ii) the growing attraction of the cities which offered better standards of living and conditions of employment. The rural exodus was relatively slow until the 1940's but increased from then on because of the aforementioned factors. Increasing differentiation in economic activities also produced a differentiation among the urban wage-labourers. There was a marked increase in the middle sectors of the population linked mainly with the expansion of commerce, services and the state apparatus. Furthermore, a working class group began to join the oil industry and the few factories which heralded the beginning of industrial development. Both factory workers and the workers employed in the oil industry constituted the most advanced groups as far as class organisation and class consciousness in this period was concerned.

The strengthening of the dominant class and the organisation of the working class marked the beginning of a profound change in social relations in Venezuelan society.

#### The National Liberal State

One of the key factors in the development of the Venezuelan society during the period being studied was the establishment of the liberal state and its place in the

world capitalist system. From a political point of view it meant the successful achievement of the political project of the dominant class.

The close relationship of Venezuela with capitalist countries reinforced the role of the state as both the beneficiary and distributor of the oil revenue. State income continued to grow during the 1940's due both to high-prices for oil and to an increase in its production. Consequently the state became more and more independent of sources of revenue other than oil.

The growing importance of Venezuela as a provider of the productive and warfare apparatus of the United States reinforced the ties which linked the country economically to the U.S.A. Consequently, when confronted with other foreign powers Venezuela tended to pursue the interests of the U.S.A. as its own.

The National Liberal State was thus established as envisaged in the National Project of the second half of the 20th century and developed within a framework of relationships with the capitalist system and particularly with the United States. The most significant feature of this period was the increasing capacity of the state to play an active role in the developing social process.

The new situation can be characterised as one in which the state ceased to be an arbiter and became an interventionist. This was an important difference from the European Liberal bourgeois model. The Constitutions

of 1936<sup>(1)</sup> and 1947<sup>(2)</sup> were the base and increased oil profits provided financial support for a greater state intervention in the economy. Conditions were thus created for the state to take on a planning function. Such functions had already been anticipated in the 1947 Constitution (though they were limited to agriculture) and in the Preliminary Plan for a Network of Road Construction in the same year. The dominant class gradually determined the limits of this intervention through state agencies, and their own pressure groups (FEDECAMARAS was created in 1942 and by the middle of the 1940's the National Economic Council and the Chamber of Industry were already in operation.).

At this time the open policy with regard to foreign investment together with the new relationship with the world capitalist system began to give results. By now foreign enterprises were willing to invest in Venezuela and the Venezuelan state had to neither encourage nor to insure them against investment risks.

The state gradually took control of a larger number of companies and the dynamic role played by these companies in economic activities resulted in an expansion of government agencies of increasing complexity together with the centralisation of power.

A national system of control backed by the repressive power of the state eg. professional army,

---

(1) Constitution of the United States of Venezuela 1936

(2) Constitution of the United States of Venezuela 1942

police force, security organisations was created. This situation thus differed qualitatively from that of the end of the 19th century and the beginning of the 20th when the political mechanisms of control were based on political links between the government and local leaders. This new repressive machinery gave the state more control over social conflicts.

Public administration was expanded in order to reinforce central control by the state by the creation of such institutions as: The National Labour Office, the Ministry of Agriculture and Breeding and the Ministry of Labour and Communications created in 1936; the Venezuelan Children's Council in 1939 and the Central Bank of Venezuela the following year. The increasing complexity of public administration could also be seen in the accelerated development of administrative law which defined and regulated the state's activity. Measures were also taken to unify the country under one operation system.

Therefore, the increase of state control in Venezuela was reinforced by the creation of a national system of state controlled agencies and a legal structure which sought to legitimise the changes prompted by the prevailing dominant system. The need to keep new social sectors under control led also to an acknowledgement of social rights - eg. the Constitutions of 1936 and 1947 - though these rights never came fully into force. On the other hand, several new laws such as the Labour Law and

Public Order Law and the Compulsory National Insurance Law were created in 1936 and 1940 respectively, to develop a greater control over the working class and to channel the middle sectors demands.

The principle of division of power provided an illusion of representative democracy and legitimised the government of the day. In practice the power of the Executive was greater than all others. The centralisation of power in the hands of the President of the Republic was well established when it was decided that the electoral rights of the States should be delegated to the President thus weakening the already limited control of the Legislative Assemblies over local government. In this way the division of power became an academic ideological formulation and bore no resemblance to the actual historical process. Similarly, the means of political participation was implemented in such a way as to control the demands of an increasingly politicized population who was endangering the social peace maintained thus far by repressive means.

However, the dominant class had in the dictatorship the form of government that best suited their interests ie. it maintained social order and created the conditions for their own development. In the late 1960's when the state integrative mechanisms were well developed it was possible to adopt the democratic form of government already envisaged in the National Project of the late 19th century. The democratic attempt of the 1940's initiated a

climate of great social turmoil. The demands of the middle and working class sectors which had been long repressed erupted at the death of Juan Vicente Gomez. The beginnings of democracy were assisted during World War II by the United States which now adopted a more favourable attitude towards democracy in the countries under its area of influence.

This attempt at democracy failed for several reasons: Firstly, the dominant class was alarmed by the populist character of the October 1945 revolution. This revolutionary movement strengthened several popular organisations created in the 1930's (eg. encouraged and legalised political parties and strengthened the Venezuelan Workers Confederation (CTV) founded in 1936). Secondly, the army shared the apprehensions of the dominant class. Their participation in the government of Romulo Gallegos was limited even though the army considered themselves as co-partners in the October revolution. Thirdly, the political parties COPEI and URD, so far not well organised, had not been given a part in the government by Accion Democratica, and so their possibilities for growth and participation were blocked. In such a situation their objectives coincided with those of the dominant class and the army.

The failure of this attempt at democracy was followed by another period of dictatorship during the 1950's. But this brief experience of democracy and the new forms of popular mobilisation adopted during this

period such as new political parties showed the discontent and dis-agreement that existed about the previous forms of political action. Conflict among local leaders during the latter half of the 19th century had precipitated the development of political parties. This marked a significant change in the forms of political struggle.

The continuation of the dominant structure depended to a great extent on the ability of the dominant class to provide the ideological basis that would legitimise their political project and gain popular support. One of the most effective means of achieving this general support was to inflate the role played by the dominant class in the past. The appointed interpreters were the intellectuals who resorted to an old trick: re-interpreting the country's history to show that the objectives of the dominant class during the whole historical process, but particularly since the Independence, were a prolonged effort to prepare a mass of 'ignorant' and 'immature' people for a democratic life that some day they would be called upon to live. This legitimisation of domination and the Bolivar ideal constituted a successful attempt to maintain ideological control of society.

Within this perspective History was used as a means to support the authoritarianism of the period. The abolition of political parties from the beginning of the 20th century until the death of Juan Vicente Gomez was considered by political leaders to be a pre-condition for

the maintenance of social order and the implementation of the National Project as these parties followed the local leaders and encouraged political struggle. From then on the 'immaturity' of the people for life in a democracy became the justification of an authoritarian ruling class and an excuse for postponing a return to democracy.

From this ideological perspective all radical transformations seemed unfeasible and the dominant sectors project emerged as the only way to organise society.

Towards the end of the 1950's the state apparatus in terms of financial resources and its increased power and ability to organise society in the interests of the dominant project was large enough to control the whole society.

#### Population Growth and Distribution for the Reproduction of Capital

The processes mentioned earlier eventually led to a redistribution of population. Characteristic of this period is the growth and redistribution of population in terms of capitalist development, i.e. the reproduction of capital and labour force.

Although the old demographic patterns continued more or less unchanged (Caracas continued to be the centre of highest population) there was also an expansion of population into as yet undeveloped areas. At this early stage some capitalist features in the system of



production were already recognisable - eg. the capitalist structure of some production units and the communications network.

Since the early 1930's the connections of the Venezuelan society with the world capitalist system became an important stimulus to the accelerated demographic trends. From 1880 to the beginning of the 20th century the birth rate was consistently high while the death rate decreased. The measures intended to attract European population failed but a moderately high rate of population growth was maintained.

The early 1930's showed a marked increase in population which nearly doubled during this period. This dramatic increase in population was due to an increase in the birth rate and a decrease in the death rate. The national health programme begun on a small scale by the oil companies, also made a significant contribution to the growth of population since it began to control malaria, tuberculosis and other contagious diseases.

At the end of World War II the state was in a good financial position and so it expanded into the field of medical aid and health education. Medical technology developed during the war (particularly in the use of penicilin and other antibiotics, immunisation and insecticides) and resulted in a marked decrease in the death rate.

During this period the Venezuelan population

kept its predominantly rural character but the rural-urban ratio began to change and in 1960 it was reversed. Better health provision, increased job opportunities in the cities and the continuing deterioration of the standard of living in rural areas all contributed to increased migration towards urban areas where most of the state revenue was invested. Public works such as the construction of motorways and public buildings, sewage, water pipe lines, bridges, and ports built for the oil industry, greatly increased the demand for labour.

Population growth and the tendency to move to the cities were important factors in the development of a capitalist society. Concentration of population also promoted concentration of consumption, banking and commerce, communication and transport and of the means of production and reproduction of capital and labour.

Until the 1930's population centres grew slowly and did not spread very far into surrounding areas while a lack of communications with other areas were limited. These geographical obstacles slowed national integration. The difficulty lay mainly in the low level of technology in the country at that time. But as Venezuela became more integrated into the world capitalist system it was able to obtain advanced technology and began to solve this problem. Living conditions in unpopulated areas were improved and a new stimulus was given to national integration.

The oil industry had a great influence on the environment. Although the actual area occupied by the oil industry was limited, it encouraged the population to spread to adjacent areas which eventually became centres of population linked to the oil industry. New urban centres were established and old ones developed. This expansion of job opportunities did not occur simultaneously nor at the same rate oil producing areas. In the west this expansion occurred at the end of the 1920's and in the east, in the 1930's.

Exploration and exploitation of oil fields increased knowledge of the geography of the country particularly regarding the location and distribution of natural resources. The basic road communications network envisaged in the early project was complemented by improving old communication routes. Some of the new roads built for the oil companies became part of the national communications system under construction.

More significant though, in spacio demographic terms, was the nationwide effect of state activity. The national communications system and the road network was enlarged - although the full effect of this expansion was not felt until technological problems had been overcome after World War II. Nonetheless, in the 1950's, roads were built connecting the Andes with the centre and the west and south with the centre. To a lesser extent, seaports and airports were enlarged and facilitated communication with Caracas and relatively isolated areas.

Areas which functioned only within regional circuits relatively isolated from each other and linked to the exterior by export harbours tended to relate more organically. This relationship was strongest between the oil producing areas and Caracas the centre of state administration and between the latter and areas of public investment. As state revenues increased the state tended to centralise and distribute its resources from Caracas, thereby strengthening its historic hegemonic position.

Appendix 1 was compiled by the author of this study on the basis of information from the following sources:

1. Aranda, Sergio La Economía Venezolana 3rd. ed. Siglo Veintiuno editores. Bogota, Colombia, 1979.
2. Brito Figueroa, F. Historia Económica y Social de Venezuela Vol.I, 4th ed. U.C.V. Ediciones de la Biblioteca. Caracas, Venezuela, 1979.
3. Brito Figueroa, F. Historia Económica y Social de Venezuela Vol.II, 2nd. ed. U.C.V. Ediciones de la Biblioteca. Caracas, Venezuela, 1974.
4. Brito Figueroa, F. Historia Económica y Social de Venezuela Vol.III, 3rd. ed. U.C.V. Ediciones de la Biblioteca. Caracas, Venezuela, 1978.
5. Centro de Estudios del Desarrollo Formación Histórico Social de Venezuela U.C.V. Ediciones de la Biblioteca. Caracas, Venezuela, 1981.
6. Maza Zarrala, D.F., Malane Mata, Hector y otros autores Venezuela, Crecimiento sin Desarrollo 7th ed. Editorial Nuestro Tiempo. Mexico D.F., 1980.

APPENDIX 2

EXPORTS REQUIREMENTS FOR MANUFACTURED GOODS  
(1975-1980)

Y E A R S	1975	1976	1977	1978	1979	1980	Total	Rate
								1976-1980
(Millions of Bolivars at 1968 prices)								
TOTAL	13,660	15,235	17,085	16,408	16,848	16,755	95,991	4,2
MANUFACTURES								
A.	1,270	1,316	1,372	1,441	1,508	1,590	8,497	4,6
Traditional Industries								
311-12 Foodstuffs	638	673	714	760	804	849	4,438	5,9
313 Drinks	232	248	266	289	312	345	1,692	11,6
314 Tobacco	-	-	-	-	-	-	-	-
321 Textiles	273	266	256	161	152	248	1,556	(3,2)
322 Clothing	55	51	49	53	51	49	308	(3,5)
323 Leathers and Furs	14	13	13	13	13	13	79	(2,5)
324 Footwear	-	-	-	-	-	-	-	-
331 Timber and Cork	55	63	72	63	74	84	411	15,2
332 Furniture and Accessories	3	2	2	2	2	2	13	(12,3)

APPENDIX 2

EXPORTS REQUIREMENTS FOR MANUFACTURED GOODS  
(1975-1980)

Y E A R S	1975	1976	1977	1978	1979	1980	Total	Rate
								1976-1980
B. Intermediate Industries	5,491	5,895	6,587	6,370	6,759	7,069	38,171	8,8
341 Paper & Cellulose	806	833	849	889	933	982	5,292	6,8
351-52 Chemical Products	2,896	3,215	3,811	3,980	4,437	4,955	23,294	19,6
353-54 Oil and Coal	96	96	96	96	96	96	576	-
355 By-products								
Rubber and its Products	82	87	90	90	87	79	515	(1,2)
356 Plastics	41	44	46	49	53	56	289	11,0
361-62 Non-metallic Minerals	190	202	214	224	235	245	1,310	8,8
371-72 Basic Metallics	1,380	1,418	1,481	1,042	918	656	6,895	(22,1)

(Millions of Bolívars at 1968 prices)

(%)

APPENDIX 2

EXPORTS REQUIREMENTS FOR MANUFACTURED GOODS  
(1975-1980)

Y E A R S	1975	1976	1977	1978	1979	1980	Total	Rate
								1976-1980
(Millions of Bolivars at 1968 prices)								
C.								(%)
Mechanical Industries	6,257	7,357	8,412	7,856	7,805	7,281	44,968	5,2
381 Metallic Products	533	541	559	579	599	622	3,433	5,3
382 Machinery (except electric)	2,637	2,955	3,567	3,962	3,868	3,893	20,882	13,9
383 Machinery and electric equipment	1,052	1,235	1,393	1,229	1,258	1,169	7,336	3,6
384 Transport Materials	2,035	2,626	2,893	2,086	2,080	1,597	13,317	(7,7)
D.								
Miscellaneous	642	667	714	741	776	815	4,355	8,3
342 Art Design	109	114	120	128	127	134	732	7,1
385-90 Various	533	553	594	613	649	681	3,623	8,5

Source: Republica de Venezuela, Oficina Central de Coordinacion y Planificacion. V Pland de la Nacion 1976-1980 Talleres Graficos de Cordiplan. Caracas, Venezuela, 1976, Cuadro III-17.



APPENDIX 3INSTITUTIONS OF HIGHER EDUCATION IN VENEZUELA

<u>NATIONAL UNIVERSITIES</u>	DATE OF CREATION
Universidad Central de Venezuela	22 December 1721
Universidad de Los Andes	21 September 1810
Universidad del Zulia	29 May 1891
Universidad de Carabobo*	15 November 1892
Universidad de Oriente	21 November 1958
Universidad Centro Occidental Lisandro Alvarado	22 September 1962
Universidad Simon Bolivar	18 July 1967
Universidad Simon Rodriguez	24 January 1974
Universidad Nacional Experimental del Tachira	27 February 1974
Universidad Nacional Experimental de los Llanos Ezequiel Zamora	23 December 1974
Universidad Francisco de Miranda	25 July 1977
Universidad Romulo Gallegos	25 July 1977
Universidad Nacional Abierta	27 September 1977
 <u>PRIVATE UNIVERSITIES</u>	
Universidad Catolica Andres Bello	19 October 1953
Universidad Santa Maria	13 October 1953
Universidad Metropolitana	24 February 1965
Universidad Avila**	7 February 1974
Universidad Rafael Urdaneta	21 May 1974
Universidad Tecnologica del Centro	21 September 1979

UNIVERSITY PEDAGOGICAL INSTITUTESNATIONAL

Instituto Universitario Pedagógico de Caracas	30 September 1936
Instituto Universitario Pedagógico Experimental de Barquisimeto	6 November 1959
Instituto Universitario Pedagógico Experimental de Maturín	20 October 1971
Instituto Universitario Pedagógico Maracaráy	11 November 1971
Instituto Universitario Pedagógico J.M. Siso Martínez***	5 October 1976

---

\* Reopened on 21 March 1958

\*\* Temporarily closed

\*\*\* Created as the East Teachers Training Institute

PRIVATE

Instituto Universitario Pedagógico Monsenor Rafael Arias Blanco	27 December 1977
---	------------------

UNIVERSITY POLYTECHNICSNATIONAL

Instituto Universitario Politecnico Experimental de Barquisimeto	22 September 1962
Instituto Universitario Politecnico Experimental de Guayana	23 November 1971
Instituto Universitario Politecnico Luis Caballero Mejias	24 January 1974
Instituto Universitario Politecnico de las Fuerzas Armadas Nacionales	3 February 1974

UNIVERSITY TECHNOLOGICAL INSTITUTES

NATIONAL

Instituto Universitario de Tecnologia de la Region Capital	7 January	1971
Instituto Universitario de Tecnologia de Coro	21 November	1971
Instituto Universitario de Tecnologia Region Los Andes	21 July	1971
Instituto Universitario de Tecnologia de Cumana	30 January	1973
Instituto Universitario de Tecnologia de Los Lanos	7 February	1973
Instituto Universitario de Tecnologia del Yaracuy	5 May	1974
Instituto Universitario de Tecnologia Experimental de La Victoria	14 December	1976
Instituto Universitario de Tecnologia de Valencia	31 December	1976
Instituto Universitario de Tecnologia de Puerto Cabello	31 December	1976
I.U.T. Escuela Nacional de Administracion y Hacienda Publica	24 July	1977
Instituto Universitario de Tecnologia de El Tigre	18 November	1977
Instituto Universitario de Tecnologia del Estado Trujillo	5 May	1978
Instituto Universitario de Tecnologia de Portuguesa	14 September	1978

PRIVATE

Instituto Universitario de Tecnologia Antonio Jose de Sucre	5 April	1972
Instituto Venezolano de la Audicion y el Lenguaje	5 April	1972

Instituto Universitario de Relaciones Publicas	5 July	1972
Instituto Universitario de Seguros	5 April	1972
Instituto Universitario de Mercadotecnia	5 April	1972
Instituto Universitario "AVEPANE"	4 May	1973
Instituto Universitario Nueva Esparta	4 May	1973
Instituto Universitario Nuevas Profesiones	4 May	1973
Instituto Universitario de Tecnologia del	16 September	1977
Instituto Universitario de Tecnologia Industrial de Valencia	16 December	1977
Instituto Universitario de Tecnologia Industrial Rodolfo Loero Arismendi	3 March	1978
Instituto Universitario de Banca y Finanzas	19 October	1978
Instituto Universitario Tecnologico de Seguridad Industrial	14 September	1978

#### UNIVERSITY COLLEGES

#### NATIONAL

Colegio Universitario de Caracas	23 November	1971
Colegio Universitario Region Capital Los Teques	25 November	1971
Colegio Universitario de Carupano	7 February	1973
Colegio Universitario Francisco de Miranda	20 February	1974
Colegio Universitario de Maracaibo	5 March	1974
Colegio Universitario de Cabimas	5 March	1974
C.U. Instituto Nacional de Psiquiatria Infantil	16 September	1977

PRIVATE

Colegio Universitario de Psicopedagogia	15 November	1971
Colegio Universitario Fermin Toro	10 June	1975
Colegio Universitario de Rehabilitacion	10 June	1975
Colegio Universitario Monsenor de Talavera	22 July	1975
Colegio Universitario Jean Piaget	12 December	1975

---

Source: Republic of Venezuela C.N.U.-O.P.S.U.  
Statistical Bulletin 1979, Caracas, Venezuela,  
1979.

## APPENDIX 4

COURSES OFFERED BY THE VENEZUELAN HIGHER EDUCATION  
SYSTEM BY AREA OF STUDY

1. BASIC SCIENCES

Chemistry	Mathematics
Physics	Biology

2. ENGINEERING, ARCHITECTURE  
AND TECHNOLOGY

Metallurgic Engineering	Informatics
Metallurgic	Informatics & Computing
Metallurgy & Siderurgy	Systems Engineering
Mining Engineering	System Analysis
Geology Engineering	Applied Mathematics & Physics
Geology	Electronic Engineering
Geology and Mining	Electronic Technology and Electronics
Geodesic Engineering	Electrotechnology
Hydrometeorologic Engineering	Electrical Engineering
Petrochemical Engineering	Electrical Technology and Electricity
Oil: Exploration	Instrumentation
Oil: Perforation	Arms Engineering
Oil: Purification	Aeronautical Engineering
Oil: Production	Airplanes Mechanics
Hydrocarburats	Naval Engineering
Computing Engineering	Industrial Engineering
Computing	
Naval Technology and Naval Mechanics	

2.-ENGINEERING, ARCHITECTURE AND TECHNOLOGY (cont.)

Mechanic Engineering	Industrial Systems Technology
Car Technology	Industrial Production
Technology in Mechanic Production and Mechanic Technology	Textile Technology
Thermic Mechanics	Industrial Design
Mechanic Maintainance	Technology on Industrial Risks Prevention
Maintainance	Industrial Safety Techn.
Chemical Engineering	Fire Technology
Chemical Technology	Civil Engineering
Chemical Processes	Public and Urban Construction
Industrial Chemistry	Public Works Design
Architecture	Urbanism

3.-AGRICULTURAL AND SEA SCIENCES

Agronomic Engineering	Food Technology
Agricultural Engineering	Sugar Technology
Vegetal Production Engineering	Forestry Engineering
Agro-industrial Engineering	Conservation Engineering
Agronomy	Technology on the Con- servation of Renewable Natural Resources
Agricultural Production Engineering & Agricultural Production	Agricultural Economics
Agrobiology	Administration and Planning of Agricultural Enterprises
Agricultural Technology	Agricultural Marketing of Food Enterprises
Food Engineering	Marine Technology
Administration: Agri- cultural Marketing	

### 3.-AGRICULTURAL AND SEA SCIENCES (cont.)

Veterinary	Sea Applied Sciences: Sea Food
Zootechnics	Sea Applied Sciences: Sea Food Technology
Animal Breeding Engineering	Oceanography and
Food Technology	Sailing and Fishing

### 4.- HEALTH SCIENCES

Medicine	Language Therapy
Nursing	Physiotherapy
Nursing (Technology)	Occupational Therapy
Bioanalysis	X-Rays
Hystopathology	Electro-Medicine
Nutrition and Diet	Sanitary Inspection
Odontology	Health Information
Dental Hygiene	Health Ecology
Pharmacy	Hospital Administration

### 5.-EDUCATION

Education	Technical Agricultural Education - Teaching
Chemistry - Teaching	Soil Sciences - Teaching
Physics - Teaching	Physical Education - Teaching
Mathematics - Teaching	Pedagogy - Teaching
Biology - Teaching	Special Education - Teaching
Technical Industrial Education & Technical Education - Teaching	Trade Techniques and Trade Technical Educa- tion - Teaching
Electro-mechanics Teaching	Pre-School Education
Social Sciences	



5.- EDUCATION (cont.)

Geography and History

Languages: English

Languages: French and Spanish

Art

Spanish, Literature & Latin.  
Spanish & Literature

Learning Aids

Educational Administr.

Psycho-pedagogy: Education of Bright Children

Special Education

Teacher of Deaf Children and Children with Language Difficulties

6. SOCIAL SCIENCES

Economics

Statistics

Statistics (Technician)

Ship Insurances

Government Sciences: Finances

Public Accounting

Government Sciences: Rent

Government Administration and Administrative Sciences

Administrative Techniques and Administration and Commercial Sciences

Industrial Administration

Administration: Informatics

Administration: Automatic Data Processing

Administration: Organisation and Methods

Computerised Accounting

Tourist Enterprises

Administration: Cost Accounting

Administration: Budget

Administration of Physical and Financial Resources

Administration of Personnel and Human Resources

Business Administration

Marketing Administration

Customs Administration

Port and Transport Administration

Administration: Distribution of Goods

Banking Administration

Municipal Administration

Administration: Hydro-carburats

Tourist Services Administration

Social Work

6. SOCIAL SCIENCES (cont.)

Administration: Hotels and Tourism	Social Development and Organisation
Tourism: Hotels and Tourism	Social Welfare
Hotels	Psychology
Marketing: Market Research	Professional Counselling
Marketing: Commercialisation	Geography
Marketing: Advertising	Regional Planning
Advertising	Regional Administration
Media Administration	Sociology
Journalism	Sociology of Development
Public Relations	Anthropology
Industrial Relations	Law
Labour and Business Administration	International Studies
Administration of Co-operatives	Political and Administrative Studies
	Foreign Trade

7. HUMANITIES AND ARTS

Philosophy	Archives
Humanities	Modern Languages
History	Arts
Library Studies	

8. MILITARY SCIENCES & ARTS

Army Officer & Licensee on Military Sciences & Arts	War Naval Officer and Licensee on Naval Sc.
Officer in the Armed Forces and Licensee on Military Sciences and Arts	Officer in the Air Force and Licensee on Military Science and Arts

---

Source: Republic of Venezuela C.N.U. - O.P.S.U.

APPENDIX No.5

DEGREES GRANTED BY HIGHER EDUCATION INSTITUTIONS AND DURATION OF COURSES OF STUDY

Degree Awarded	AREA: BASIC SCIENCES					LONG COURSES		
	University	Polytechnic	Technological Colleges	Teachers Train. Ins.	Colleges	Military Academies	Private University Institutes	(Minimum duration period)
Licensee in:								
Chemistry	X							5 years -10 semesters
Physics	X							5 years -10 semesters
Mathematics	X							5 years -10 semesters
Biology	X							5 years -10 semesters

Degree Awarded	AREA: ENGINEERING, ARCHITECTURE AND TECHNOLOGY					LONG COURSES		
	University	Polytechnic	Technological Colleges	Teachers Train. Ins.	Colleges	Military Academies	Private University Institutes	(Minimum duration period)
Engineer in:								
Metallurgy	X							5 years
Mines	X	X						10 semesters
Geology	X							10 semesters
Geologist	X							10 semesters
Geodist	X							10 semesters
Meteorologist	X							10 semesters
Petrochemicals	X							10 semesters
Computing								5 years
Licensee in Computing	X							10 semesters

(Minimum duration period)

Degree Awarded	University	Polytechnic	Technological Colleges	Teachers Train. Ins.	Colleges	Military Academies	Private University Institutes
Engineer in:							
Informatics	X						5 years -10 semesters
System Analysis		X					10 semesters
Electronics	X	X				X	5 years -10 semesters - 4 years
Electrical Engineer	X						5 years -10 semesters
Electricity	X	X				X	5 years -10 semesters - 4 years
Arms Equipment						X	4 years
Aeronautics						X	4 years
Naval						X	4 years
Mechanics	X	X				X	5 years -10 semesters - 4 years
Chemistry	X	X					5 years -10 semesters
Industrial	X	X					10 semesters
Civil	X					X	10 semesters - 4 years
Architect	X						6 years -10 semesters
Urbanist	X						5 years

(Minimum duration period)

Degree Awarded	University	Polytechnic	Technological Colleges	Teachers Train. Ins.	Colleges	Military Academies	Private University Institutes
Higher Technician in Metallurgy Metallurgy & Steel & Iron Manuf.			X				2 years - 5 semesters
					X		6 semesters

**SHORT COURSES**  
(Minimum duration period)

Degree Awarded	University	Polytechnic	Technological Colleges	Teachers Train. Ins.	Colleges	Military Academies	Private University Institutes	
Higher Technician in:								
Geology & Mining Exploration of Oil			X				X	6 semesters
Perforation of Oil							X	6 semesters
Purification of Oil							X	6 semesters
Oil Production							X	6 semesters
Hydrocarburats Informatics			X				X	6 semesters
Computing								2 years
System Analysis			X				X	5/6 semesters
Applied Maths & Physics								6 semesters
Electronics Technician in								2 years
Electronics			X					2/3 years
Electrotechnics							X	6 semesters
Electricity								2 years
Electricity Instrumentation								2/3 years
Aeronautics			X					6 semesters
Naval Mechanics								2/3 years

SHORT COURSES

(Minimum duration period)

Degree Awarded	University	Polytechnic	Technological Colleges	Teachers Train. Ins.	Colleges	Military Academies	Private University Institutes
Higher Technician in:							
Car Mechanics	X		X				6 semesters
Mechanics			X		X		2/3 years 2 years - 4/5/6 semesters
Mechanics (Production)	X		X				6 semesters 6 semesters
Thermomechanics			X				6 semesters 7 semesters
Mechanics (Maintenance)			X				6 semesters 7 semesters
Maintenance			X				2 years - 4/6 semesters
Chemistry			X				2 years
Chemical Processes			X				6 semesters 6 semesters 6 semesters 6 semesters 6 semesters
Industrial Chemistry			X				6 semesters 6 semesters 6 semesters 6 semesters 6 semesters
Industrial Systems	X						6 semesters 6 semesters 6 semesters 6 semesters 6 semesters
Industrial Production			X				6 semesters 6 semesters 6 semesters 6 semesters 6 semesters
Textile Technology			X				6 semesters 6 semesters 6 semesters 6 semesters 6 semesters
Industrial Design			X				6 semesters 6 semesters 6 semesters 6 semesters 6 semesters
Prevention of Industrial Risks	X						6 semesters 6 semesters 6 semesters 6 semesters 6 semesters
Industrial Safety			X				6 semesters 6 semesters 6 semesters 6 semesters 6 semesters
Fire Risks			X				6 semesters 6 semesters 6 semesters 6 semesters 6 semesters
Civil Construction			X				6 semesters 6 semesters 6 semesters 6 semesters 6 semesters
Design of Public Works			X				6 semesters 6 semesters 6 semesters 6 semesters 6 semesters

AREA: AGRICULTURAL AND MARINE SCIENCES

LONG COURSES

(Minimum duration period)

Degree Awarded	University	Polytechnic	Technological Colleges	Teachers Train. Ins.	Colleges	Military Academies	Private University Institutes
<u>Engineer in:</u>							
Agronomy	X						10 semesters
Agriculture	X						10 semesters
Vegetal Production	X						10 semesters
Agro-Industry							10 semesters
Food	X						5 years
Forestry	X						10 semesters
Conservation	X						10 semesters
Agricultural							10 semesters
Economics	X						10 semesters
Veterinary	X						10 semesters
Zootchnics	X						10 semesters
Animal Production	X						10 semesters
Marine Biology	X						10 semesters
Sea Applied Sciences (Marine Aquaculture)	X						10 semesters

Licensee in Sea  
Applied Sciences  
Higher Technician

SHORT COURSES

in:							
Agronomy			X				2 years 6 semesters
University Technician in Agriculture			X				4/6 semesters
Technician in Agrobiology	X						6 semesters
Higher Technician in Agricultural Technology			X				6 semesters

SHORT COURSES  
(Minimum duration period)

Degree Awarded	University	Polytechnic	Technological Colleges	Teachers Train. Ins.	Colleges	Military Academies	Private University Institutes
<u>Higher Technician</u>							
In:			X				
Food Technology	X						
Sugar Technician							
Conservation of Natural Renewable Resources			X				
Business Administration			X				
Agricultural Technology			X		X		
Oceanography and Fishing Technology			X		X		
Fishing & Navigation			X				

2 years - 6 semesters  
6 semesters  
6 semesters  
6 semesters  
6 semesters  
6 semesters  
6 semesters

AREA: HEALTH SCIENCES

SHORT COURSES  
(Minimum duration period)

Degree Awarded	University	Polytechnic	Technological Colleges	Teachers Train. Ins.	Colleges	Military Academies	Private University Institutes
Surgeon	X						
<u>Licensee in:</u>							
Nursing	X						
Bio-analysis	X						
Bioanalyst	X						
Nutrition & Dietetics	X						

12-13-14 semesters  
8 semesters  
8-10 semesters  
10 semesters  
10 semesters



LONG COURSES

(Minimum duration period)

Degree Awarded	University	Polytechnic	Technological Colleges	Teachers Train. Ins.	Colleges	Military Academies	Private University Institutes
----------------	------------	-------------	------------------------	----------------------	----------	--------------------	-------------------------------

Odontologist	X						
Pharmacist	X						

10 semesters  
10 semesters

Higher Technician

SHORT COURSES

(Minimum duration period)

Nursing	X						
Dental Hygiene							
Language Therapy	X						
Physiotherapy	X						
Occupational Therapy	X						
Technician in							
X-rays	X						

5 semesters  
5 semesters

3 years

6 semesters  
6 semesters

4 semesters

Higher Technician in:

Electro-medicine	X						
Inspector of							
Public Health	X						
Health Ecology	X						
Health Information	X						
Hospital Intendant	X						

5 semesters  
2 semesters  
5 semesters  
5 semesters  
2 semesters

AREA: EDUCATION

LONG COURSES

(Minimum duration period)

Degree Awarded	University	Polytechnic	Technological Colleges	Teachers Train. Ins.	Colleges	Military Academies	Private University Institutes
Licensee in Education	X						
Teacher of Chemistry				X			8-9 semesters
Physics				X			Conventional
Mathematics				X			8-9 semesters
Biology				X			8-9 semesters
Industrial & Technical Ed.				X			8-9 semesters
Technical Ed.				X			8-9 semesters
Electromechanics				X			8-9 semesters
Technical Agri-cultural Ed.				X			8-9 semesters
Soil Sciences				X			8-9 semesters
Physical Ed.				X			8-9 semesters
Pedagogy				X			8-9 semesters
Special Educ.				X			8-9 semesters
Business Techniques				X			8-9 semesters
Technical Business Education				X			8-9 semesters
Social Sciences				X			8-9 semesters
Geography & History	X						8-9 semesters

5 years 8-10 semesters

AREA: EDUCATION (Cont.)

Degree Awarded	<u>LONG COURSES</u> (Minimum duration period)						Private University Institutes
	University	Polytechnic	Technological Colleges	Teachers Train. Ins.	Colleges	Military Academies	
<u>Teacher of Languages</u>							
English				X			8-9 semesters
French & Spanish (Castilian)				X			8-9 semesters
Art				X			8-9 semesters
Spanish, Literature and Latin				X			8-9 semesters
Spanish & Literature				X			8-9 semesters
<u>Higher Technician in</u>							
Pre-School Education					X		5-6 semesters
Pre-School Educator					X		8 semesters
Specialised Teacher in Pre-School							8 semesters
<u>Higher Technician in</u>							
Learning Resources Educational Admin. Psycho-pedagogy					X		6 semesters
Education of bright children					X		6 semesters

AREA EDUCATION

SHORT COURSES

(Minimum duration period)

Degree Awarded	University	Polytechnic	Technological Colleges	Teachers Train. Ins.	Colleges	Military Academies	Private University Institutes
Specialised Teacher in Special Education	X						X
Teacher of Deaf Children & Children with Language Difficulties							X

6 semesters

3 years

AREA SOCIAL SCIENCES

SHORT COURSES

(Minimum duration period)

Degree Awarded	University	Polytechnic	Technological Colleges	Teachers Train. Ins.	Colleges	Military Academies	Private University Institutes
Economist Licensee in Statistics	X						
Accounting	X						
Public Sciences: Finances			X				X
Accounting	X						
Public Accounting	X						
Public Sciences (Rents)			X				X
Administration	X						
Business Admin. Administrative Sciences	X						

5 years 10 semesters

10 semesters

10 semesters

10 semesters

10 semesters

5 years 10 semesters

10 semesters

5 years 10 semesters

5 years 10 semesters

5 years

AREA SOCIAL SCIENCES

LONG COURSES  
(Minimum duration period)

Degree Awarded	University	Polytechnic	Technological Colleges	Teachers Train. Ins.	Colleges	Military Academies	Private University Institutes
<u>Licensee in</u>							
Managerial Sciences	X						5 years
Social Media of Journalism	X						5 years
Industrial Relations	X						5 years 10 semesters
Social Work	X						5 years 10 semesters
Social Worker	X						10 semesters
<u>Licensee in</u>							
Psychology	X						5 years 10 semesters
Geography	X						10 semesters
Regional Planning	X						10 semesters
Regional Admin.	X						10 semesters
Sociologist	X						10 semesters
<u>Licensee in</u>							
Sociology	X						10 semesters
Sociology of Development	X						10 semesters
Anthropologist	X						10 semesters
Lawyer	X						5 years
International Studies	X						8 semesters
Political & Admin. Studies	X						10 semesters
Political & Admin. Sciences	X						10 semesters

AREA SOCIAL STUDIES

SHORT COURSES  
(Minimum duration period)

Degree Awarded	University	Polytechnic	Technological Colleges	Teachers Train. Ins.	Colleges	Military Academies	Private University Institutes	
Technician in Statistics	X							6 semesters
<u>Higher Technician in</u>								
Ships Insurances Administration	X		X				X	6 semesters
Industrial Admin.			X					2 years 4-6 semesters
Technician in Industrial Admin.	X							6 semesters
<u>Higher Technician in</u>								
Informatic Admin.					X			6 semesters
Administration: Data Processing					X			6 semesters
Administration: Organisation & Methods					X			6 semesters
Computerised Accounting							X	5 semesters
Administration: Cost Accounting					X			6 semesters
Administration: Budgets					X			6 semesters
Administration: Physical & Financial Resources							X	6 semesters

AREA SOCIAL STUDIES

SHORT COURSES

(Minimum duration period)

Degree Awarded	University	Polytechnic	Technological Colleges	Teachers Train. Ins.	Colleges	Military Academies	Private University Institutes	
<u>Higher Technician</u>								
in:								
Personnel Admin.			X		X			6 semesters
Human resources			X		X			5-6 semesters
Business Admin.								
Customs Admin.	X							
Port & Transport								
Administration	X							
Transport & Goods								2-3 years
Distribution			X					6 semesters
Banking	X							6 semesters
Municipal Admin.	X							6 semesters
Hydrocarburats								6 semesters
Admin.								6 semesters
Tourist Admin.								6 semesters
Services								6 semesters
Tourist Enterprises								6 semesters
Hotel & Tourism								6 semesters
Administration								6 semesters
Tourism	X							2-3 years
Hotels	X							6 semesters
Marketing								2-3 years
<u>Market research</u>								5 semesters
Marketing								
Commerce							X	5 semesters
Advertising							X	5 semesters
Advertising							X	6 semesters

AREA SOCIAL STUDIES

SHORT COURSES  
(Minimum duration period)

Degree Awarded	University	Polytechnic	Technological Colleges	Teachers Train. ins.	Colleges	Military Academies	Private University Institutes	
Higher Technician								
in:								
Administration of Information Resources			X				X	6 semesters
Public Relations								4 semesters
Industrial Relations								6 semesters
Entrepreneurial & Labour Organ. Entrepreneurial	X		X					2-3 years
Organisation Co-operative								6 semesters
Organisation & Social Development	X							6 semesters
Social Welfare Professional					X			6 semesters
Counselling Foreign					X			6 semesters
Commerce	X						X	2-3 years 6 semesters



AREA : HUMANITIES AND ARTS

LONG COURSES  
(Minimum duration period)

Degree Awarded	University	Polytechnic	Technological Colleges	Teachers Train. Ins.	Colleges	Military Academies	Private University Institutes
<u>Licensee in:</u>							
Philosophy	X						10 semesters
Humanities	X						5 years 8-10 semesters
History	X						8-10 semesters
Library Stud.	X						10 semesters
Archives Stud.	X						10 semesters
Modern Languages	X						10 semesters
Arts	X						10 semesters

AREA : MILITARY SCIENCES AND ARTS

LONG COURSES  
(Minimum duration period)

Degree Awarded	University	Polytechnic	Technological Colleges	Teachers Train. Ins.	Colleges	Military Academies	Private University Institutes
<u>Active Lieutenant in the Army &amp; Licensee in Military Arts</u>							
Lieutenant in the Armed Forces & Licensee in Military Sciences and Arts						X	4 semesters
Naval War Officer & Licensee in Naval Sciences						X	4 semesters
Air Force Officer & Licensee in Military Sciences & Arts						X	4 semesters
						X	4 semesters
						X	4 semesters

APPENDIX No. 6

TOTAL NUMBER OF PRE-REGISTRATIONS DISTRIBUTED BY TYPE OF HIGHER  
EDUCATION INSTITUTIONS, AREAS OF KNOWLEDGE AND FIRST CHOICE CAREER  
DURING THE PERIOD 1979 - 1980

AREAS OF KNOWLEDGE AND CAREERS	TOTAL	TYPE OF INSTITUTION							WITHOUT INFORMATION
		UNIVERSITIES	PEDAGOGICAL INSTITUTES	POLYTECHNICS	TECHNOLOGICAL COLLEGES	UNIVERSITY COLLEGES	MILITARY INSTITUTES		
TOTAL	99,342	82,620	3,246	2,305	5,460	4,911	712	88	
Basic Sciences	2,251	2,251	-	-	-	-	-	-	
Biology	1,040	1,040	-	-	-	-	-	-	
Physics	240	240	-	-	-	-	-	-	
Mathematics	518	518	-	-	-	-	-	-	
Chemistry	453	453	-	-	-	-	-	-	
Engineering, Architecture & Technology	27,927	22,553	-	2,305	2,324	744	-	1	
System Analysis	460	460	-	-	-	-	-	-	
Architecture & Urbanism	3,429	3,429	-	-	-	-	-	-	
Computing	1,151	1,151	-	-	-	-	-	-	
Civil Construction	627	-	-	-	466	161	-	-	
Public Works Design	75	-	-	-	75	-	-	-	
Industrial Design	46	-	-	-	46	-	-	-	
Electricity	262	6	-	-	261	25	-	-	
Electro-technic	11	-	-	-	11	-	-	-	

AREAS OF KNOWLEDGE AND CAREERS	TOTAL	TYPE OF INSTITUTION							WITHOUT INFORMATION
		UNIVERSITIES	PEDAGOGICAL INSTITUTES	POLYTECHNICS	TECHNOLOGICAL COLLEGES	UNIVERSITY COLLEGES	MILITARY INSTITUTES		
Geology	57	57	-	-	-	-	-	-	-
Geology & Mining	103	-	-	-	-	103	-	-	-
Hydrocarburats	56	-	-	-	-	56	-	-	-
Informatics	309	139	-	-	170	-	-	-	-
Aeronautic Engineering	160	-	-	160	-	-	-	-	-
Civil Engineering	5,401	5,401	-	54	-	-	-	-	-
Armanent Engineering	29	-	-	29	-	-	-	-	-
Computing Engineering	275	275	-	-	-	-	-	-	-
Structure Engineering	32	32	-	-	-	-	-	-	-
Mining Engineering	170	170	-	-	-	-	-	-	-
Mining (Oil) Engineering	563	563	-	-	-	-	-	-	-
Systems Engineering	804	654	-	150	-	-	-	-	-
Electric Engineering	2,581	2,552	-	229	-	-	-	-	-
Electronic Engineering	858	285	-	573	-	-	-	-	-
Geodesic Engineering	118	118	-	-	-	-	-	-	-
Geologic Engineering	253	253	-	-	-	-	-	-	-
Industrial Engineering	2,308	2,126	-	182	-	-	-	-	-
Mechanic Engineering	3,136	2,647	-	491	-	-	-	-	-
Metallurgic Engineering	590	313	-	277	-	-	-	-	-
Naval Engineering	67	-	-	67	-	-	-	-	-
Chemical Engineering	1,589	1,496	-	93	-	-	-	-	-
Instrumentation	128	-	-	-	73	55	-	-	-
Maintenance	84	-	-	-	84	-	-	-	-
Mechanic Maintenance	39	-	-	-	39	-	-	-	-

AREAS OF KNOWLEDGE AND CAREERS	TYPE OF INSTITUTION							WITHOUT INFORMATION
	TOTAL	UNIVERSITIES	PEDAGOGICAL INSTITUTES	POLYTECHNICS	TECHNOLOGICAL COLLEGES	UNIVERSITY COLLEGES	MILITARY INSTITUTES	
Physics & Applied Mathematics	27	-	-	-	27	-	-	-
Mechanics	349	11	-	-	303	35	-	-
Aeronautic Mechanics	83	83	-	-	-	-	-	-
Naval Mechanics	32	-	-	-	24	8	-	-
Thermic Mechanics	42	-	-	-	42	-	-	-
Metallurgy	96	-	-	-	96	-	-	-
Oil: Exploration	10	-	-	-	10	-	-	-
Oil: Perforation	9	-	-	-	9	-	-	-
Oil: Production	5	-	-	-	5	-	-	-
Oil: Purification	9	-	-	-	9	-	-	-
Chemical Processes	56	-	-	-	56	-	-	-
Industrial Production	26	-	-	-	26	-	-	-
Steel & Iron Manuf. & Metallurgy	301	-	-	-	-	301	-	-
Car Technology	48	-	-	-	48	-	-	-
Fire Technology	3	-	-	-	3	-	-	-
Industrial Safety Technology	39	-	-	-	39	-	-	-
Electronic Technology	205	56	-	-	149	-	-	-
Civil Construction Technology	92	92	-	-	-	-	-	-
Electronic Technology in Industrial Production	135	134	-	-	-	-	-	-
Industrial Production	86	86	-	-	-	-	-	-

AREAS OF KNOWLEDGE AND CAREERS	TYPE OF INSTITUTION							WITHOUT INFORMATION
	TOTAL	UNIVERSITIES	PEDAGOGICAL INSTITUTES	POLYTECHNICS	TECHNOLOGICAL COLLEGES	UNIVERSITY COLLEGES	MILITARY INSTITUTES	
Technology in Industrial Risks Prevention	42	41	-	-	-	-	-	-
Technology in Industrial Systems	123	123	-	-	-	-	-	-
Chemical Technology	224	-	-	-	224	-	-	-
Textile Technology	28	-	-	-	28	-	-	-
<b>AGRICULTURE &amp; SEA SCIENCES</b>	<b>8.641</b>	<b>7.122</b>	<b>-</b>	<b>-</b>	<b>1.305</b>	<b>211</b>	<b>-</b>	<b>3</b>
Administration & Agricultural Markets	61	-	-	-	53	8	-	-
Administration & Planning of Agricultural & Cattle Enterprises	65	-	-	-	54	11	-	-
Agrobiology	213	213	-	-	-	-	-	-
Agronomy	278	-	-	-	278	-	-	-
Biology & Marine Aquaculture	78	78	-	-	-	-	-	-
Marine Biology	350	350	-	-	-	-	-	-
Agricultural Economics	85	85	-	-	-	-	-	-
Agricultural Engineering	228	228	-	-	-	-	-	-
Agro-Industrial Engineering	129	128	-	-	-	-	-	1
<b>Agronomic Engineering</b>	<b>3.508</b>	<b>3.508</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Food Engineering	53	53	-	-	-	-	-	-

AREAS OF KNOWLEDGE AND CAREERS	TYPE OF INSTITUTION							
	TOTAL	UNIVERSITIES	PEDAGOGICAL INSTITUTES	POLYTECHNICS	TECHNOLOGICAL COLLEGES	UNIVERSITY COLLEGES	MILITARY INSTITUTES	WITHOUT INFORMATION
Conservation	74	74	-	-	-	-	-	-
Engineering								
Animal Production	95	95	-	-	-	-	-	-
Engineering								
Vegetal Production	97	97	-	-	-	-	-	-
Engineering	812	812	-	-	-	-	-	-
Forestry	1,084	1,083	-	-	-	-	-	-
Veterinary	11	-	-	-	11	-	-	-
Navigation & Fishing								
Oceanology &								
Aquaculture	59	-	-	-	59	-	-	-
Agricultural								
Technology	400	35	-	-	285	149	-	-
Agricultural &								
Cattle								
Technology	166	-	-	-	166	-	-	-
Sugar Technology	118	118	-	-	-	-	-	-
Food Technology	254	-	-	-	254	-	-	-
Technology in the								
Conservation of Natural								
Resources	55	1	-	-	54	-	-	-
Cattle Technology	131	-	-	-	60	51	-	-
Fishing Technology	3	-	-	-	-	3	-	-
Zootechnics	199	199	-	-	-	-	-	-

AREAS OF KNOWLEDGE AND CAREERS	TYPE OF INSTITUTION							WITHOUT INFORMATION
	TOTAL	UNIVERSITIES	PEDAGOGICAL INSTITUTES	POLYTECHNICS	TECHNOLOGICAL COLLEGES	UNIVERSITY COLLEGES	MILITARY INSTITUTES	
HEALTH SCIENCES	14.432	14.232	-	-	55	145	-	-
School Dental Services	12	12	-	-	-	-	-	-
Public Health Services	21	21	-	-	-	-	-	-
Bioanalysis	2.456	2.456	-	-	-	-	-	-
Health Ecology (Technician)	11	11	-	-	-	-	-	-
Electromedicine (Technician)	29	29	-	-	-	-	-	-
Nursing	225	225	-	-	-	-	-	-
Nursing (Technician)	17	17	-	-	-	-	-	-
Community Nursing	6	6	-	-	-	-	-	-
Pharmacy	567	567	-	-	-	-	-	-
Physiotherapy	402	288	-	-	-	.14	-	-
Hystopathology (Technician)	25	25	-	-	-	-	-	-
Sanitary Inspection Hospital	107	107	-	-	-	-	-	-
Administration	13	13	-	-	-	-	-	-
Laboratory & Parasitology	23	23	-	-	-	-	-	-
Medicine	7.540	7.540	-	-	-	-	-	-
Nutrition & Dietetics	673	673	-	-	-	-	-	-
Odontology	1.858	1.858	-	-	-	-	-	-
X-Rays	276	276	-	-	-	-	-	-

AREAS OF KNOWLEDGE AND CAREERS	TOTAL	TYPE OF INSTITUTION						
		UNIVERSITIES	PEDAGOGICAL INSTITUTES	POLYTECHNICS	TECHNOLOGICAL COLLEGES	UNIVERSITY COLLEGES	MILITARY INSTITUTES	WITHOUT INFORMATION
<b>HEALTH SCIENCES (cont.)</b>								
Speech Therapy	55	-	-	-	55	-	-	-
Occupational Therapy	116	85	-	-	-	31	-	-
<b>EDUCATION</b>	<b>9,424</b>	<b>5,346</b>	<b>3,246</b>	-	<b>32</b>	<b>800</b>	-	-
Administration of Education	62	-	-	-	-	62	-	-
Art	39	-	39	-	-	-	-	-
Biology	402	-	402	-	-	-	-	-
Spanish Literature & Latin	108	-	108	-	-	-	-	-
Spanish & Literature	256	-	256	-	-	-	-	-
Basic Sciences	6	-	6	-	-	-	-	-
Sciences of the Earth	40	-	40	-	-	-	-	-
Social Sciences	321	-	321	-	-	-	-	-
Education	4,837	4,837	-	-	-	-	-	-
Cattle Education	47	-	47	-	-	-	-	-
Business Education	75	-	75	-	-	-	-	-
Education of Exceptional Children	244	-	-	-	-	244	-	-
Special Education	226	-	210	-	16	-	-	-
Health Education	617	-	617	-	-	-	-	-



TYPE OF INSTITUTION

AREAS OF KNOWLEDGE AND CAREERS

	TOTAL	UNIVERSITIES	PEDAGOGICAL INSTITUTES	POLYTECHNICS	TECHNOLOGICAL COLLEGES	UNIVERSITY COLLEGES	MILITARY INSTITUTES	WITHOUT INFORMATION
<b>EDUCATION (cont.)</b>								
Industrial Education	9	-	9	-	-	-	-	-
Pre-school Education	817	504	-	-	-	313	-	-
Technical Education	12	-	12	-	-	-	-	-
Electromechanic	36	-	36	-	-	-	-	-
Physics	61	-	60	-	-	-	-	-
French & Spanish								
Languages	55	-	55	-	-	-	-	-
History & Geography	171	-	171	-	-	-	-	-
English	378	-	378	-	-	-	-	-
Teachers for Deaf Children & Children with Language Difficulties	16	-	-	-	16	-	-	-
Mathematics	189	4	185	-	-	-	-	-
Pedagogy	133	-	133	-	-	-	-	-
Chemistry	86	-	86	-	-	-	-	-
Learning Resources	176	-	-	-	-	176	-	-
Educational Technology	5	-	-	-	-	5	-	-
<b>SOCIAL SCIENCES</b>	<b>33,832</b>	<b>29,076</b>	<b>-</b>	<b>1,744</b>	<b>3,012</b>	<b>-</b>	<b>-</b>	<b>-</b>
Commercial Administration	261	-	-	256	-	-	-	-
Customs Administration	130	130	-	-	-	-	-	-
Bank Administration	402	402	-	-	-	-	-	-

TYPE OF INSTITUTION

AREAS OF KNOWLEDGE AND CAREERS TOTAL UNIVERSITIES PEDAGOGICAL POLYTECHNICS TECHNOLOGICAL COLLEGES UNIVERSITY COLLEGES MILITARY INSTITUTES WITHOUT INFORMATION

SOCIAL SCIENCES (cont.)

Commercial Administration	6.751	6.751	-	-	-	-	-	-	-
Administration & Cost Accounting	156	-	-	-	156	-	-	-	-
Enterprise Administration	482	-	-	391	91	-	-	-	-
Hydrocarburats Administration	155	-	-	-	155	-	-	-	-
Personnel Administration	909	-	-	-	909	-	-	-	-
Budget Administration	40	-	-	-	40	-	-	-	-
Administration of Media Resources	10	-	-	-	10	-	-	-	-
Administration of Physical & Financial Resources	14	-	-	-	14	-	-	-	-
Administration of Tourist Services	20	-	-	-	20	-	-	-	-
Industrial Administration	325	305	-	19	-	-	-	-	-
Informatics Administration	754	-	-	-	754	-	-	-	-

AREAS OF KNOWLEDGE AND CAREERS	TYPE OF INSTITUTION							TOTAL	UNIVERSITIES	PEDAGOGICAL INSTITUTES	POLYTECHNICS	TECHNOLOGICAL COLLEGES	UNIVERSITY COLLEGES	MILITARY INSTITUTES	WITHOUT INFORMATION
<b>SOCIAL SCIENCES (cont.)</b>															
Marketing Administration	248	-	-	-	-	-	248	-	-	-	-	-	-	-	-
Municipal Administration	106	90	-	-	-	-	16	-	-	-	-	-	-	-	-
Administration & Organization & Methods	84	-	-	-	-	-	84	-	-	-	-	-	-	-	-
Transport & Ports Administration	12	12	-	-	-	-	-	-	-	-	-	-	-	-	-
Data Processing Administration	125	-	-	-	-	-	125	-	-	-	-	-	-	-	-
Regional Administration	17	17	-	-	-	-	-	-	-	-	-	-	-	-	-
Transport Administration & Distribution of Goods	51	-	-	-	-	-	51	-	-	-	-	-	-	-	-
Tourist & Hotel Administration	231	-	-	-	-	-	231	-	-	-	-	-	-	-	-
Customs	220	-	-	-	-	-	220	-	-	-	-	-	-	-	-
Anthropology	70	70	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistical Sciences	201	201	-	-	-	-	-	-	-	-	-	-	-	-	-
Foreign Trade	57	15	-	-	-	-	42	-	-	-	-	-	-	-	-
Computerised Accounting	18	-	-	-	-	-	18	-	-	-	-	-	-	-	-
Public Accounting	2,920	2,920	-	-	-	-	-	-	-	-	-	-	-	-	-

AREAS OF KNOWLEDGE AND CAREERS	TYPE OF INSTITUTION							TOTAL
	UNIVERSITIES	PEDAGOGICAL INSTITUTES	POLYTECHNICS	TECHNOLOGICAL COLLEGES	UNIVERSITY COLLEGES	MILITARY INSTITUTES	WITHOUT INFORMATION	
Cooperatives	9	-	-	-	-	-	9	-
Law	6.164	-	-	-	-	-	6.164	-
Economics	3.879	-	-	-	-	-	3.879	-
Touristic Enterprises	17	-	-	17	-	-	-	-
International Studies	560	-	-	-	-	-	560	-
Political & Administrative Studies	209	-	-	-	-	-	209	-
Geography	323	-	-	-	-	-	323	-
Management & Administration	69	-	-	-	-	-	69	-
Hotel Administration	13	-	-	-	-	-	13	-
Hotel & Tourist Administration	99	-	-	-	-	-	99	-
Income Tax	67	-	-	67	-	-	-	-
Marketing:								
Commercialization	18	-	-	18	-	-	-	-
Marketing:								
Market Research	17	-	-	17	-	-	-	-
Marketing:								
Advertising	37	-	-	37	-	-	-	-
Business Organization	26	-	-	-	21	-	5	-
Social Organization & Development	47	-	-	-	47	-	-	-
Professional Guidance	34	-	-	-	34	-	-	-

AREAS OF KNOWLEDGE AND CAREERS	TOTAL	TYPE OF INSTITUTION					
		UNIVERSITIES	PEDAGOGICAL INSTITUTES	POLYTECHNICS	TECHNOLOGICAL COLLEGES	UNIVERSITY COLLEGES	MILITARY INSTITUTES
<b>SOCIAL SCIENCES (Cont.)</b>							
Journalism	1.104	1.104	-	-	-	-	-
Regional Planning	21	21	-	-	-	-	-
Psychology	1.980	1.980	-	-	-	-	-
Publicity	90	-	-	90	-	-	-
Industrial							
Relations	2.097	1.827	-	270	-	-	-
Public Relations	64	-	-	64	-	-	-
Insurance	26	-	-	26	-	-	-
Sociology	885	885	-	-	-	-	-
Sociology of							
Development	91	91	-	-	-	-	-
Statistical							
Technology	32	32	-	-	-	-	-
Social Work	737	737	-	-	-	-	-
Tourism	256	64	-	192	-	-	-
<b>HUMANITIES AND ART</b>	<b>2.039</b>	<b>2.039</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Archives	53	53	-	-	-	-	-
Art	426	426	-	-	-	-	-
Library	79	79	-	-	-	-	-
Philosophy	156	156	-	-	-	-	-
History	191	191	-	-	-	-	-
Modern Languages	785	785	-	-	-	-	-
Humanities	349	349	-	-	-	-	-

AREAS OF KNOWLEDGE AND CAREERS	TOTAL	TYPE OF INSTITUTION						WITHOUT INFORMATION
		UNIVERSITIES	PEDAGOGICAL INSTITUTES	POLYTECHNICS	TECHNOLOGICAL COLLEGES	UNIVERSITY COLLEGES	MILITARY INSTITUTES	
MILITARY ARTS & SCIENCES	712	-	-	-	-	-	712	-
Military Arts & Sciences	527	-	-	-	-	-	527	-
Naval Sciences	185	-	-	-	-	-	185	-
NOT KNOWN	84	1	-	-	-	-	-	83

Source: C.N.U.-O.P.S.U. Boletín Estadístico Vol.2.  
Caracas, Venezuela, November 1980, No.7 pp.72-73.

## APPENDIX 7

PRE-ENROLMENTS CLASIFIED BY OPTION AND AREA OF KNOWLEDGE  
AND CAREER IN VENEZUELAN HIGHER EDUCATION INSTITUTIONS  
1979-1980

Area of Knowledge and Career	Total	Option Choice		
		1st	2nd	3rd
TOTAL	50,843	30,054	15,313	5,476
BASIC SCIENCES	1,514	991	349	174
Biology	489	350	99	40
Physics	160	103	35	22
Mathematics	482	297	131	54
Chemistry	383	241	84	58
ENGINEERING, ARCHITECTURE AND TECHNOLOGY	9,985	7,653	1,528	804
System Analysis	250	213	26	11
Architecture	671	627	40	4
Computing	117	103	8	6
Civil Construction	386	294	52	40
Electricity	226	123	59	44
Electrotechnics	9	8	1	-
Geology	16	14	1	1
Geology & Mining	95	76	10	9
Hydrocarburats	62	37	15	10
Informatics	214	100	75	39
Civil Engineering	1,424	1,230	156	38
Mining Engineering	52	31	16	5
Oil Engineering	309	207	70	32

System Engineering	629	406	128	95
Electric Engineering	996	754	192	50
Electronic Engineering	100	88	9	3
Geodesic Engineering	90	63	20	7
Geologic Engineering	68	55	10	3
Industrial Engineering	1,073	831	148	94
Mechanical Engineering	1,065	848	162	55
Metallurgic Engineering	265	186	41	38
Chemical Engineering	821	646	109	66
Instrumentation	120	85	20	15
Maintainance	71	64	4	3
Mechanics	249	139	56	54
Naval Mechanics	15	7	5	3
Metallurgics	39	34	8	7
Metallurgic and Manufacture of Iron and Steel	272	224	25	23
Tech. in Electronics	100	45	32	23
Tech. in Civil Construction	16	13	1	2
Tech. in Electronics	9	7	1	1
Tech. in Mechanic Manufactures	2	1	1	-
Tech. in Prevention of Industrial Risks	9	7	1	1
Tech. in Industrial Systems	24	19	2	3
Tech. in Chemistry	121	78	24	19
<b>AGRICULTURE AND SEA SCIENCES</b>	<b>3,908</b>	<b>2,677</b>	<b>793</b>	<b>438</b>
Administration: Agri- cultural Marketing	99	46	41	12
Administration: Agri- cultural Enterprises	85	36	26	23



Agro-biology	77	68	7	2
Agronomy	179	105	47	27
Biology: Marine Aqua- culture	66	30	22	14
Biology: Marine	142	105	23	14
Agricultural Engineering	87	58	16	13
Agronomic Engineering	1,272	1,029	176	67
Forestry Engineering	197	159	29	9
Veterinary	703	458	162	83
Tech. in Agriculture	439	272	96	71
Tech. in Sugar	63	32	17	14
Tech. in Foods	208	121	55	32
Tech. in Conservation of Renewable Resources	61	38	7	16
Tech. in cattle	148	77	44	27
Tech. in Fishing	6	3	2	1
Zootechnics	76	40	23	13
HEALTH SCIENCES	6,405	4,985	946	474
Bio-analysis	1,080	768	237	75
Nursing	326	138	101	87
Pharmacy	515	245	149	121
Physiotherapy	162	124	23	15
Sanitary Inspection	14	12	—	2
Hospital Administration	6	4	—	2
Medicine	2,933	2,793	97	43
Nutrition and Dietetics	412	198	158	56
Odontology	875	644	166	65
X-Rays	34	31	2	1
Occupational Therapy	48	28	13	7

EDUCATION	5,691	7,924	1,100	662
Educational Administration	67	29	20	18
Art	32	13	13	6
Biology	168	109	30	29
Spanish, Literature and Latin	32	18	9	5
Spanish and Literature	139	96	35	8
Basic Sciences	11	2	3	6
Soil Sciences	21	2	9	5
Social Sciences	155	106	31	18
Education	3,554	2,653	586	315
Agricultural Education	37	23	9	5
Business Education	53	27	11	15
Special Education	25	17	3	5
Physical Education	237	160	49	28
Industrial Education	15	5	3	7
Pre-School Education	436	308	82	46
Electromechanics	58	26	13	19
Physics	45	26	10	9
French and Spanish	32	9	12	10
History and Geography	32	14	11	7
English	169	91	47	31
Mathematics	92	54	19	19
Pedagogy	32	11	12	9
Chemistry	41	13	15	13
Learning Resources	209	107	68	34
SOCIAL SCIENCES	12,185	8,798	2,137	1,250
Administration	2,234	1,848	278	108
Banking Administration	250	171	46	33

Cost Accounting Administration	175	84	42	49
Business Administration	460	308	86	66
Administration: Hydrocarburats	137	68	28	41
Personnel Administration	840	525	202	113
Budget Administration	47	16	20	11
Media Resources Administration	6	6	—	—
Financial Resources Administration	12	9	3	—
Tourist Service Administration	30	9	11	10
Industrial administration	47	42	2	3
Informatics Administration	701	430	178	93
Marketing Administration	236	145	47	44
Council Administration	172	70	65	37
Organisation and Methods Administration	66	31	16	19
Data Processing Administration	167	101	32	34
Transport & Distribution of Resources Admin.	40	27	4	9
Hotel and Tourism Administration	218	124	62	32
Anthropology	21	17	2	2
Court Sciences	60	38	12	10
Statistical Sciences	189	84	66	39
Public Accounting	902	699	151	52
Co-operatives	23	6	11	6
Law	1,807	1,617	115	75
Economics	1,128	881	167	80
International Studies	122	86	27	9

Political and Administrative Studies	197	78	59	60
Geography	241	140	63	38
Tourism and Catering	77	37	19	21
Organisation of Business Enterprises	19	14	5	—
Organisation and Social Development	62	19	26	17
Professional Counselling	32	23	7	2
Journalism or Social Communication	379	287	67	25
Psychology	180	168	10	2
Industrial Relations	153	134	14	5
Sociology	407	262	104	41
Tech. in Statistics	4	4	—	—
Social Work	344	190	90	64
<b>HUMANITIES AND ART</b>	<b>1,222</b>	<b>712</b>	<b>310</b>	<b>200</b>
Archives	69	33	19	17
Art	154	106	36	12
Librarian	108	54	29	25
Philosophy	177	87	48	42
History	229	102	71	56
Modern Languages	169	139	27	3
Humanities	316	191	80	45
Unknown	9,933	314	8,150	1,469

---

Source: C.N.U.-O.P.S.U Boletín Estadístico Vol.2.  
Caracas, Venezuela, November 1980, No.7 pp.181-182.

## APPENDIX 8

In order to achieve a coordinated sequence between Secondary Education and Higher Education in Venezuela, it would be necessary that Secondary Education had a curriculum organisation able to respond to the needs and characteristics of Higher Education.

An Alternative Model of Curriculum Organisation for Venezuelan Secondary Education

Secondary education should be divided into three courses.

- 1.- An Introductory Course,
- 2.- A General Basic Course, and
- 3.- A Pre-university Course.

1.- The Introductory Course:

The Introductory Course which should be the first form in Secondary Education would be of a one-year duration.

Its aim should be to introduce students into the practical value of the study of the different subjects taught in Secondary Education and the way how this knowledge is applied in the different areas of production, science, culture and social welfare.

This course should orientate students towards the subjects to study in the General Basic Course according to their future professional expectations.

## 2.- The General Course:

This course of a two-year duration should have a general scope and be constituted by two groups of basic subjects:

- a.- Scientific
- b.- Humanities and Art.

The scientific subjects included should be those which are studied at the Institute of Basic Sciences, and the Humanities and Art subjects should be those related to the ones studied in the corresponding institutes of humanities, political, social and administrative studies.

The provision of the curriculum contents for these courses should be made by the Department of Curriculum for the General Course, formed by the tutors of the Pre-university Course - one for each subject - and the teachers of the General Course, also one per subject.

## 3.- The Pre-university Course

This course should be divided into three options:

- a.- Sciences
- b.- Humanities and Art
- c.- Mixed.

The Science Option: This option should include the subjects studied at the Especial Institute of Basic Sciences, Spanish and the study of a modern foreign language.

The Humanities and Arts Option: This option should include humanities and arts subjects plus Spanish and the study of a foreign modern language as well.

The Mixed Option: This option should mainly include humanities plus a science course. This option should be for those students interested in going to a career that would also require the knowledge of a specific scientific subject as it would be the case, for example of Education to become a teacher of Mathematics or of Physics, etc. The mixed option should also be suitable for future studies in Economics, Administration and Business Studies. The contents of the scientific subjects should be provided by the Institute of Basic Sciences of the Regional University according to the requirements that exist in that department and also considering those of the specialised institutes.

Besides the above mentioned subjects for each option the students should also be trained in some practical skills and taught practical knowledge that would allow them to develop both their own abilities and preferences as well as to train them in a practical skill that would allow them to work.

Integral Information:

In each course there should be compulsory subjects covering the history and geography of Venezuela, as well as those related to Art and Music. These should stress on national art and music. The subjects of national history

and geography should, besides providing knowledge of the country, include the discussion of topics of current affairs. Those of Art and Music should provide facilities so that able students may develop their specific abilities.

Transfer from the General Basic Course to the Pre-University Course:

In order to pass from the General Basic Course to the Pre-University course it should be necessary to prove academic achievement in the subjects studied in the course. Those students whose achievements were above the average qualifications required should go into the respective option. Existing plans based on projections and estimates of population growth as well as fixed priorities for the country should also be considered. This would mean that if the need for people trained in Sciences were larger than the need for people trained in Humanities, the average qualifications required to enter the Science Option should be lowered and vice-versa.

Admission to the General Basic Course:

The admission into the General Basic Course after attending the Introductory Course should be based on the following:

- a.- The student should have attended at least 75% of the lessons and activities programmed for the Introductory Course. This would guarantee that the



student has had a minimum of possibilities where he has received both the necessary information and orientation for his studies in the General Basic Course.

- b.- The student should have attended the final evaluations which should consist in the answering of questionnaires and the writing of short essays in which the student shows that he possesses the necessary information that will allow him to decide on the studies to take in the General Basic Course.

Admission to the Pre-University Course:

The passing from the General Basic Course to the Pre-University Course should be made thus:

Three months before the end of the first year of the General Basic Course, the students should fill in a form stating the option they intend to take in the Pre-University Course.

This information would allow each teacher to guide and advise the student according to what is expected in the Pre-University Course and would let the students, alternatively, take the necessary steps to achieve the requirements needed to be admitted in the Pre-University Course.

The requirements to be accepted in the Pre-University Course should be the following:

- a.- To have completed and approved all the subjects of the course.
- b.- To have obtained the minimum average qualifications in the subjects related to the Pre-University Course in the option of Sciences when this is the case: for example: if a student who has applied to Sciences does not fulfil the requirements, he should have two alternatives: one in the Humanities and another in the Mixed Option, but he could still make new attempts to enter the Science Option.

#### University Entrance

Six months before his entrance to the Pre-university Course, the student should be familiar with the academic established criteria to enter each university career, know about the number of places offered by the careers, about his possibilities of being accepted, about the priorities given within the national planning to the specific field of study he is interested in, and the field of work of the career chosen.

This information would be provided by the following:

- The Statistics Department of the Education Sector,
- The Regional Central Office for Economic Development
- The Regional Office for Academic Requirements and Entrance to Higher Education.

The information should be sent by each organisation to the schools and the Counselling and Guidance Department of each School should make it available to each student.

The academic criteria should be fixed according to the existing needs in Higher Education. Therefore, higher requirements should be put to those careers where there is not an urgent need to train professionals.

Departments and Sections in Secondary Education:

- a. Department of the Introductory Course
- b. Department of the General Basic Course
- c. Department of the Pre-University Course
- d. Department of Counselling and Guidance
- e. Curriculum Section for the General Basic Course:  
formed by the Head of the Pre-university course, the Head of the General Basic Course and the Directors of the Subject Departments of both the Pre-university and General Basic Course.

The Department of the Introductory Course:

This department should have a Director, and the academic staff in charge of the introductory activities would be members of this department.

The Director should be responsible for the organisation of time-tables, programme of the course and the activities to achieve the aims and objectives of the course. The programme should include films and videos

that show the influence of the dynamics of technological development and its importance for the country's economic and social progress.

#### The Counselling and Guidance Department

This department should be divided into three sections, one for each of the courses (Introductory, General and Pre-university), and the main objectives of the Department should be to help students to overcome problems of low educational achievement, and to guide students by providing them with the necessary information required so that they may find the kind and type of study that is most suitable to their abilities and interests.

The departments of the General Basic Course and the Pre-university Course would be formed by the Heads of each subject department and the tutors of each course. Each department should have a Director and the functions of these departments should be those related to the organisation of curricular contents, programmes of study and teaching methods.

#### The Curriculum Section of the General Course

This section would be constituted by the Director of the Pre-university course and the Heads of Subject Departments of both the General Course and the Pre-university Course. The function of this section should be the selection of contents suitable for the requirements of the higher course.

### Evaluation Section of the General Course

Its composition should be the same as that of the Curriculum Section for the General Course and its main purpose would be to evaluate the procedures and teaching methods used in the General Course with the aim to recommend amendments or changes in order to improve results in the learning/teaching process of this course of studies.

### Advantages of the suggested alternative model of curriculum organisation

1. Provides an integrated and co-ordinated academic sequence from Secondary Education to Higher Education in the country.
2. Provides students with counselling and guidance with respect to the students' abilities and interests without disregarding the academic requirements of the corresponding course as well as those of the higher level.
3. Ensures successful access of students to the higher level of studies.
4. Makes students aware of the circumstances of their region.
5. Makes the curriculum contents more dynamic.
6. Benefits students by providing them with an integral education that will guarantee the study of professions suitable for their economic and social benefit as well providing society with an adequate service according to its own needs.