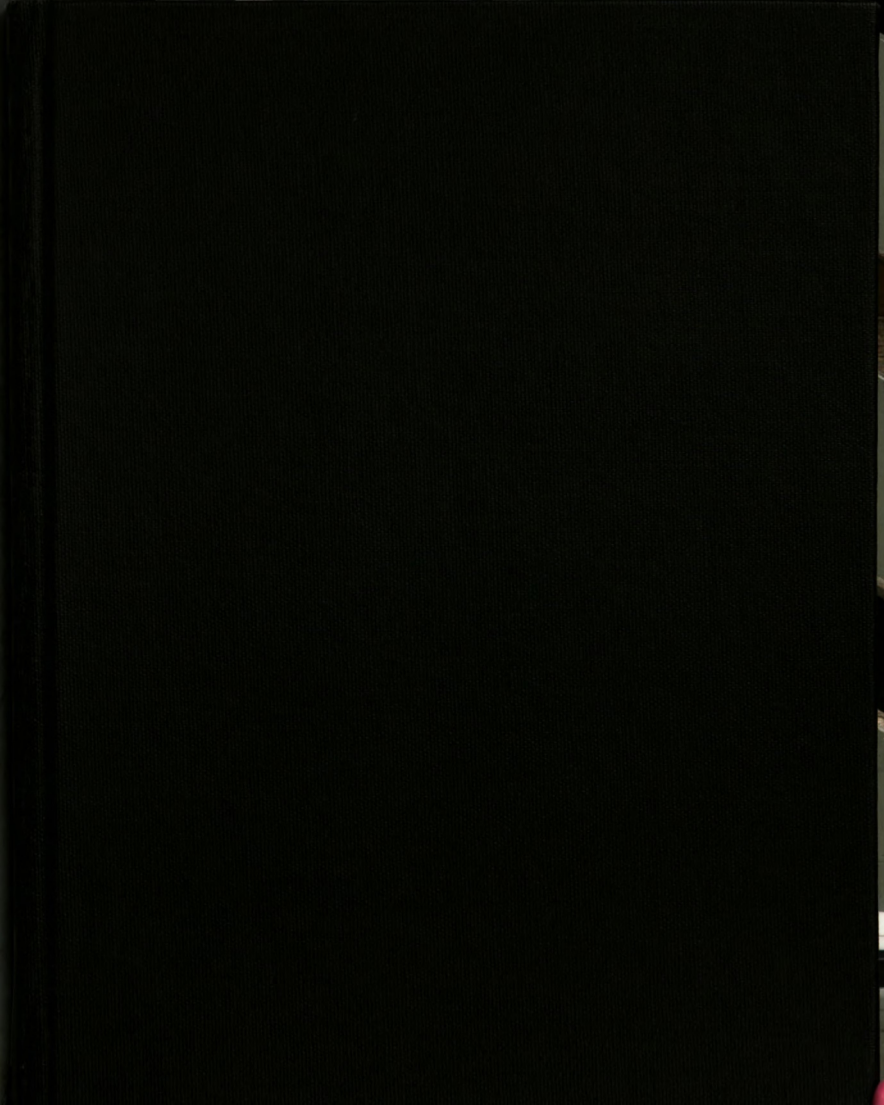




THESIS



This is to certify that the

dissertation entitled

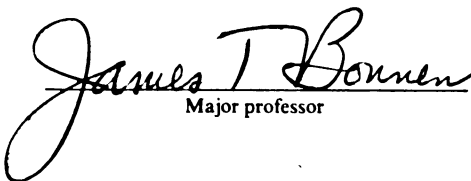
PHILIPPINE AGRARIAN REFORM POLICY DECISION-MAKING UNDER
MARTIAL LAW: ANALYSIS OF A PUBLIC INFORMATION SYSTEM
IN A FEEDBACK CONTROL SYSTEM FRAMEWORK

presented by

Carl Borres Montaña

has been accepted towards fulfillment
of the requirements for

Ph.D. degree in Agricultural Economics


Major professor

Date August 27, 1982



RETURNING MATERIALS:
Place in book drop to
remove this checkout from
your record. FINES will
be charged if book is
returned after the date
stamped below.

--	--	--

PHILIPPINE AGRARIAN REFORM POLICY DECISION-MAKING UNDER
MARTIAL LAW: ANALYSIS OF A PUBLIC INFORMATION SYSTEM
IN A FEEDBACK CONTROL SYSTEM FRAMEWORK

By

Carl Borres Montaña

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Agricultural Economics

1982

ABSTRACT

PHILIPPINE AGRARIAN REFORM POLICY DECISION-MAKING UNDER MARTIAL LAW: ANALYSIS OF A PUBLIC INFORMATION SYSTEM IN A FEEDBACK CONTROL SYSTEM FRAMEWORK

By

Carl Borres Montaña

Agrarian reform in the Philippines is a complex program pursued in an integrated approach. The capability of the public decision makers to deal with the policy problems and issues surrounding this program depends on the effectiveness of the supporting information system in providing policymakers relevant, reliable and timely information. Yet, as with all systems, it appears to have weaknesses.

Policy-making inadequacies are partly the results of analytical difficulties. The program presents itself to analysts as a complex and ill-defined problem situation, in which partial optimization and static approaches to analysis are not appropriate. In this situation, the General System Simulation Approach (GSSA) can be very useful.

In view of the above, this study was conducted: (1) To provide a description of (a) the structure and dynamics of the agrarian reform policy-making process in the Philippines, as well as of (b) the associated information system, showing the relationships among data, analysis, and decision-making; (2) To identify problem areas in the agrarian reform information system requiring immediate and long-run improvements and to make suggestions on alternative ways of improving them; (3) To identify the relevant program performance variables; and (4) To suggest potential contributions of the General System Simulation Approach towards improving the analytical capability of the information system, and to outline the resource and organizational requirements for realizing these potentials.

The analytical framework which became the basis of data gathering in the Philippines is a synthesis of the interrelated theories of feedback control systems, information systems, rational decision-making processes and the General System Simulation Approach (GSSA). Using this framework, the Agrarian Reform Program, viewed as a feedback control system, is divided into three components: (1) management, (2) information and (3) plant. However, this study focuses only on the first two components.

The data were obtained through survey and nonparticipant observation. These were supplemented by data obtained from secondary sources including policy/implementation workshops and conferences.

The population of participants in the agrarian reform decision-making process were stratified into four (4) sets according to their roles in this process, namely, (1) policymakers, (2) implementors/administrators, (3) analysts/investigators/researchers and statisticians and (4) affected parties and other interest groups. The highly dynamic nature of the population forced a resort to purposive sampling (in place of random sampling) of key elements in each of the four population sets. Cases were formed to study the various processes in the feedback control system (e.g., formulation of Presidential Decree No. 27).

The major findings of this study are: (1) The management component of the Philippine agrarian reform program is composed of two sub-components, namely, policy-making and implementing. Under martial law, the policy-making process is highly centralized, with minimal target-sector participation. (2) Likewise, the information component is composed of two sub-components, namely, data and analytical. (3) In both

the policy-making and implementation processes, interaction is discernible among the three main program actors, i.e., (a) policymakers and implementors, (b) landlords and (c) tenants. Where this three-way interaction has been one of cooperation, the implementation proceeded at a faster pace. Otherwise, implementation bogged down in conflict. (4) The policy-making process in practice iterates between two levels: strategic and operational. The Operation Land Transfer (OLT) information system is designed to support only operational policy-making or implementation. Nevertheless, it is inadequate for that purpose. (5) The OLT data system is weak particularly because it lacks sophistication in the operationalization of concepts. (6) The implementation of OLT has been delayed by the lack of up-to-date data for planning and decision-making. A built-in OLT evaluation process is handicapped by the absence of a system for monitoring a number of significant performance variables. (7) From a feedback control system standpoint, the controllability of the agrarian reform system is weak. This is so because the authority to manipulate the broad range of short-run and long-run policy instruments is widely dispersed among several authorities/agencies. (8) Finally, there is a good possibility that the application of the GSSA can strengthen agrarian reform policy analysis and decision-making. The required human resources and support services to carry out this approach are available.

Copyright by
Carl Borres Montaña
1982

Dedicated to

my late mother, Purificacion Borres,
who gave much of herself for us;

to my father, Antonio Montaña
who illuminated the way;

and to Anton, Karina and Prime,
who will come to understand someday
that it is as much the rules of the game
as it is how you play.

ACKNOWLEDGMENTS

In this intellectual enterprise, performance is not attributable to the manager's skills alone, but to a combination of internal and environmental resources and conditioning factors with which the system operates and manages to survive. Dr. James T. Bonnen, my Major Professor, planted the seed of the idea which I nurtured into a thesis topic. He continually serves as an inspiration, a willing and ready friend at every twist and turn of my academic and sometimes personal life. My Thesis Supervisor, Dr. Michael Abkin, deserves special mention in this work. From beginning to end, he had the supportive persistence--and patience--to stirr me through. The very productive interactions we have had--academically or otherwise--I will gratefully cherish.

I wish to acknowledge also the significant contributions imparted by Professors Lester Manderscheid, Anthony Koo, Robert Solo and Raleigh Barlowe (now retired)--all members of my Guidance Committee.

I am particularly grateful to the Agricultural Development Council, Inc. (ADC) without whose fellowship and thesis support this study would not have materialized.

In collecting data from the Philippines, I received assistance and cooperation from former colleagues, friends, respondents, etc. who are too many to enumerate here. Specifically, however, I would like to mention the following: Dr. Willie C. Depositario, then Acting Dean of the Agrarian Reform Institute (ARI) of the University of the Philippines

at Los Baños (UPLB), who de facto became not only a facilitator of my research needs--such as office space, typists and transportation--but also an adviser and a caring friend. His home became a "home away from home"; and Atty. Jesus C. Berte, Special Assistant to the Minister of Agrarian Reform and concurrently Assistant Director of the Bureau of Legal Assistance (BALA), who opened up doors for further contacts with other MAR administrators. A charismatic administrator and an eager academician, he is a friend in whose home one is always welcome.

I would like to thank also: MAR's Assistant Minister for Field Services, Jose Medina, Jr., who has been supportive of the study since its conception; MAR's Assistant Minister for Administrative Affairs, Benjamin Labayen, for all the courtesies and hospitality afforded this researcher, including access to workshops/conferences; Ms. Betty Ryan, Systems Analyst of the United States Agency for International Development (USAID), who contributed in many ways to make me grasp what is going on in the OLT information system; and Father Tony Ledesma, then Research Fellow at the International Rice Research Institute, for sharing grass-roots insights into data-gathering approaches.

I present this work as a tribute to all the respondents whom I have come in contact with: from the top-level administrators of such agencies as the Ministry of Agrarian Reform, Land Bank of the Philippines, Bureau of Cooperatives Development, Land Registration Commission, Bureau of Lands, National Census and Statistics Office, Ministry of Agriculture, Bureau of Agricultural Economics, and University of the Philippines, to their field officials and personnel, especially in Region 8; the peasant leaders and members of the Federation of Free Farmers, Federation of Land Reform Farmers, and Federation of Agricultural and Industrial Toiling

Hands; policy-making participants and consultants especially Mr. Eligio Tavanlar. All these people gave of their time to the study despite their very busy schedules. This is a tribute to their genuine concern and dedication for the achievement of a productive, yet equitable and humane, society.

Lastly, but most of all, I deeply value the contribution of my entire family who all the time rallied behind me. My beloved wife, Aurora Pal-Montaña, had her share of the bumpy road to completion. My brother-in-law, Primepares Pal, had to interrupt an otherwise relaxing vacation to help in the last-ditch typing assault (in time for the oral defense). The finality of it all came when there was a firm resolve to cut, aided by a seasoned hand--my father-in-law's, Dr. Agaton Pal. An eternal spring of parental love and guidance, both he and Mrs. Calenica Pal, have as much claim for the triumph as Karina, our daughter, whom they cared for momentarily in our behalf.

TABLE OF CONTENTS

	<u>Page</u>
LIST OF TABLES	xv
LIST OF FIGURES	xvi
 PART I: THE RESEARCH PROBLEM	
CHAPTER 1: INTRODUCTION	1
Background of the Study	1
Developments in Recent Years	1
The National Scene	1
The Rural Sector	2
The Role of Agrarian Reform in the Development Process	4
Evolution of Agrarian Reform in the Philippines	5
Pre-martial Law (Before September 21, 1972)	5
Agrarian Reform Under Martial Law	13
Statement of the Problem	17
Decision Makers and Policy-Making, and the Need for an Effective Information System	17
Policy Decision-making Difficulties in Agrarian Reform and the Promising Usefulness of the General System Simulation Approach	19
Objectives of the Study	20
Importance of the Study	23
Organization of this Thesis	23
 PART II: RESEARCH METHODOLOGY	
CHAPTER 2: ANALYTICAL FRAMEWORK	26
Theories Relevant to the Study: A Literature Review	26
Feedback Control System Theory	26
General	26
Private and Public Applications	29
The Theory and Economics of Information Systems	32
Information System Paradigm	32
Data and Data System	32
The Nature of Information	34
The Epistemological Linkage between Data Systems and Inquiry Systems	34
Implications of the Paradigm	35
Economic Characteristics of Information	36
Information as a Commodity	36
Information as a Public Good	37

	<u>Page</u>
Demand for Information	37
Supply of Information	38
Income Distribution and the Distribution of Information	38
Property Rights and Vested Interests in Information	39
The Theory of a Rational Decision-Making Process in the Field of Agricultural Policy	40
The General System Simulation Approach	51
Theory	51
Applications in Agricultural Sector Development Decision-Making	54
Application in the Analysis of Income Distribution, Economic Growth and Land Reform	54
Analytical Framework for the Study of Agrarian Reform	
Policy Decision-Making in the Philippines	54
A Feedback Control System Model	54
Identification of the Total System	56
Management Component	57
Policy-Making Sub-Component	58
Planning and Implementing Sub-Component	59
Plant Component	59
System Environment	60
Information Component	60
Data System	63
Analytical System	64
Decision-Making System	65
Policy Inputs	66
Program Outputs and Performance Variables	66
Processes and Entities in Each Component	67
Policy-Making Sub-Component	67
Public Participants or Actors	68
Private Interest Groups or Actors	68
Planning and Implementing Sub-Component	69
Plant Component	69
System Environment	70
Data System	70
Analytical System	70
Dynamic Interactions Among System Components	70
Focus of the Study	71
CHAPTER 3: RESEARCH PROCEDURE	72
Rationale, Objectives and Design of the Survey	72
Rationale and Objectives	72
Population and Relevant Stratification	73
Population	73
Stratification of Participants in the Policy- Making Process	73
Modifications Made in the Field	74

	<u>Page</u>
Scope of the Study	74
Relevant Populations	76
Samples	76
Sampling Procedure	77
Purposive Sampling of Core Policy-Making Participants	77
Purposive Sampling of OLT Planners and Implementors	79
Purposive Sampling of Persons and/or Institu- tions Involved with the Data and Analytical Systems of PD 27 and OLT	79
Purposive Sampling of Affected Parties and Other Interest Groups	80
Survey Scheme	80
Observation of Pilot Implementation of Automated Data Systems for OLT in Region 8	82
Other Means of Collecting Data	82
Analysis and Synthesis of Data	82
Limitations of the Study	84
Note on Confidentiality	86

PART III: FINDINGS

CHAPTER 4: PHILIPPINE AGRARIAN REFORM POLICY-MAKING STRUCTURE UNDER MARTIAL LAW	87
The Ministry of Agrarian Reform	87
The Agrarian Reform Coordinating Council	88
The Land Bank	88
The Agricultural Credit Administration	89
Field Offices Under the MAR	89
The Bureau of Agrarian Legal Assistance	91
The Bureau of Land Acquisition, Distribution and Development	92
The Bureau of Resettlement	92
The Bureau of Land Tenure Improvement	92
Cooperating Bureaus of Other Ministries	93
The Bureau of Lands	93
The Bureau of Cooperatives Development	93
The Land Registration Commission	95
Bureaus in the Ministry of Agriculture	97
Important Influences on the Agrarian Reform Program	97
Target Groups	99
The Federation of Free Farmers (FFF)	99
The Federation of Agrarian and Industrial Toiling Hands, Inc. (FAITH)	100
The Federation of Land Reform Farmers, Inc. (FLRF)	101
The Landlords	102
Non-Target Groups	104
Mass Media	104

	<u>Page</u>
Church/Religious Groups	105
Technocrats in the Private Sector	106
Civic/Social-Action Groups	107
Agribusiness Sector	107
Individual Citizens	108
Foreign Nationals/Scholars/Academicians	109
Planning and Implementation	109
Regional Planning and Program Development	110
Private Participation	113
Information Component	114
Public Data System	114
Philippine Public Data System and Coordinating Bodies	115
Public Data System on Agrarian Reform	118
Research-Related Data	118
Development Academy of the Philippines (DAP), Office of the President	119
University of the Philippines (UP) System	119
National Defense College of the Philippines (NDCP)	120
Research Councils	120
Regional and International Research Institutions	120
Privately-Supported Academic Institutions	121
Privately-Supported Non-Academic Institutions	121
Program Objectives and Outputs	121
Program Objectives	122
The Program's Assumed or Expected Effects/ Outputs	123
The Program's Actual and Projected Effects/ Impacts/Outputs Based on Research Findings	123
Economic Impacts/Outputs	124
Social Impacts/Outputs	129
Political Impacts/Outputs	130
Program Outputs: Integration and Analysis	131
Relative to Economic Objectives	131
Relative to Social Objectives	135
Relative to Political Objectives	136
Program Performance Variables	139
Program Performance Variables as Viewed by Policy- makers, Implementors, and Peasant Organization Leaders	139
(1) Socio-Cultural Objectives	140
(2) Degree of Happiness of the Beneficiaries	140
(3) Social Status of the Beneficiaries	141
(4) Change in Attitudes of Former Landlords and Tenants	141
Performance Variable Based on System Outputs, Inputs and Constraints	141
Program Policy Inputs or Policy Instruments	142
Summary	145

	<u>Page</u>
CHAPTER 5: THE DYNAMICS OF AGRARIAN REFORM POLICY DECISION-MAKING UNDER MARTIAL LAW	146
Formulation of PD 27: A Case Study	147
Core Decision-Making Participants	147
Sector and Affiliation	147
Sex and Age	147
Educational Background	148
Principal Features of PD 27 as a Policy Output	149
Emancipation Thrust	149
Coverage	150
Farm Size	150
Landlords' Retention Limit	150
Land Valuation	150
Tenant's Amortization Obligation	151
Limits on Transferrability of the Land	151
Tenant's Membership in a Farmer's Cooperative	151
A Broad Policy Statement	151
The Policy-Making Process	153
The Presidential Economic Staff	153
The President's "Think Tank"	154
MAR's Drafting of Decree	154
Data/Information Inputs to Policy Formulation	156
Relative Contribution of Policy-Making Partici- pants to the Features of the Decree	156
Kind, Source, Channel and Quality Indications of Data/Information Used/Provided by Participants	158
Summary	160
CHAPTER 6: PD 27 IMPLEMENTATION AND THE OLT INFORMATION SYSTEM	161
Initial Attempt to Translate a Broad Policy Into Operational Policies	161
Committee on the Formulation of Rules and Regula- tions Implementing PD 27	161
Policy Proposals and Actions Taken	162
Operation Land Transfer	162
The Agrarian Reform Coordinating Council	162
Pilot Municipalities/Provinces	163
The Certificate of Land Transfer	164
The Implementing Processes	166
Identification Phase	167
Land Valuation Phase	170
Distribution Phase	170
Payment Phase	172
Collection Phase	172
Policy-Making Sub-Component of OLT	175
Key Policy Entry Points	175
The Policy Process and the Demand for Information	175

	<u>Page</u>
Analytical Sub-Component of OLT	177
Public Analytical Units	178
Government Ministries	178
Academic Institutions	178
Non-Academic Research or Research Granting and/or Coordinating Institutions	179
Private Analytical Units	180
Data Inputs to Policy Analysis	180
Information Derived and Their Utilization	181
Data Sub-Component for OLT	182
Management and Operation of the New System	182
Operations Field Management Team (OFMT)	187
Technical Documents Team (TDT)	188
Barrio Data Gathering Team (BDGT)	188
Barrio Identification Team (BIT)	190
Conceptualization, Operationalization and Measurement	190
Preliminary Activities	191
Identification Phase	192
Land Valuation	193
Data Outputs and How They Are Supplied to Users	196
Summary	199
CHAPTER 7: PROBLEMS WITH THE OLT INFORMATION SYSTEM	201
No Available Current Data	201
1960 Data for 1972 Use	201
Effects of Stale Data	202
Conceptualization, Operationalization and Measurement Problems	203
Identification of Tenants, Landlords and Tenanted Lands	203
Sketching and Parcellary Mapping	206
Land Valuation	207
Some System Performance Variables Not Monitored	215
Personnel and Information-Usage Problems Accompanying Data-System Changes	216
Problems in the Analytical Sub-Component	217
Lack of Trained Manpower	217
Weak Linkages Among Analytical Units	219
Unavailability of Relevant Information	219
Summary	222
PART IV: SUMMARY, IMPLICATIONS, RECOMMENDATIONS AND CONCLUSIONS	
CHAPTER 8: SUMMARY OF EMPIRICAL FINDINGS AND THEIR IMPLICATIONS	223
Empirical Findings	223
Policy-Making Under Martial Law	223
Land Reform for the Whole Country	224

	<u>Page</u>
Rice and Corn Tenants Emancipated	224
Incremental Succeeding Policies	224
Planning Agencies of Agrarian Reform	224
The Ministry of Agrarian Reform	225
The Agrarian Reform Coordinating Council	225
The Arms of the Agrarian Reform Program	225
Implementation: Operation Land Transfer	226
"Pilot" Municipalities	226
Inter-Agency Cooperation	226
Involvement of Target Groups	226
The Bottleneck of Operation Land Transfer	226
Implications of the Findings	227
Expeditious Decision-Making	227
The Importance of Political Analysis in Agrarian Reform Policy Decision-Making	228
Iterative Nature of the Decision-Making Process	229
Weak System Controllability	231
Reduced Scope of Agrarian Reform Program	232
Incremental Implementation	232
Evaluations	233
Need for an Improved Information System	234
 CHAPTER 9: SYSTEM DESIGN CONSIDERATIONS AND RECOMMENDATIONS	 236
Introduction	236
Some Design Considerations in the Development of the Present System	236
Information Needs of the Entire Agrarian Reform Program Program	236
Organizational Behavior	239
Technical Staff Creation and Its Relation to the Planning Service	239
Data System: Organizational Basis and Management Problems	240
Alternative Ways of Improving the OLT Information System	241
Improving the Data System	241
Land-Crop Categories	241
Data Forms	242
Training of Interviewers	243
Land Valuation Procedures	243
Data Coverage	247
Data and Analytical System Linkage	249
Improving the Analytical System	249
Building the Human Resource's Analytical Capability	250
Gearing Analytical Units for a Concerted Effort at OLT-Related Policy Analysis	251
Strengthening the Analytical and Decision-Making System Linkages/Interactions	253
Ways of Improving the Program's Information System	254
Prioritizing Information System Development	255

	<u>Page</u>
Relevance and Integrity of Statistics/Information and the Choice of Information Supplier	255
The Information System's Intra- and Inter-Component Linkages	258
Analysis Needs and the Potential Contribution of the General System Simulation Approach	261
CHAPTER 10: CONCLUSIONS	276
Conclusions	276
First Objective	277
Second Objective	278
Third Objective	279
Fourth Objective	279
Suggestions for Further Research	280
Further Theory Verification	280
Theory Building and Testing of New Hypotheses	280
System Controllability and the Design of a Public Information System	281
The Value and Cost of Publicly-Provided Information	281
Subject-Matter/Problem-Solving Research	282
Strategic Policy Area	282
Operational Policy Area	283
APPENDIX A: COMPOSITION AND SIZE OF THE FOUR SETS OF PURPOSIVE SAMPLES	
Appendix Table A.1. Purposive Sample of Core Decision- Making Participants in the Formulation of PD 27	284
Appendix Table A.2. Purposive Sample of OLT Planners and Implementors in Region 8 (Leyte)	285
Appendix Table A.3. Purposive Sample of Persons Involved with the Data and Analytical Systems on PD 27 Formulation and OLT	286
Appendix Table A.4. Purposive Sample of Target Groups	287
APPENDIX B: INTERVIEW SCHEDULES	
Appendix B.1. Interview Schedule for Implementors/ Administrators	288
Appendix B.2. Interview Schedule for Policymakers	305
Appendix B.3. Interview Schedule for Analysts	320
Appendix B.4. Interview Schedule for Statisticians	340
Appendix B.5. Interview Schedule for Affected Parties (Target Groups)	354
APPENDIX C: DAR SPECIAL ORDER NO. 109 (APRIL 1975) CREATING THE POLICY FORMULATION OFFICE (PFO) AND THE CENTER FOR OPERATION LAND TRANSFER (COLT)	355
APPENDIX D: GOVERNMENT AGENCIES WHICH CONTRIBUTE DATA RELATED TO AGRARIAN REFORM	357

	<u>Page</u>
APPENDIX E: PRIMARY DATA BEING PRODUCED BY THE PUBLIC DATA SYSTEM ON AGRARIAN REFORM	
Appendix Table E.1. Primary Data Being Produced by MAR (Formerly DAR) as of 1975	358
Appendix Table E.2. Primary Data Being Produced by Agencies Attached to the MAR as of 1975	359
Appendix Table E.3. Primary Data Being Produced by the Bureau of Lands (BL) as of 1975	361
Appendix Table E.4. Primary Data Being Produced by the Land Registration Commission (LRC) as of 1975	362
Appendix Table E.5. Primary Data Being Produced by the NCSO as of 1975	363
Appendix Table E.6. Primary Data Being Produced by the BAEcon as of 1975	364
APPENDIX F: UNIVERSITY OF THE PHILIPPINES SYSTEM'S COLLEGES, DEPARTMENT, INSTITUTES AND CENTERS WHICH ARE ACTIVELY ENGAGED IN SOCIAL SCIENCE RESEARCH ON AGRARIAN REFORM AND THE GENERAL AREA OF RURAL DEVELOPMENT	365
APPENDIX G: LIST OF PRIVATELY-SUPPORTED ACADEMIC INSTITUTIONS COMPRISING PART OF THE PRIVATE DATA SYSTEM ON AGRARIAN REFORM	366
APPENDIX H: CONCEPTUAL MATRIX DESIGNED TO ACCOUNT FOR THE EFFECT(S) OF SPECIFIC (AGRARIAN) REFORM(S) ON PROGRAM OBJECTIVES	367
APPENDIX I: DESIRED AND UNDESIRED OUTPUTS OF THE PHILIPPINE AGRARIAN REFORM PROGRAM	368
APPENDIX J: OUTPUTS ARISING FROM ACTIVITIES UNDERTAKEN UNDER THE LAND TENURE IMPROVEMENT COMPONENT OF THE AGRARIAN REFORM PROGRAM	369
APPENDIX K: TRADE-OFFS OR COMPLEMENTARITIES AMONG PROGRAM OUTPUTS DEPENDING ON SPECIFIC POLICIES ADOPTED	370
APPENDIX L: POLICY INPUTS AND POLICY ENTRY POINTS WITH RESPECT TO THE PHILIPPINE AGRARIAN REFORM PROGRAM	371
APPENDIX M: LANDOWNER'S IDENTIFICATION SHEET (LIS)	372
APPENDIX N: BASIC INFORMATION ON LANDHOLDINGS	373
APPENDIX O: OLT FORM 1-A	375
APPENDIX P: OLT PS FORM NO. 1	376
APPENDIX Q: OLT VALUATION FORM 1	377
APPENDIX R: INFORMATION NEEDED BY POLICYMAKERS IN SOLVING POLICY PROBLEMS AND ISSUES ON AGRARIAN REFORM AT PRESENT AND IN THE FORESEEABLE FUTURE	378
BIBLIOGRAPHY	379

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1 Philippine Agrarian Reform Program Targets, 1978-1987 . . .	18
2 Sex and Age of Sample Core Decision-Making Participants Who Submitted Curriculum Vitaes	148
3 Educational Attainment of Sample Core Decision-Making Participants Who Submitted Curriculum Vitaes	149
4 Respondents' Reasons for Considering PD 27 as a Broad/ General Policy Statement	152
5 Relative Contributions of Nine (9) Core Policy-Making Participants to the Features/Provisions of PD 27	157
6 Kind, Source, Channel and Quality Indications of Data/ Information/Prescription Provided to the Committee Drafting the Decree or to the President	159
7 OLT Pilot Provinces and Municipalities	165

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1 Map of the Philippines	6
2 A Feedback Control System	28
3 Elements of Feedback Control in Business	30
4 An Agricultural Information System	33
5 The Decision-Making Process	41
6 An Information Theory View of the Decision-Making Process	46
7 System Simulation and the Decision-Making Process	53
8 A Feedback Control System Model of Agrarian Reform Policy Decision-Making	55
9 A Generalized Information System Model	62
10 An Information System	81
11 Map of the Municipality of Sta. Fe Showing the Study Area	83
12 Organizational Chart of the Ministry of Agrarian Reform (MAR)	90
13 Organizational Chart of the Bureau of Lands (BL) (as of January 1978)	94
14 Organizational Chart of the Bureau of Cooperatives Development (BCOD)	96
15 Organizational Chart of the Ministry of Agriculture (MA) .	98
16 Philippine Planning Set-Up (A) and the Principal Steps in the Plan Preparation Process (B)	111
17 The NEDA Complex (as of December 1977)	116

<u>Figure</u>		<u>Page</u>
18	Identification Phase Procedure Flow Process Chart	168
19	Valuation Phase Procedure Flow Process Chart	171
20	Distribution Phase Procedure Flow Process Chart	173
21	Payment and Collection Phase Procedure Flow Process Chart	174
22	Generalized Overview of the Future MIS	184
23	Integrated OLT Data Base	185
24	Field Management of the New Data System on OLT	186
25	A Hypothetical Yield Distribution for the Same Barangay and the Same Soil-Crop-Irrigation Category	213
26	Intra- and Inter-Component Linkages among Information Systems of the Agrarian Reform Program and Their Relation to Information Systems of Other Programs . . .	260
27	The Analytical Unit in the Decision Structure	268
28	The Analytical Unit of the Decision Structure in the Philippine Context	270

PART I
THE RESEARCH PROBLEM

CHAPTER 1

INTRODUCTION

Background of the Study

Developments in Recent Years

The National Scene

The Philippines, a country of 45 million people (1977) and 115,830 square miles (300,000 square kilometers) of land area, is one of the less developed nations of Southeast Asia. Primarily an agricultural country, 71 percent of its population lives in rural areas. In 1976, agriculture accounted for 51.4 percent of total employment and 31 percent of net domestic product (Philippines, 1977).

Since formal independence from the United States in 1946, the country has had an economic growth rate of about 6 percent a year in real terms. After accounting for a 3 percent annual population growth, the average annual increase in per capita income has been around 3 percent. This growth has not been sufficient to insure the country's self-sustained, long-term development. Furthermore, distribution of the benefits of growth has been unequal, and the rate of growth cannot be maintained without changes in its pattern of distribution (IBRD, 1976).

The pattern of industrialization and resource allocation in the 1950s and 1960s has been strongly biased toward capital-using industries and has generally focused on import-substitution. Insufficient industrial exports, however, have made the burden of financing the imports of

capital goods and raw materials needed by the urban industrial sector fall heavily on traditional exports. Even though the agricultural sector has grown nearly 5 percent annually since 1946, agricultural exports have been unable to earn sufficient foreign exchange to finance the growing import bill. The industrialization thrust has not been conducive to providing the broad-based employment opportunities needed in a labor-surplus economy. Consequently, the highly skewed pattern of income distribution in the Philippines has changed little if at all (IBRD, 1976; Philippines, 1977).

The Rural Sector

Structurally, the rural sector has a wide range of organizational forms of production. At one extreme are a few large, capital-intensive logging and mining establishments--virtual enclaves with relatively little impact on the surrounding local economy but of major importance for the country's capacity to generate foreign exchange. At the other end of the spectrum are the numerous smallholders or tenants with cultivated areas of a few hectares or less. They produce mostly rice and corn for domestic consumption or coconuts for export. Sugar, pineapple and banana plantations, small-scale mining and logging operations, and the few rural industrial establishments occupy various intermediate positions in level and intensity of capital and land use (ILO, 1974).

There has been a sectoral labor-force shift towards commerce and services. This may be explained by the fact that the national increment to the agricultural labor force, faced with a relatively static demand for agricultural labor, moved into the easy entry activities in services and commerce (often in the urban areas), depressing real earnings in

these sectors which have been stagnant or falling. The decreased demand for agricultural labor may be connected with the switch, in rice and corn growing, from area expansion in the 1950s to yield expansion in the 1960s. While employment increased faster than the long-term average in the 1950s, it slowed down in the 1960s, averaging 3.3 and 1 percent per year over these two decades, respectively (ILO, 1974). Most of the gain in agricultural income resulting from an improvement in agriculture's terms of trade and an increase in productivity per hectare in the 1960s accrued to landowners, whether landlords or owner-cultivators (ILO, 1974).

Yield improvements in rice and corn in the 1960s have been attributed to the technological change brought about by the Green Revolution, i.e., new varieties, increased use of fertilizers and insecticides, and the extension of irrigation. Despite bad crop seasons in 1970-72 that dispelled earlier optimism for obtaining dramatic yield gains, the investment "bargains" available in agriculture, especially on the intensive margin, are larger (ILO, 1974). Future growth in output, however, may depend more on intensive cultivation than on extension of cultivated land. Area expansion slowed markedly in the 1960s to 1 percent per year in contrast to 3.4 percent in the 1950s. While there is considerable doubt as to how much cultivable land still remains, there are apparent signs of the closure of the land frontier.

Overall, any increase in productive employment in agriculture will increasingly depend on what can be done on the intensive margin through new basic biological knowledge and superior adaptive research capacity. Unfortunately, past intensive development efforts often resulted in a less favorable income distribution than those involved in pushing back the extensive margin. The concentration of research to date on irrigated

rice rather than on corn or upland rice, the maldistribution of irrigation and related infrastructure components, credit requirements for fertilizer purchase and an earlier farm mechanization support program may have all benefited mainly the large, already well established farmer. Additionally, nonagricultural rural activity (i.e., rural industry) has been conspicuously absent in the Philippines, mainly as a consequence of competitive pressures during the colonial period and of a subsequent extreme centralization of industrial activity around Manila. Thus, a balanced and mutually interacting pattern of rural development that would integrate widespread labor productivity increases in agriculture and rural industry appears nowhere in sight (ILO, 1974).

The Role of Agrarian Reform in the Development Process

The strategy for Philippine development in the next decade is two-pronged: (1) attainment of a more dynamic and balanced economy, particularly through increased agricultural and industrial production, trade diversification and rationalization, transformation of the energy structure, application of science and technology, as well as proper management of natural resources and environment; and (2) more equitable access to social development opportunities and fuller utilization of human resources in nation-building (Philippines, 1977).

Within the context of the problems in the Philippine rural sector, agrarian reform is envisioned by the government to play a major role especially in achieving a more equitable distribution of income and in releasing incentives for productivity increases in agriculture (ILO, 1974). The agrarian reform program is a complex program of social change designed to affect the structure of property rights and economic

relationships in agriculture and to set off social, economic, and political repercussions that would touch the lives of millions of Filipinos.

The program initially started as the government's direct response to agrarian unrest which had broken into open rebellion in a number of places, principally in the Central Luzon region (Figure 1) (ILO, 1974). Agrarian reform is presently articulated as a motive force for social transformation, a goal to be "vigorously pursued as a concrete measure towards wealth redistribution". In the process, "increases in productivity and cooperativism to foster security, welfare and dignity of the Filipino farmer" are to receive emphasis (Philippines, 1977, p. 12).

Evolution of Agrarian Reform in the Philippines

As a process, agrarian reform in the Philippines may be viewed in an evolutionary sense. What it is presently results from the dynamic interaction of a combination of factors--physical, demographic, economic, social, political, etc.--that began in the past and continue to the present and possibly into the future. In tracing the highlights of this evolutionary process, one aims to gain a better understanding of the current agrarian reform under martial law.

Pre-martial Law (Before September 21, 1972)

Land reform in the Philippines has been characterized by three distinct facts, namely: (1) it has been limited for the most part to rice land; (2) it has been confined mainly to Central Luzon, the principal rice-growing area; and (3) it has been directed mostly toward eliminating sharecrop tenancy (Murray, 1972).

Land tenancy and related agrarian problems in the Philippines had its origins in pre-Spanish times. Their evolution through the present

- REGIONAL OFFICES**
- REGION NO. 1 ILOCOS REGION**
REGIONAL CENTER: SAN FERNANDO, LA UNION
- REGION NO. 2 Ilocos NORTHERN REGION**
REGIONAL CENTER: ILOCOS BAYAN, ILOCOS NORTHERN
- REGION NO. 3 Ilocos SOUTHERN REGION**
REGIONAL CENTER: SAN FERNANDO, PAMPANGA
- REGION NO. 4 METROPOLITAN MANILA AREA**
REGIONAL CENTER: MANILA AND QUEZON CITY
- REGION NO. 5 CALABARZON REGION**
REGIONAL CENTER: METROPOLITAN MANILA AREA
- REGION NO. 6 BULACAN REGION**
REGIONAL CENTER: LAOAG CITY
- REGION NO. 7 WESTERN VISAYAS REGION**
REGIONAL CENTER: ILOILO CITY
- REGION NO. 8 CENTRAL VISAYAS REGION**
REGIONAL CENTER: CEBU CITY
- REGION NO. 9 EASTERN VISAYAS REGION**
REGIONAL CENTER: TACLOBAN CITY
- REGION NO. 10 WESTERN MINDANAO**
REGIONAL CENTER: ZAMBOANGA CITY
- REGION NO. 11 NORTHERN MINDANAO**
REGIONAL CENTER: CAGAYAN DE ORO CITY
- REGION NO. 12 SOUTHERN MINDANAO**
REGIONAL CENTER: DAVAO CITY
- REGION NO. 13 CENTRAL MINDANAO**
REGIONAL CENTER: COTABATO CITY

REPUBLIC OF THE PHILIPPINES
NATIONAL ECONOMIC AND DEVELOPMENT AUTHORITY
NATIONAL CENSUS AND STATISTICS OFFICE
1977

MAP OF THE PHILIPPINES

SCALE: 1:200,000

1977

LEGEND

- ★ CAPITAL OF THE PHILIPPINES
- CITY AND PROVINCIAL CAPITAL
- PROVINCIAL CAPITAL
- CITY
- REGIONAL BOUNDARY
- SUB-REGIONAL BOUNDARY
- PROVINCIAL BOUNDARY



Figure 1. Map of the Philippines

have been variously influenced by Spanish and American land policies during the country's colonial history (McLennan, 1973). Prior to the Spanish conquest which began in 1565, two patterns that were later to characterize tenancy were already present among food producers in the Philippines. These were: (1) sharecropping, in which a social superior laid prior claim to a portion of the produce; and (2) debt peonage, in which individuals were reduced to dependency because of heavy debt (Murray, 1972, p. 152).

The Spaniards introduced two other land patterns, namely: (1) caciquism and (2) individual ownership of land. In governing the islands, the Spaniards were careful not to disturb the structure of the villages or the position of the village headman, who became known by the Carib term "cacique". In recognizing them, the Spaniards helped the caciques preserve their power over the people. This only expanded the caciques' opportunity to increase their landholdings (inasmuch as they were the tax collectors) at the expense of freeholders who were reduced to the status of tenants (Murray, 1972; Pelzer, 1948).

The introduction of individual landownership by the Spaniards virtually finished the reduction of freeholders to tenants. The comparatively few people who acquired legal titles were mostly persons belonging to the cacique class, and they often laid claim to more land than that on which they actually had any rights. Peasants who felt secure in the possession of their land and had not known or cared about titles were suddenly confronted with the fact that a wealthy person, with the law behind him, could claim their land. The peasants were either driven from the land or forced to stay as tenants (Pelzer, 1948). The introduction

of land registration by the Americans in 1913 caused or facilitated similar effects (Murray, 1972, p. 152).

The agrarian policy implemented during the American period (1898-1935) was intended: (1) to give land to the landless; (2) to rationalize the system of land registration and the issuance of land titles; (3) to break up landed estates; and (4) to improve tenancy conditions (Bauzon, 1975).

However, the American colonial government's homestead policy failed because: (a) the inhabitants tended to reside in communities rather than in homesteads that were kilometers apart from each other; (b) landlord manipulations which blocked tenants from applying for homestead grants; (c) governmental inability to undertake a systematic survey of public lands available for homesteading; (d) the imposition of unduly tough standards, like rendering productive one-fifth of the homestead within five years; (e) inadequate infrastructure projects, such as roads and bridges that would connect homesteads with marketing outlets; (f) insufficient health care delivery facilities; and (g) the hostility of tribes on whose ancestral hunting and planting preserves the Christians intruded (Bauzon, 1975).

The Philippine Commission passed an act in 1902 which established the land registration court and introduced the system of torrens title.¹ However, these innovations militated against the tenant farmers. Largely poor and uneducated, they were at a disadvantage in court litigations against the wealthy and educated landlords. Many small farmers were

¹A system of land title registration wherein governmental guarantee of properly registered titles is intended to simplify real property transfers, making title insurance unnecessary (Schick and Plotkin, 1978).

dispossessed from their lands by the Court of Land Registration. The process of land registration and title issuance, as Bauzon (1975) observes, "became in effect a curse rather than a blessing" for many of these farmers (p. 13).

The break-up of landed estates involved governmental purchase of friar lands. However, the goal to create a class of owner-cultivators by redistributing the religious estates to the tenant population at reasonable terms never materialized for the following reasons: (1) friars often refused to sell their best-situated agricultural lands; (2) the government failed to distribute to the tenant population all the lands it succeeded in buying from the friars; (3) the undistributed lands were leased or eventually acquired through purchase by huge American business firms and affluent Filipinos, resulting in bigger landholdings; and (4) the colonial government did not provide support systems to enable those who bought some lands from the friars to retain their holdings and at the same time cope with the elements. In effect, what transpired was merely the transfer of titles of ownership from the friars to Filipino and American landlords, inevitably furthering tenancy (Bauzon, 1975).

The increasing intensity and the extensiveness of agrarian radicalism, however, soon prompted the American colonial administration to exert greater effort to arrest the deterioration of the conditions of tenancy and effectively regulate the relationship between tenant farmers and their landlords. These intentions culminated in the Rice Share Tenancy Act of 1933 (Commonwealth Act 4054), which provided for the following: (1) the writing of tenant-landlord contracts in the vernacular language spoken locally; (2) the implementation of a 50/50 sharing arrangement of the harvested crops; (3) the establishment of 10 percent as the maximum limit

to interest rates which could be charged on loans made to the tenant farmers; and (4) the establishment of a guarantee that no matter how much a tenant farmer owed in debts, he would get at least 15 percent of the harvest.

While the Rice Share Tenancy Act outwardly appeared as the ideal solution, it was far from such in reality. An amendment to the original bill before its passage by a landlord-dominated legislative body explicitly conditioned its effectiveness "only when there was actual rural unrest, and . . . upon the near unanimous petition by the municipal councils of a province where there existed serious agrarian disturbances" (Bauzon, 1975, p. 16).

The passage of Republic Act No. 1166 in June 1954 created the National Resettlement and Rehabilitation Administration (NARRA). Its aim was:

To hasten free distribution of agricultural lands of the public domain to landless tenants and farm workers and to encourage migration to sparsely populated areas in furtherance of the fundamental policy of the state to increase the level of production, provide widespread employment and improve the living standards of the people (Gozon, 1964, pp. 3-4; Estrella, 1969, p. 15).

At the same time, the Economic Development Corps (EDCOR) was established under the Department of Defense, primarily to encourage the resettlement of ex-rebels. However,

These attempts to effect large-scale resettlement generally failed for the following reasons: (1) the extremely high cost of duplicating in resettlement areas the facilities and services found in places where tenants come from; (2) the large proportion of resettlement cost going to subsistence rather than land development; (3) the social immobility of the farming population; and (4) the tendency for tenancy also to develop in resettlement areas (Murray, 1972).

It was during the administration of Ramon Magsaysay (1954-1957) that major agrarian reform efforts were pursued. Magsaysay believed that the solution to the social unrest which supported the Huk movement lay in agrarian reform. While determined to carryout a program of rural reform, Magsaysay was hampered from doing so by a lack of "the kind of political backing essential to successful implementation of a reasonable agrarian policy" (Starner, 1961, p. 125).

The foregoing overview thus far reveals that: (1) the evolving Philippine agrarian problems have economic, social and political dimensions; and (2) steps taken by the government have generally been a direct response to agrarian unrest, which has erupted into open rebellion from time to time and in a number of places. Agrarian reform measures undertaken then were mainly to attain social (equity) and political goals, relegating to the background the economic objectives (e.g., productivity and income distribution). These three objectives were to receive equal emphasis, however, in the Agricultural Land Reform Code (R.A. 3844) which was passed into law in 1963 during the Macapagal administration (de los Reyes, 1972).

In general, political and equity objectives occupied a central role in the land reform movements of the nineteenth and first half of the twentieth century. In recent years, this classical objectives has been increasingly complemented by a productivity objective (Ruttan, 1966).

The drive for more widespread landownership has been reinforced by the unproven assumption that owner-operators of small farms would tend to raise larger food crops than would tenants (Ruttan, 1966). In effect, expectations generated by the modern theory of the business firm were being gratuitously extended to the subsistence farmer. Meanwhile, Sacay (1963) argues that in the Philippines the principal reason for abolishing

share tenancy is the fact that it does not provide the necessary incentives for increased production. Palacios (1966) moreover notes that the Land Reform Code aims to motivate tenants to increase their agricultural produce to meet the needs of a growing population. At the time the Code became law (1963), the Philippine population growth rate was over 3 percent and rice still had to be imported as it had been throughout the intervening postwar years.

The Agricultural Land Reform Code of 1963, which was amended in 1971 (R.A. 6389) during the Marcos administration to become the Code of Agrarian Reforms (1971 Code), mandates, among others, the following goals (parentheses indicate the 1971 amendments):

1. To establish owner-cultivatorship (cooperative-cultivatorship among those who live and work on the land as tillers) and the economic family-sized farm as the basis of Philippine agriculture and, as a consequence, divert landlord capital in agriculture to industrial development;
2. To achieve a dignified existence for the small farmer, free from pernicious institutional restraints and practices;
3. To create a truly viable social and economic structure in agriculture conducive to greater productivity and higher farm incomes (through a cooperative system of production, processing, marketing, distribution, credit, and services).

The provisions of the 1963 Code were not put into effect with any intensity until 1970 and then, mainly in the pilot area of Nueva Ecija (Murray, 1972; de los Reyes, 1972). Among the motivations for undertaking the Nueva Ecija Land Reform Integrated Development Project (NELRIDP) as a pilot project was the fact that the Land Reform operations until then had not been very effective.

Started on June 30, 1970, the NELRIDP's broad objectives were as follows:

1. To implement an integrated provincial land reform program, and to evaluate the strength and weaknesses of existing government machinery and legislation for carrying out the national land-reform program; and
2. To test alternative approaches for simultaneously accelerating land-tenure transitions and agricultural productivity (de los Reyes, 1972, p. 84; Medina Jr., 1976).

By 1972, tenanted rice and corn farms in the Philippines totaled one million according to the Ministry (formerly Department) of Agrarian Reform (MAR). Reconciling MAR's statistics with those of the Bureau of Agricultural Economics (BAECON), the ILO (1974) estimated that the proportion of share tenants among non-owner-operators (excluding partial owner-operators) was probably still within the range of 40 to 50 percent and that reform leaseholders² actually paying no more than the maximum statutory rent accounted for another 20 to 30 percent, with the market leaseholders accounting for the remainder. Based on studies done in Nueva Ecija (Pahilanga-de los Reyes and Lynch, 1972) and Central Luzon (Sandoval and Gaon, 1971), the ILO also estimated that, on the average, an owner-operator's income should be about one-third greater than that of a reform leaseholder; 40 to 60 percent greater than that of a market leaseholder and 130 to 140 percent greater than that of a share tenant.

Agrarian Reform Under Martial Law

The sluggish implementation of land reform was, accordingly, one of the many reasons for the accelerating urban and rural dissatisfaction

²Share tenants and leaseholders whose rents were reduced to a level below market rates (i.e., "lessees by operation of law"), as distinct from market rate or ordinary leaseholders (i.e., "lessees prior to R.A. 3844 and 6389").

which began in 1970 and culminated in the declaration of martial law by President Marcos on September 21, 1972 (ILO, 1974). Five days later (September 26, 1972), Presidential Degree (PD) No. 2 declared the entire country a land reform area and made land reform the "cornerstone of the New Society". A month later on October 21, 1972, PD No. 27 declared that:

Inasmuch as the old concept of land ownership by a few has spawned valid and legitimate grievances that gave rise to violent conflict and social tension;

The redress of such legitimate grievances being one of the fundamental objectives of the New Society; . . .

[Therefore, the President decrees] the emancipation of all tenant farmers as of this day, October 21, 1972; . . .

The implementation of the new program has been carried forward in three principal directions: (1) Operation Land Transfer (OLT), administered by the MAR; (2) the organization of samahang nayon, or barrio associations, under the direction of the Ministry (formerly Department) of Local Governments and Community Development (MLGCD); and (3) credit and financial guarantee support, jointly directed by the Central Bank and the Agrarian Reform Fund Commission.

Operation Land Transfer involves the identification of rice- and corn-growing tenants and their landowners, sketching and mapping of individual farm parcels, and the distribution of certificates of land transfer. The plots transferred are those actually occupied, with no adjustments upwards or downwards, toward the 3 or 5 hectare norms.³

³Thus, ownership of estates is being broken up, whereas farms (operating units) are not being modified in size. It must be noted that there is evidence elsewhere of a slight negative relationship between farm size and land productivity (ILO, 1974, p. 478; see also Dorner, 1971, p. 53 and Georgescu-Roegen, 1960).

The program does not therefore reduce economies of scale (Harkin, 1976, p. 22).⁴ Actual land transfer was carried out according to a system of priority starting from the largest estates of 100 hectares or more, down to less than seven hectares.

Excluding those absentee landlords in the ownership size class of 7 to 24 hectares who are exempt from land transfer (i.e., owing to certain forces majeures such as military service), the total scope of the land transfer program has been estimated to affect 285,000 tenants. However, roughly "15 percent of the tenants are practicing lessees paying approximately 25 percent of their crops as rental", leaving "242,000 potential share-tenant beneficiaries of land transfer" (Harkin, 1976, p. 18). Meanwhile, some "700,000 tenants not eligible for land transfer will be subject to conversion to leasehold" (p. 21).

The target of the MLGCD is to set up 5,000 samahang nayons in several priority provinces. These associations have provisional co-operative status for purposes of PD No. 27. By June 1973, organizational work had reportedly been completed on 1,265 samahang nayons with 1,505 others still in progress. Additionally, about 15 percent of the potential membership in the priority areas were already members.

Concerning the relative importance of the various sources of credit to the different tenure groups, the ILO observes:

1. For the Philippines as a whole, the proportion of share tenants relying on landlord credit averages between 15 and 20 percent, although in Nueva Ecija and probably certain other areas 35 to 40 percent is common. These loans are typically at very high interest rates.

⁴But "since the present average tenant farm size is only 1.8 hectares, attainment of 'family-size farm' standards are mathematically not feasible unless vast new areas are opened up for settlement" (ILO, 1974, p. 478).

2. The dependence of leaseholders on credit from landowners--for the Philippines as a whole between 7 and 10 percent and in Nueva Ecija 12 percent--is markedly less than that of share tenants. It appears that this is primarily due to a lower propensity on the part of landowners to extend credit to lessees, since the lessees themselves profess to seek credit from landowners as much as share tenants do.
3. There may be a difficult transition period ahead for the amortizing owners, particularly share tenants, since only a minority of them have been served by the institutional lenders in the past, and the bulk of the institutional support came from the ACA (either directly or through the farmer cooperative marketing associations), whose operations may be cut back in favor of the rural banks and the Philippine National Bank (pp. 482-484).

On October 22, 1973, PD No. 315 mandated the acceptance of Land Transfer Certificates by all financing institutions as collateral for loans of not less than 60 percent of the value of the farmers' holdings. The condition set for these loans is that they shall be used to improve the farmholding or establish facilities that will enhance production, the marketing of agricultural products, or increase farm income (Estrella, 1974, p. 31).

Resettlement continues to form an integral part of the agrarian reform program. Under the New Society, it has assumed the new "role of absorbing tenant-farmers who might be displaced by the full implementation of PD 27" (Estrella, 1974, pp. 43-44). By the end of Fiscal Year 1973-74, MAR administered a total of 27 settlements spread out in various parts of the country, notably in Mindanao.

Pursued in an integrated approach, the present agrarian reform program is composed of five major components, namely: (1) land tenure improvements; (2) institutional development; (3) physical development; (4) agricultural development; and (5) manpower training (Estrella, 1977; Medina, 1977).

The accent of the agrarian reform program in the next ten years will be on an intensified modernization program centered on the formation of compact farms and the development of resettlement areas.⁵ Meanwhile, the Land Transfer (under PD No. 27) and Leasehold Operations will be completed and Land Consolidation continued (see targets, Table 1).⁶

Statement of the Problem

Decision Makers and Policy-Making, and the Need for an Effective Information System

The problems and issues confronted in the agrarian reform program require rigorous analytical work and policy planning not only by the Ministry of Agrarian Reform (MAR) but also by the entire planning and policy-making structure. A whole range of issues must be addressed, including among others: (1) determining appropriate policy mixes that take account of the inherent trade-offs and contradictions arising from the structural complexity of the program itself; (2) allocation of agency resources among the various components to optimize social welfare or correspondingly minimize social costs brought about by such undesired effects as production and income decreases, labor displacement due to mechanization, disruptive social conflicts or political tension and

⁵ Compact farms are a group of contiguous farms totaling 30 to 50 hectares in area under single management, one farm plan and budget. The farmers pool their resources, exercise joint and separate liabilities, including marketing of the produce.

⁶ Land consolidation involves the replotting of farms, readjustment of the land rights, systematic planning and adjustment of irrigation canals and laterals and farm roads.

Table 1. Philippine Agrarian Reform Program Targets, 1978-1987

Program Aspects	Unit	Program Scope In 000 ^a	Program Status 1977 (%)	1978-82 In 000 ¹	Accomplish- ment 1978-82 (%)	Cumulative Total (%)	1983- 1987 ^a In 000	Per Cent Accomplish- ment (%)	Cumulative Total (%)
I. Leasehold									
1. Rice and corn									
Farmer	521.1	70.9	151.5	29.1	100.0	—	—	—	100.0
Hectare	663.4	75.0	155.8	25.0	100.0	—	—	—	100.0
2. Other crops									
Farmer	110.3	—	110.3	100.0	100.0	—	—	—	100.0
Hectare	441.5	—	441.5	100.0	100.0	—	—	—	100.0
II. Land Transfer									
1. Landowner's compensation									
Landowner	39.6	6.0	9.6	24.0	30.0	27.5	70.0	70.0	100.0
Farmer	293.8	11.0	90.8	23.0	34.0	261.0	66.0	66.0	100.0
Hectare	759.0	11.0	175.2	23.0	34.0	503.7	66.0	66.0	100.0
2. With CLT									
Farmer	353.8	65.0	139.0	35.0	100.0	—	—	—	100.0
Hectare	759.0	59.0	310.4	41.0	100.0	—	—	—	100.0
3. With patents									
Farmer	353.8	0.6	18.0	5.0	5.6	373.1	94.4	94.4	100.0
Hectare	759.0	0.6	34.9	5.0	5.6	719.7	94.4	94.4	100.0
III. Compact Farms									
1. Irrigated areas									
Farm	19.6	3.2	5.1	26.0	29.2	8.1	41.3	41.3	70.5
Farmer	490.0	3.2	125.5	26.0	29.2	202.5	41.3	41.3	70.5
Hectare	980.0	3.2	255.0	26.0	29.2	405.0	41.3	41.3	70.5
2. Nonirrigated areas									
Farm	1.4	1.8	0.2	17.8	20.3	0.3	21.7	21.7	41.3
Farmer	34.5	1.8	6.1	17.8	20.3	7.5	21.7	21.7	41.3
Hectare	69.0	1.8	12.2	17.8	20.3	15.5	21.7	21.7	41.3
IV. Land Consolidation	Hectare	10,440.0	^b	18.0	0.2	0.2	36.0	0.3	0.5
V. Cooperative Farms	Project	181.0	7.2	36.0	19.9	27.1	40.0	19.9	47.0
VI. Resettlement									
1. Pioneer	Settler-Family	156.6	13.8	23.4	15.0	28.8	26.7	17.0	45.8
2. Resettled	Settler-Family	371.4	8.3	32.8	8.8	17.1	42.2	11.4	28.5

^aExcept cooperative farms where units are in absolute levels.^b0.04 percent

Source: MAR

environmental pollution; (3) evaluation of policy consequences with due consideration given to feedbacks from the affected sectors; and (4) projection of the long-run dynamic impact of alternative policies or policy mixes.

The usefulness of the present analytical component of the program in providing adequate, consistent, accurate and timely information to policy makers significantly depends on its analytical capacity and the data system which sustains it with accurate and relevant data on the various aspects of the program. Thus, the data system and the analytical component must be meshed such that the data gathered from the field and the analytical input meet the demands of decision makers for adequate, accurate, consistent and timely information. That this has not yet been accomplished is exemplified by the fact that presently there is a vacuum of information concerning landless agricultural workers who are outside the ambit of the Operation Land Transfer under martial law. There is also a state of uncertainty concerning the availability of potential farmlands (ILO, 1974; IBRD, 1976). At the implementation level, errors in operationalizing the data system⁷ have been observed (Montemayor, 1975; Harkin, 1976).

Policy Decisionmaking Difficulties in Agrarian Reform and the Promising Usefulness of the General System Simulation Approach

From the foregoing, agrarian reform can be viewed as a system involving man, land and institutions, and having various interacting components. It has economic, social and political dimensions. As presently pursued in the Philippines, it is both equity and productivity oriented. Policies

⁷That is, failure to define accurately a concept (e.g., homelot) for purposes of measurement or data collection. See also Chapter 2.

which emphasize either objective have trade-offs that need to be identified. Several participants who have either the same or conflicting interests are involved directly or indirectly in the program. The administration is lodged among several agencies that are coordinated at the national level. The issues involved are dynamic in nature and, hence, not appropriately researched using static techniques. An example is the current concern to determine whether family-type farms or group farms (e.g., compact farms) would be the more viable farming structure in the long run. There are also multiple goals to be achieved and undesirable consequences to be avoided, and therefore partial optimization techniques are no longer adequate as a research tool. There are, to begin with, the associated problems of determining the performance variables where some outputs of the program are difficult to define operationally. Given this complex and ill-defined problem situation, in which partial optimization and static approaches for analysis are not appropriate, the general system simulation approach can be very useful (Johnson and Rossmiller, 1978; Manetsch, 1971).

Objectives of the Study

Broadly, this study seeks to answer the following interrelated questions:

1. Are there problems in the Philippine agrarian reform information system? If so, what are they and how can they be solved?
2. Does the General System Simulation Approach (GSSA) hold promise in contributing to the solutions of some of these problems?

3. Specifically, how can and how should the GSSA be utilized for such purposes in the specific Philippine institutional setting?

The identification of problems in the Philippine agrarian reform information system necessitates a relatively detailed description of (a) the structure and dynamics of the agrarian reform policy-making process, as well as of (b) the associated information system showing the relationship among data, analysis and decision making. The description of the policy-making process provides an assessment of the status of the demand for information. This includes an identification of the policy entry points, policy-making participants, and policy issues being addressed. Likewise, the description of the data and analytical system provides an assessment of the status of information supply. Taken together, the description of the information demand and supply situations will thus permit the identification of information gaps, data inadequacies and such other problems in the information system as errors in conceptualization and measurement. Once these information system problems are identified, appropriate recommendations can be made towards providing short-run as well as long-run solutions to these problems. Because of the desirable features inherent in the GSSA as a problem-solving approach, and because it has a demonstrated usefulness in agricultural sector planning, at least in South Korea (Rossmiller, 1978), an assessment will be made whether or not it is potentially useful in this problem setting.

Assuming that GSSA has a major potential for contributing to the solutions of policy and planning problems, appropriate steps must be taken for its application, or at least appropriate procedures to achieve successful application need to be indicated or outlined.

The first step in applying the GSSA is system identification--the starting point for model building and simulation. The system must be delineated from its environment and the system inputs, outputs and performance variables identified.

The scope of this study does not go beyond this first essential step of the systems approach; it does not extend to model building and simulation. What this study does is to provide the basic framework on which future model construction could be based. In fact, it suggests the nature of the models that are relevant to develop.

Specifically, then, the objectives of this study are:

1. To provide a description of (a) the structure and dynamics of the agrarian reform policy-making process in the Philippines, as well as of (b) the associated information system, showing the relationships among data, analysis, and decision-making.
2. To identify problem areas in the agrarian reform information system requiring immediate and long-run improvements and make suggestions on alternative ways of improving them. These include data and information needs of policymakers and other policy-making participants, capacity of the analytical components, or design problems and errors in the data system;
3. To identify the relevant program performance variables; and
4. To suggest potential contributions of the General System Simulation Approach towards improving the analytical capability of the information system, and to outline the resource and organizational requirements for realizing these potentials.

Importance of the Study

The findings of this study are particularly relevant to policy-makers and program analysts. It is generally recognized that central to effective policy decisions is an effective information system. Yet, there is little doubt that there are weaknesses in the present system. Fundamentally, this study provides an analysis of the existing information system for agrarian reform policy decision and action to determine what and where improvements can be made. It lays the groundwork for further development of an information system that is responsive to the information needs not only of policymakers but also of administrators, analysts, researchers, and other program participants.

This study also provides a testing ground for the so-called "general system simulation approach" (Rossmiller, 1978), as well as for the usefulness for research purposes of the information-system paradigm developed by Bonnen (1975 and 1976) and of the rational decision-making process model of Johnson (1976).

Scientists conducting disciplinary, subject-matter, or problem-solving research that involve the dynamics of technological, institutional and human change, and especially the consideration of income distribution and economic growth, may profit from the assessment as to the applicability of the theories, techniques, or approaches in this study.

Organization of this Thesis

This thesis is divided into four parts and ten chapters. Part I deals with the research problem and is comprised of this introductory chapter (Chapter 1). Part II covers the research methodology and is

comprised of Chapters 2 and 3. Chapter 2 discusses the analytical framework of the study, which is derived from an integration of the feedback control system theory in system science with the theories of information systems, decision-making processes and the general system simulation approach found in the agricultural economics literature and other sources. The main focus of the study is then clearly delineated. Chapter 3 describes the research procedure. Among the topics included are: the rationale, objectives and design of the survey; the observation of pilot implementation of the automated system of OLT in Leyte (Region 8); and limitations of the study.

The findings of this study are presented in Part III, which is composed of Chapters 4 to 7. Chapter 4 describes the structure of Philippine agrarian reform policy-making under martial law. Identified are the entities constituting the management and information components of the program, program outputs, performance variables and policy inputs. Chapter 5 describes the dynamics of agrarian reform policy decision-making under martial law, with PD 27 formulation as a specific case. Chapter 6 follows up on Chapter 5's description by tracing through the implementation of PD 27. Moreover, the chapter concentrates on the description of the OLT information system component by component, assessing the demand for information by the key OLT policy-making bodies (policy entry points) and, correspondingly, the status of the information supply gauged from the existing data and analytical subsystems. This chapter, thus, lays the basis for the identification of the problems and dysfunctions of the OLT information system in Chapter 7.

Part IV of this thesis covers the summary, implications, recommendations and conclusions of the study. It is composed of Chapters 8 to

10. Chapter 8 provides the summary as well as the theoretical and policy implications of the empirical findings. On the basis of the research findings and their implications, recommendations are proposed in Chapter 9 for improving the OLT information system, as well as the information system for the entire agrarian reform program. Chapter 10 provides overall conclusions of the study and suggestions for further research.

.

Part II
RESEARCH METHODOLOGY

.

CHAPTER 2

ANALYTICAL FRAMEWORK

Theories Relevant to the Study: A Literature Review

The analytical framework of this study is built principally around four theoretical developments. These are: (1) the theory of a feedback control system (Manetsch and Park, 1977); (2) the theory and economics of information systems (Bonnen, 1975, 1976 and 1977 ; Riemenschneider, 1977); (3) the theory of a rational decision-making process in the field of agricultural policy (Johnson, 1976; Johnson and Rossmiller, 1978); and (4) the concept of a general system simulation approach (Manetsch, et al., 1971; Johnson and Rossmiller, 1978). An attempt to integrate these theories for application in this specific problem setting follows.

Feedback Control System Theory

General

The management of any real-world system, whether a business or an economy, involves a controlling function. This function stems from the need of managers to insure that the goals of the system are attained. According to Burch and Strater (1974), controlling is a process consisting of three basic steps: (1) measuring the outputs of the system; (2) comparing these outputs with plans and ascertaining the deviations, if any; and (3) correcting unfavorable deviations by taking corrective action. What should not be overlooked in this process is the very

important assumption that the manager has the power to modify or change some inputs so that corrective action can be taken.

In system science, this "control" problem is stated more formally as follows: Given the system structure and a set of system outputs to be achieved, find the system inputs that will achieve the desired outputs. Or, how can the manager make the system work "better" if he can adjust inputs under his control (i.e., policy inputs) which affect the system's internal and output variables (Manetsch and Park, 1977)? The problem involves adding a control structure to the existing processes (system) which will accomplish an improvement in operations.

Out of attempts to deal with this typical management-control problem has emerged the concept of a feedback control system. Figure 2 is a block diagram showing the structure of such a system (Manetsch and Park, 1977). The system to be controlled is represented by the plant model (G_p). A dotted line separates the plant (to the right of the dotted line) from the control structure (to the left of the dotted line) which is made up of two components: the controller (represented by the controller block or management system, G_c) and the information system (represented by the information system model, H). C is the plant's actual output signal whose measurement (as obtained by the information system H) is compared with the desired output or reference signal R , and any difference E acts as a stimulus to the controller which generates the policy signal U . If the output exactly tracks the reference, $E = 0$ and no control is applied. The policy signal tends to drive or steer the output towards the desired value.

The "steersman"/cybernetic or feedback concept has long been useful in many practical applications from as far back as Watt's steam engine

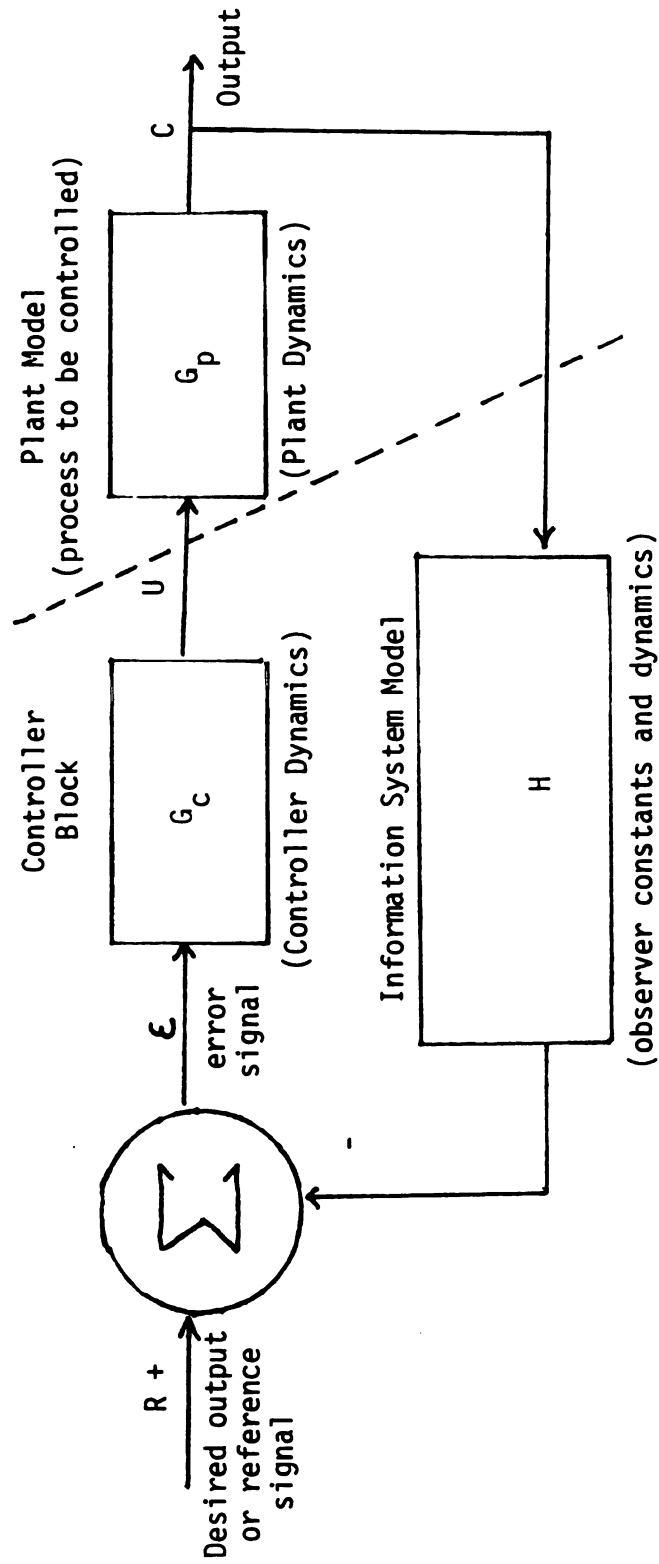


Figure 2. A Feedback Control System
 (Adapted from Manetsch and Park, 1977, Figure 5.7,
 p. 6-5, and Figure 7.1, p. 7-1)

controlled by a governor to the most modern autopilots that provide stability to an aircraft in flight. A more familiar example is driving an automobile--a man-machine system. The driver looking down the road decides upon the desired path of the car, makes control decisions and introduces correction inputs through the steering wheel and throttle or brake. Thus, the form of the controlled response C (i.e., controlled motion of the car) is affected by the control strategy (i.e., the driver's brain control policy) as well as by any lags or delay in the measurement process (i.e., provision of response data by the speedometer, odometer, and the driver's senses). The same feedback concepts generally apply to the management control of dynamic systems, examples of which range from a business firm to more complicated economic and social systems such as a country's agricultural economy (Manetsch, et al., 1971).

Private and Public Applications

The idea of a feedback control system lies behind every attempt of private businesses (e.g., big corporations) and public (or government) agencies (e.g., Ministry of Agriculture) to establish their own information systems. In any case, the purpose of management is the same: to have a better control of the ("plant") system.

A diagram representing the same concepts as in Figure 2 above, but with a (private) business management orientation, is shown in Figure 3 (cf. Burch and Strater). In this diagram, the information system measures and evaluates output from the (business) process which can consist of sales, sales performance, earnings, quality control, purchases, levels of production, performance of personnel, flow of funds, utilization of assets, and so on. These outputs emanate from the process of the system.

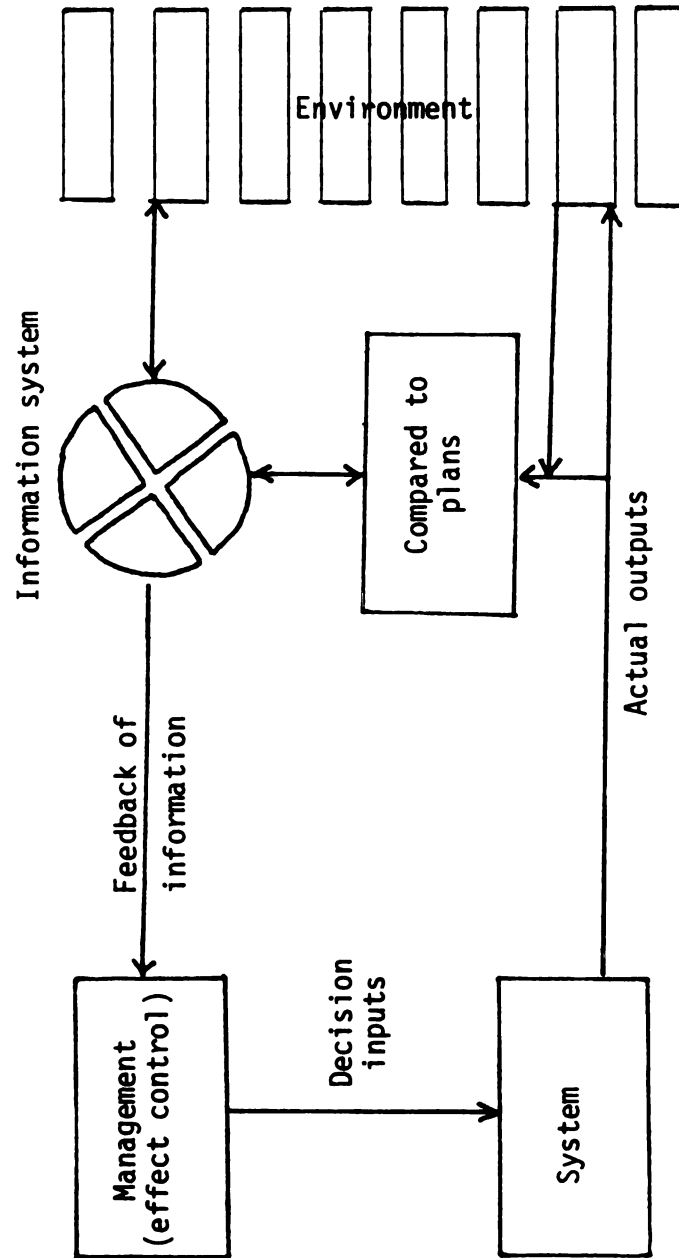


Figure 3. Elements of Feedback Control in Business
(Adapted from Burch, Jr. and Strater, 1974, p. 51)

Burch and Strater stress that the information system of a business organization must disseminate information to external as well as to internal users. External users such as stockholders or government could have some impact upon the decisions the internal management group makes. They also point out that the information system should collect data from the environment about level of demand, price of material, availability of labor, price of labor, competitive action, government action, customer response, etc. The same authors view the control of the system to be effective: (1) if the actual output is properly measured and compared to the desired output; (2) if the required action decisions are implemented; and (3) if both the feedback of information and the decision-making activities are rapid enough to make corrections before the factors in the process become inconsistent with the corrections made.

In the government sector, increasing public demands for more efficient delivery of services has popularized the application of information systems. The idea has caught on in various spheres of government undertaking: in health (e.g., hospital information system), criminal justice (court information system), education, urban planning, agricultural project implementation, etc. (Burch and Strater, 1974; Rickert and Hale, 1970; Farquhar, 1972; Smith, 1975; and Smith, 1976).

While the foregoing theory as depicted in Figures 2 and 3 can stand by itself, other theories that will be discussed below complement or reinforce it. The theory and economics of information systems, for instance, can also be viewed in the framework of Figures 2 and 3. However, central to this theory's theme is the information system H, its inputs and outputs, and the economics relating to its design and effectiveness as a decision-making aid.

The Theory and Economics of Information Systems

Information System Paradigm

A clear distinction between data and information is not often made. Bonnen's paradigm below specifies the relationship between these terms and provides a common vocabulary for an understanding of this concept of an information system.

Data and Data System

According to Bonnen,

Every data system involves an attempt to represent reality by describing empirical phenomena in some system of categories, usually in quantified form . . . Data are the result of this quantification through measurement or counting after the prior question of 'What is to be counted or measured?' has been answered. If the configuration of data produced is to be logically coherent and have some correspondence with reality, the ideas quantified must be related to each other and to the reality of the world being described. In other words, there must be some concept of the reality of the world that is to be measured.

While data presuppose a concept, concepts cannot be measured directly (or in a strictly logical sense measured at all). Rather, one operationalizes the concepts by establishing or defining categories of empirical phenomena (variables) which are as highly correlated as possible with the reality of the object of one's inquiry (Bonnen, 1975a, p. 757).

"Thus, . . . three distinct steps must be taken before one can produce data which purport to represent any reality. These are: (1) conceptualization; (2) operationalization of concepts (definition of empirical variables); and (3) measurement" (Bonnen, 1975a, p. 757). These are the components of the data system. Data are outputs of this data system (Figure 4).

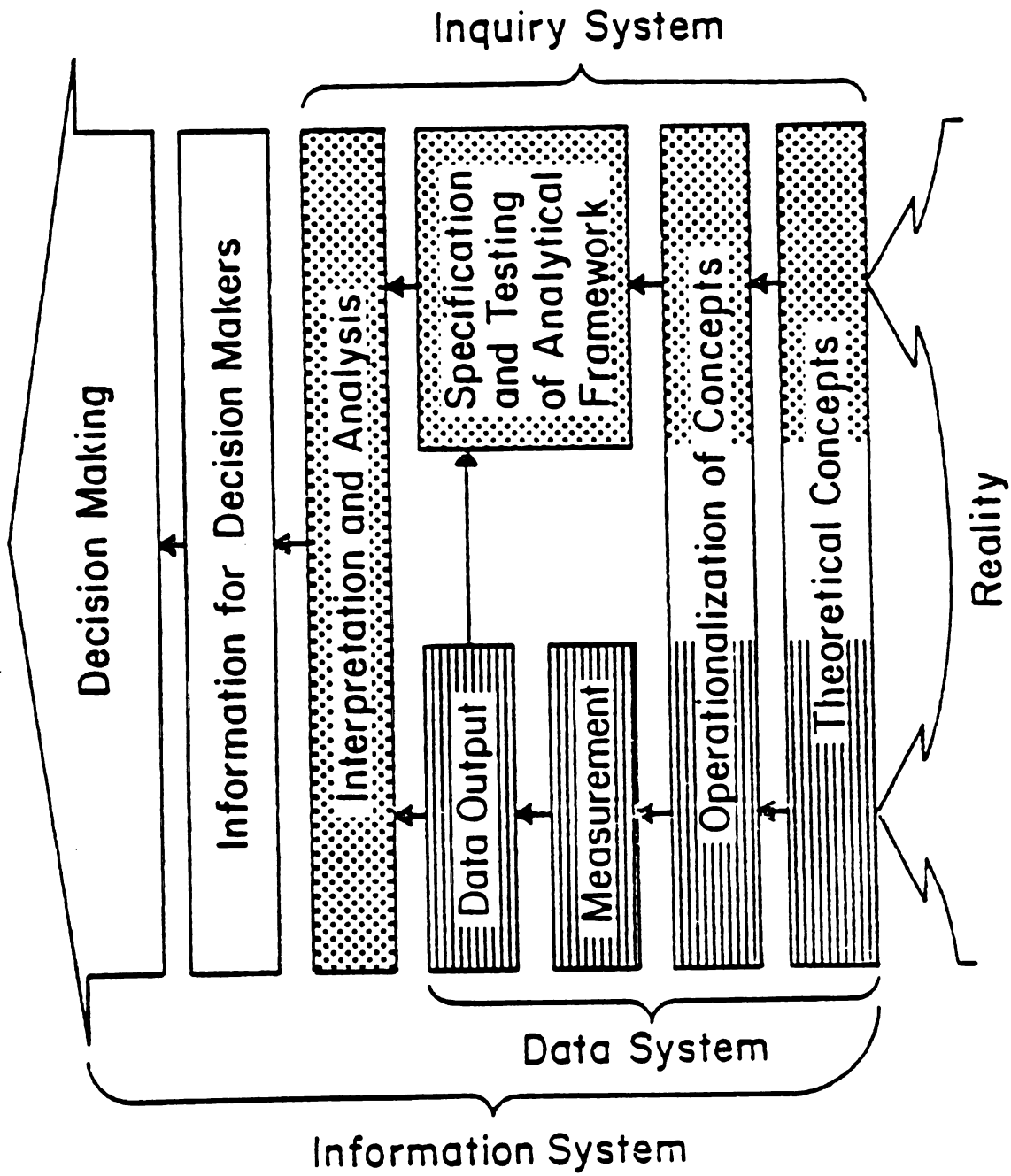


Figure 4. An Agricultural Information System (Source: Bonnen, 1979)

The failures and limitations of any one of these data system components constrain and limit the quality and usefulness of the data produced. An inadequacy at any stage can be offset only to a very limited extent by improvements or manipulations at the other stages. Thus, the great improvements in statistical methodology and data-processing techniques over the last generation cannot offset failures at the conceptual level. No matter how well one manipulates the numbers, one may still be measuring the wrong thing or something that does not exist (Bonnen, 1975a, p. 757).

The term 'reliability of data' has three different possible meanings in this paradigm: reliability of measurement, which is the way the statistician normally uses the term, reliability of operationalization, and conceptual reliability (Bonnen, 1975a, p. 758).

The Nature of Information

Bonnen made it clear that data are not information. To become information, these data require some analysis and interpretation and use in a purposeful policy decision or problem solution context (Bonnen, 1975a, p. 758).

The demand for data is generated by the need to make decisions on problems, but decision makers rarely use raw data. Rather, there are intervening acts of interpretation, policy analysis and political evaluation, etc., which transform data into information by placing them in a specific context to give meaning and form for a particular decision maker. Symbolic data acquire most of their meaning and value from the context and design of the information system in which they appear (Bonnen, 1975a, p. 758).

An information system, then, is composed of three major components: (1) data system; (2) an interpretation and analysis system which transforms data into information; and (3) a decision-making system.

The Epistemological Linkage between Data Systems and Inquiry Systems

There seems to exist among social-science-trained analysts a common epistemological basis for analyzing and solving problems, that is, there is a base of theoretical concepts or body of theories purporting to

represent reality which one operationalizes through the definition of various variables, often specified formally in a model. This model or analytical framework is then tested against the data and conclusions drawn (Bonnen, 1975a, p. 758-759). Hence, data systems (left side of Figure 4) must share a common ground with analytical systems of inquiry (right side of Figure 4): both operate from the same set of theoretical concepts and, ideally, the same set of definitions which operationalize these concepts. Unless the theories and statistics of a discipline such as economics meet on a common conceptual ground, there can be no mesh between empirical analysis and theory (Bonnen, 1975a, p. 759).

Implications of the Paradigm

From the above paradigm, Bonnen derived the following interesting implications:

All information systems have a purpose because they are subsets or components of social systems which are designed for some problem-solving purpose. Thus, data collection and analysis has a purpose and can only be understood fully in a social system context.

Data collected for societal decision-making must have a social theory base. No matter how ad hoc the collection of data may seem, every measurement act is guided explicitly by conceptual and value structures which exist prior to the act of measurement. Data and information are never value free or theory free. Conversely, all concepts or theories have an explicit or experiential prior empirical base. Theory and data are epistemologically interdependent (Bonnen, 1975a, p. 759).

Thus, our knowledge of the real world will not grow in extent and reliability unless the inductive mode of inquiry (left side of Figure 4) is combined with the deductive mode of inquiry (right side of Figure 4) in a repetitive interaction "in which both the analytical and empirical

contents of the process are reformulated and improved on the basis of what is learned from each prior iteration" (Bonnen, 1975a, p. 759).

An analytical hypothesis or model and the data for its empirical test must have the same conceptual and definitional base. Failure to appreciate this fact lies at the heart of our apparent inability to understand and deal with the problem of accuracy of information provided in agricultural economics. It brings up the necessity of empirical testing of all theoretical formulations with data which are designed around the proper concepts (Bonnen, 1975a, p. 759).

Economic Characteristics of Information

Information is a subject in economic theory that has traditionally been handled by way of assumptions. In resource allocation models under perfect competition, for example, information about such variables as production function coefficients, and factor and product prices are assumed to be known, accurate, and instantaneously available. However, when uncertainty is introduced in economic models, information acquires real economic significance.

Information as a Commodity

Because of the uncertainty pervading both private and public decision-making, information acquires the characteristics of an economically valued commodity (Arrow, 1962). Information becomes valuable in the context of uncertainty in that those firms which possess the relevant information can expect to obtain higher profits because of it (Riemen-schneider, 1977). In public decision-making, the cost of poor decisions due to lack of appropriate information can be extremely high (Bonnen, 1973).

Information as a Public Good

Information is not a purely private good. Besides the (1) riskiness in its production, information possesses attributes of a public good, namely: (2) indivisibility; (3) non-appropriability; and (4) increasing returns in use. These attributes cause underinvestment in and underutilization of information in the free enterprise economy. It will be underproduced relative to a purely private good in a competitive system (Arrow, 1962; Riemenschneider, 1977).

Demand for Information

The demand for information for private use centers on the level of returns in investments in information production and the ability of the firms to capture these returns (Riemenschneider, 1977).

On the demand for information for public use, the following observation is noteworthy:

When society begins to industrialize, as production processes become specialized and require extensive coordination, the level of returns to investments in information production to manage these processes increases. As an industry becomes concentrated in the hands of fewer and fewer firms, the returns to investment in data collection and analysis for private use can be captured by these firms. Hence the demand for private use of information increases. At the other extreme of industrial structure when there are thousands and even millions of independent firms, as in agriculture, the amount of private sector investment in information production is likely to approach zero since little of the return can be garnered by an individual firm. As a matter of fact, the public returns to private investments in data analysis would probably exceed the private returns (Bonnen, 1976, p. 14).

Thus, the demand for information for public use will be high in atomistic markets. Over this same continuum demand for information for public use will at first decline as industrial concentration moves away from atomistic markets then this demand will increase as the need for information to regulate and monitor monopolistic industries increases. This will be particularly true in those cases where society has instituted anti-trust laws or public utility laws to regulate monopolistic industries (Riemenschneider, 1977, pp. 11-12).

Supply of Information

Riemenschneider stresses that the supply of information for private use is related to the economic structure:

First the problems of indivisibility and nonappropriability make private data collection and analysis unlikely under a competitive system. As an industry becomes more and more concentrated, it will be increasingly in the self-interest of the firms in the industry to supply information for their own use and hence government provision of information for private use is less and less necessary. However, as the industry structure moves toward more atomistic competition, then the argument for government provision of data collection and analysis can be made on the grounds of improved efficiency in the allocation of resources because the industry is not likely to provide an amount anywhere near the optimum (p. 10).

Additionally, the same author argues that:

Data collection and analysis for public use is, by definition, a government activity. This is necessary to insure accurate and reliable information for public purposes and to avoid the problems of strategic misrepresentation of information supplied by private individuals for public use (p. 11).

Income Distribution and the Distribution of Information

Riemenschneider identifies two aspects of information by which information distribution is related to income distribution. The first is the fact that the value of information derives solely from its use, suggesting that the capacity to use or act on information will be a major determinant in the distribution of income (Thurow, 1970; Lamberton, 1976). The ability of different firms to act on the same information will differ and hence so will the value of the information and the income derived from it. The second has to do with the relation between economic structure and information. Insofar as firm size is related to economic structure, (e.g., firms in an oligopoly are assumed large enough to influence the market by their decisions) it is likely that large firms not only possess superior analytic capability but also have a greater

capacity to use or act on information than do small firms. Thus, one would expect larger firms involved in trades with smaller firms to use their superior information to affect the transactions it undertakes in its favor, so the resulting income distribution would favor larger firms.

Property Rights and Vested Interests in Information

Bonnen (1975a) maintains that information always involves property rights, some of which are privately held. Thus, any attempt made to redesign or create new data responding to the public interest in problems of international trade or in public policy issues on land reform, will find that absolutely essential information is often held by a few firms as well as by persons whose immediate interests are often not served by releasing that information.

There often is a public interest in information held by highly concentrated industries and monopolies which should temper any discussion of confidentiality and disclosure. As Bonnen observes:

Data on these types of firms are often sensitive because of the concentrated nature of the industry and the immediate effects of any firm's actions on the market. However, this makes the same data extremely critical for public decisions. Thus, the benefits to society of the preservation of privacy, particularly among corporations, must be weighed against the information needs of public policy decision makers (Bonnen, 1975b, pp. 101-102).

Moreover, the same author claims:

Bureaucracies and various user groups develop substantial vested interests in existing concepts and measurement procedures. Thus, they behave as if they had a property right in certain data or data systems and often politically are able to enforce their interests. Any change in the design of data must face this problem as a cost of replacing an old statistic with new designed data (Bonnen, 1975a, p. 756).

The remaining bodies of theory to be discussed here relate to the decision-making process (or the process within the Controller Block) in the feedback control system (Figure 2), particularly the steps and economics involved, as well as to the data and analysis (i.e., information system) supporting this process. The review continues below with the theory of a rational decision-making process in the field of agricultural policy, followed by the theory of the general system simulation approach.

The Theory of a Rational Decision-Making Process in the Field of Agricultural Policy

Decision-making units of government in both democratic and socialist countries are known to use large amounts of financial and other resources in obtaining information and solving public problems in agriculture. Yet, as Johnson laments, economists have not given much attention to the economics of public decision-making and management (Johnson, 1976).

Regardless of the decision-making situation (i.e., public/private sector; developed/less-developed country; centralized/decentralized administration; and macro/micro levels), the decision-making process for solving problems is comprised of several interrelated steps. Decision-making theoreticians and practitioners generally depict these steps in varied but similar ways. One such view is described as

. . . a sequential and iterative set of six steps, including (1) definition of the problem, (2) observation and collection of data and information, (3) analysis and synthesis to determine the consequences of alternative courses of action, (4) decision upon a course of action, (5) execution or action to implement the decision, and (6) responsibility bearing, which includes monitoring and evaluation of the results and feedback of those results into the decision process (Figure 5) (Johnson and Rossmiller, 1978, p. 33).

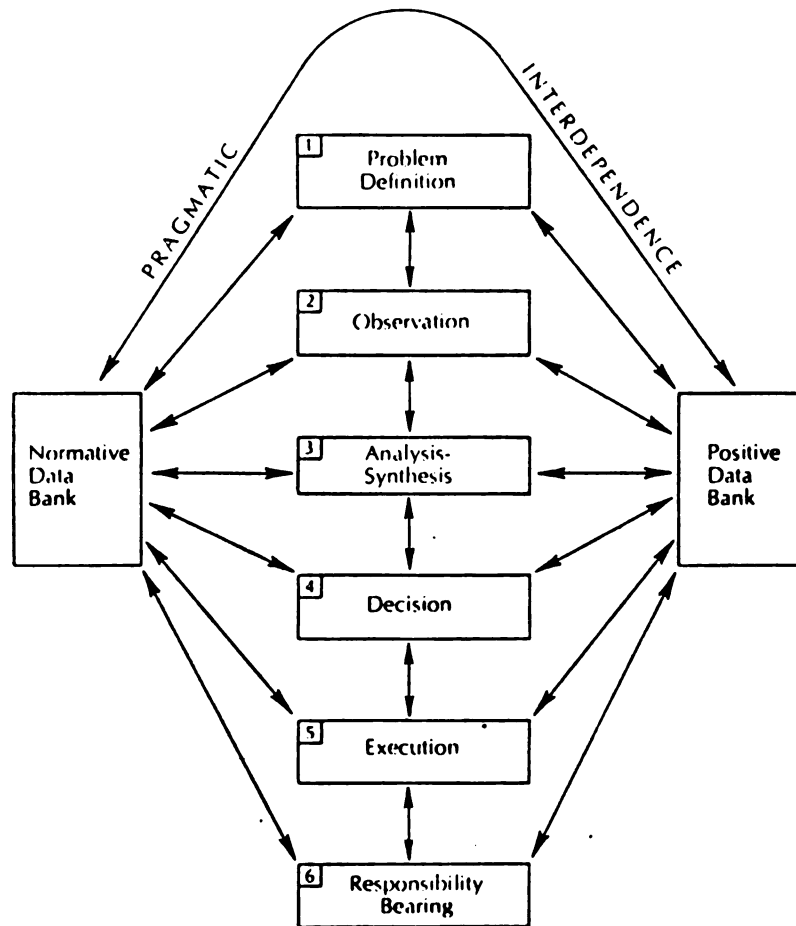


Figure 5. The Decision-Making Process
(Source: Johnson and Rossmiller, 1978, p. 34)

The process is considered "continuous and iterative in that the results of the decisions and actions must be constantly evaluated, issues re-defined, observations extended, analysis reappraised, and decisions and actions adjusted accordingly in the light of new experience, new knowledge, and changing conditions" (p. 33).

A country's capacity to solve agricultural sector problems via the above decision-making steps is termed national agricultural decision-making capacity (Johnson and Rossmiller, 1978). This capacity is viewed as a circle which splits into two parts. One part, the investigative capacity, is the capacity to acquire, analyze and synthesize information. The other part, the administrative capacity, is the capacity to make and execute decisions and bear responsibility for consequences of action taken.

The investigative capacity "resides with the personnel manning the research and analysis agencies and in the academic community that feeds disciplinary knowledge to the analysts." Included in this capacity are "subject-matter models and associated general purpose data systems" (Johnson and Rossmiller, 1978, p. 28).

The administrative capacity rests with the administrative and decision-making personnel many of whom are "found within the organizational structure of the government agency concerned specifically with the agricultural sector and its problems" (often known as the agriculture ministry). Some "such personnel may be found in a central planning agency or in other ministries having responsibilities that affect agriculture." Others may be found "in the Chief Executive Office, subadministrative units such as provincial and village governments, and other

organizations vested with power to influence the course and development of the agricultural sector" (Johnson and Rossmiller, 1978, p. 28).

Problem definition, the first function in the decision-making process (Figure 5), involves both the investigative and administrative capacities. Observation and Analysis-Synthesis (functions 2 and 3 of the decision-making process in Figure 5) involve mainly the investigative capacity, whereas decision-making, action, and responsibility bearing (functions 4, 5 and 6) involve mainly the administrative capacity (Johnson and Rossmiller, 1978).

Problems are defined in terms of both positive and normative¹ information, the latter being both monetary and nonmonetary (Johnson and Zerby, 1973). Problem definition involves the conviction: (1) "that a decision rule could process the relevant normative and positive information into a prescription for materially improving the existing problematic situation"; and (2) "that this problematic situation can actually be improved within the purview of a decision-making unit" (Johnson, 1976; Johnson and Rossmiller, 1978).

The domain of any given problem of a country's agricultural sector involves both the administrative and investigative capacities of that country. On the one hand, "the problem is specific to a decision-making unit that has the power to decide and act on the problem while at the same time being required to bear responsibility." On the other hand, "the various disciplines (e.g., agricultural economics, sociology, public administration and political science) within the investigative capacity

¹"Normative information pertains to the goodness and badness per se of a condition, situation, or thing," whereas "Nonnormative" (or positive) information pertains to a condition, situation, or thing other than its goodness or badness" (Johnson, 1976).

contribute to the understanding of the technical, institutional and humanistic aspects of the problem" (Johnson and Rossmiller, 1978).

Moreover,

problem definition will often require drawing on parts of more than one subject-matter model and, in addition, will usually require ad hoc conceptualization not existing as part of any established subject-matter model (Johnson and Rossmiller, 1978, p. 34).

Observation, the second step (function) in the decision-making process, includes collecting, processing, storing and retrieving data and information. Each type of information needed to solve a problem tends to be generated by a specific discipline such as economics, sociology, political science, soils, crop husbandry, etc. (Johnson, 1976).

"Generally, institutional, technological and humanistic information about the past, present and future are likely to be required", be this information normative, nonnormative (or positive) or prescriptive.² Also, "expectations (both normative and positive) and how they are formed are important." Thus, "to understand fully the knowledge-acquisition behavior of decision makers one must be philosophically flexible" (Johnson, 1976).

The six steps (processes) contributing to a rational decision-making process in Figure 5 are shown to be integrated with an information system whose components include: (1) positive and normative information banks; (2) a pragmatic information feedback loop; and (3) feedback arrows to cover prices, political processes, press, and research and education. "The whole process is sufficiently eclectic to cover any philosophy, discipline, source of information or technique" (Johnson, 1976).

²"Prescriptive information is functionally related to positive and normative information via decision rules (strategies)" (Johnson, 1976).

"While much data and information are available in published form, in data banks, or in existing models, it may be necessary to collect primary data for a specific problem through the use of surveys, experiments, or solicitation of judgment of knowledgeable people" (Johnson and Ross-miller, 1978). The other sources of data and information are: (1) the administrative side of a nation's decision-making capacity; and (2) various feedback channels. The latter include: (1) affected persons; (2) the market (or price system), which sends a variety of messages to decision makers about supplies, demands, prices and other important variables; (3) the political system (or processes); and (4) the press, which feed back information from affected persons to decision makers. For these feedback channels to be effective, however, the affected people must have freedom (or power) to originate and convey messages. Johnson notes, for instance, that "highly centralized economies, right or left, tend to prevent the market from operating a price information system, suppress the political process, and control educational systems and the press to prevent them from feeding back nonmonetary normative information. They also often fail to provide substitute ways of furnishing such information to their decision makers and, hence, suffer from poor decisions" (Johnson, 1976).

Johnson has noted that information theorists and cyberneticists concentrate on positivistic information monitoring (acquisition), banking (storage) and processing³ (Johnson, 1976). An example is in Dunn (1974) (Figure 6). The monitor in Figure 6 is the equivalent of the

³This is similar to, but not the same as, analysis and decision-making in Figure 5.

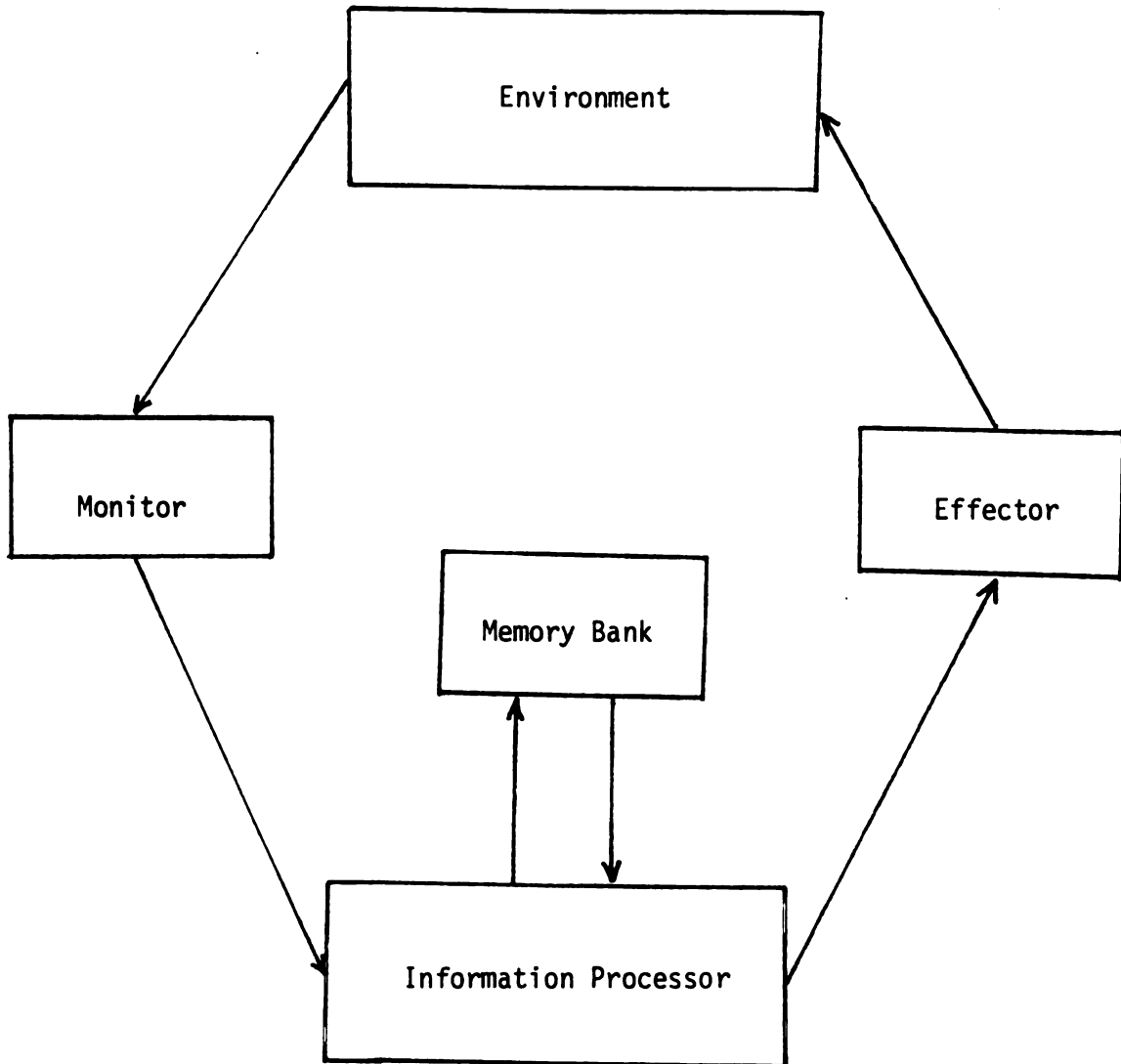


Figure 6. An Information Theory View of the Decision-Making Process
(Source: Dunn, 1974)

observer in Figure 5. "The information processor is both the analyst and the decision maker, while the effector is the executive. The feedback from the environment to the information processor via the monitor handles the responsibility bearing function" in Figure 5. However, "the memory bank in Figure 6 does not distinguish between normative and positive knowledge." Also, "the concept of information processing does not deal explicitly with how normative and positive information are processed into prescriptive information, since the normative (good and bad) are not sharply differentiated from the prescriptive (right and wrong)."⁴

The guiding economic principle for the observation step of the decision-making process can best be expressed as follows:

What data should be collected and in what detail should be determined by equating the marginal cost of each kind of information with its marginal value in the context of the problem being solved. Because the world is infinitely detailed, whereas budgets are finite and time is limited, attention must be concentrated on the most important data. Disciplinary interests, subject-matter considerations, and personal penchants for a particular kind of data should give way to the opportunity cost principle in allocating observation to the different parts of a problem domain (Johnson and Rossmiller, 1978, p. 35).

The third function, Analysis and Synthesis, involves the processing of primary data (both normative and positive) into secondary data and information. The domain of a problem indicates what theory(ies) is/are needed from what disciplines. The theories of the disciplines determine the data needed and are used for processing these data into information (Johnson, 1976).

Solutions to problems may be contributed by (1) disciplinary theories (or models) and (2) subject-matter models such as agricultural

⁴Right and wrong goals, targets and actions are to be distinguished from values (good and bad) (See Lewis, 1955).

sector models and agricultural accounts. Often, a combination of (1) and (2) provide components useful in modeling the domain of a particular problem. Model components, as well as analytical talents, "often can be obtained from academicians, consultants and advisers not normally part of the particular investigative unit" (Johnson and Rossmiller, 1978, p. 35).

Economic problems may fall in any of the following categories: (1) those which the market creates but cannot solve; (2) those which can be solved with market adjustments; and (3) those originating outside the market. "Where resource ownership is inappropriately distributed, the solution may be a redistribution of such resource (e.g., land) which hurts some in order to benefit others. In other instances, economies are simply out of economic adjustment and the resultant 'problems' can be solved by mutually advantageous (pareto-optimal) trades among producers and consumers" (Johnson, 1976).

Market solutions are the results of private decision-making, whereas nonmarket solutions emanate from public (or governmental) decision-making. Nevertheless, both types of solutions have economic and social significance.

In modeling the domain of the problem, it is again necessary for analysts to be economically efficient. This means that "refinement of the model must be carried out only to a degree that would equate the refinement's marginal returns with marginal costs" (Johnson and Rossmiller, 1978).

The fourth function in the decision-making process is the rendering of the decision. A decision is a prescription of "what ought to be done"

to solve a problem. As such, "it is a function of both positive and normative knowledge, the functional relationship being the decision rule or strategy" (Johnson, 1976). In other words, "the analysis and synthesis of the relevant theories, data and information are translated into a prescription for action to solve the specific problem at hand" (Johnson and Rossmiller, 1978).

"The decision may maximize in the sense that it might indicate which open course of action is 'the best' or, perhaps, 'the least bad' to take" (Johnson and Rossmiller, 1978, pp. 35-36). However, incorporation of a maximization component in problem-solving model presumes that (1) the positive constraints and consequences of alternative solutions, and (2) the four normative preconditions for maximization, have already been established. The latter include: (1) a normative common denominator (NCD) of all goods and bads encountered in connection with the problem, this NCD being necessary before maximization is mathematically (logically) possible; (2) an interpersonally-valid NCD (INCD), if the decision will hurt some in order to benefit others (e.g., land reform); (3) the second-order conditions mathematically necessary to assure the existence of a maximum in the NCD or INCD; and (4) agreement on the decision rule to use (Johnson, 1976).

Until these premaximization conditions are satisfied, maximization cannot be reliable. These normative preconditions for maximization tend to be established through iterative interaction among decision makers, analysts, and affected persons" (Johnson, 1976).

The output of a decision unit, therefore, is a prescription based on: (1) many kinds of positive and normative information both empirical

and analytic; (2) adaptive⁵ attempts to find a moderately-usable INCD for measuring both monetary and nonmonetary costs imposed, and benefits conferred, on different people; and (3) adaptive attempts to arrange alternative acts in the order of their decreasing advantage as determined by an iteratively-sought decision rule (Johnson, 1976).

The formal analytical components of the problem-solving model need not contain a maximization component, however, particularly if the decision maker is willing to serve in that capacity as part of the total model. Even when the model of a problem domain has a maximizing component, the real decision maker is likely to reserve the right to override the dictates of such a component in making his decision (Johnson and Ross-miller, 1978, p. 36).

The fifth function in the decision-making process is execution or action to implement the decision.

The ability of the decision maker to implement his decisions affects the detail with which it pays to model or conceptualize a problem and its solution. A so-called solution that cannot be implemented is not a solution (Johnson and Ross-miller, 1978, p. 36).

Thus,

. . . the roles of control and power in execution are important from the standpoint of executive efficiency. If complete objectivity with respect to normative, positive, and prescriptive knowledge could be reached, there would be consensus and there would be no need for power and control to enforce decisions which damage some in order to benefit others. However, complete objectivity--i.e., agreement on positive and normative information, the preconditions for maximization including a decision rule, and on the prescription--is so expensive that it is typically uneconomic. In the absence of complete objectivity, use of force--military, political, administrative, social, market power based on property ownership, religious--is necessary to executive decisions (Johnson, 1976).

According to Johnson (1976),

Imperfect knowledge and the need for executive power seem to be universal. Market decisions rest on political covenants which preserve the ownership of certain 'rights' (and privileges) as private property. Non-market adjustments (e.g., land

⁵That is, iterative and interactive with people.

reform) are based on other similar covenants or distributions of power among military and police officials, party members, civilian administrators and politicians.

When the ownership of power and control is uncertain, there is a danger of conflict from challenges which lead to tests of power on the field of battle, in the market, between personalities, or in such political arenas as the national, local, bureaucratic, academic, corporate, tribal, and familial (household and/or firm). On the other hand, the ownership of power and control may be so definite that no challenge or conflict is possible and problems involving concentration of power go so long unattended that eventual change becomes catastrophic.

The last step in the decision-making process for problem solving is responsibility bearing. Johnson asserts that responsibility is borne by decision makers, action takers, and affected persons. "The consequences of actions, whether normative or positive, need to be monitored for use in defining and solving the problems which emerge as the affairs of an entity are managed adaptively through time" (Johnson, 1976). It is therefore, important that

. . . those who bear the consequences of actions have the power to originate and transmit feedback messages and to participate in decision-making. The extent to which decision makers bear responsibility, monitor consequences, and are required to receive feedback messages partially determine their participation in observation and analysis of the domain of a problem and in deciding upon its solution (Johnson and Rossmiller, 1978, p. 36).

The General System Simulation Approach⁶

Theory

This approach is viewed as a

flexible, iterative, problem-investigation process that includes problem formulation, mathematical modeling, testing and refinement of the model and problem solution in close

⁶Adapted from Manetsch, et al. (1971); and Johnson and Rossmiller (1978).

consultation with decision makers. It is flexible with respect to: (1) types and sources of data; (2) estimation and approximation procedures; and (3) techniques. All specialized techniques are regarded as potential contributors to the approach if, when, and as appropriate. Included are linear programming (LP), nonlinear programming (NLP), equilibrium simultaneous equations with parameters estimated statistically from time series data; input/output table analyses; cost/benefit, internal rate of returns and net present value analyses; other techniques such as program planning and budgeting (PPB) and project evaluation and review techniques (PERT) and still other unnamed techniques. The approach is a process involving creative design of alternative courses of action to help provide solutions to the development problems at policy, program, and project levels. These problems and alternatives partially determine the model structure and level of aggregation (Manetsch, et al., 1971).

The process is conceptualized in Figure 7. As the arrow indicate, the process is iterative or "learning" in nature.

Prior stages are often repeated on the basis of information acquired during a subsequent stage; that is, the approach explicitly recognizes the feedback nature of the problem investigation procedure and can accommodate the learning and knowledge accumulation likely to take place at any stage in the process. The flexibility of this approach allows for: (1) sequential changes in model structure, parameters and objectives, leading to better models with a broader range of outputs; and (2) utilization of any appropriate technique. The output of a simulation is a set of system performance variables associated with each set of various benefits and various damages (at different points in time) from alternative policies, programs and projects. These estimates can be compared with different alternatives through interaction with policymakers in the process of choosing the alternative which best solves the problem under consideration (Manetsch, et al., 1971).

The general system simulation approach (GSSA) involves both the administrative and investigative sides of a country's decision-making capacity. It facilitates and depends on strong and continuous interaction among administrators, investigators and affected people as participants in the decision-making process. It is eclectic with respect to philosophies, data and information sources and types, model types, the use and non-use of various maximizing techniques and assumptions, and dimensions. Its eclecticism approaches the institutional eclecticism of decision makers, thus facilitating their participation in application of the approach. With decision maker participation throughout the process, including the

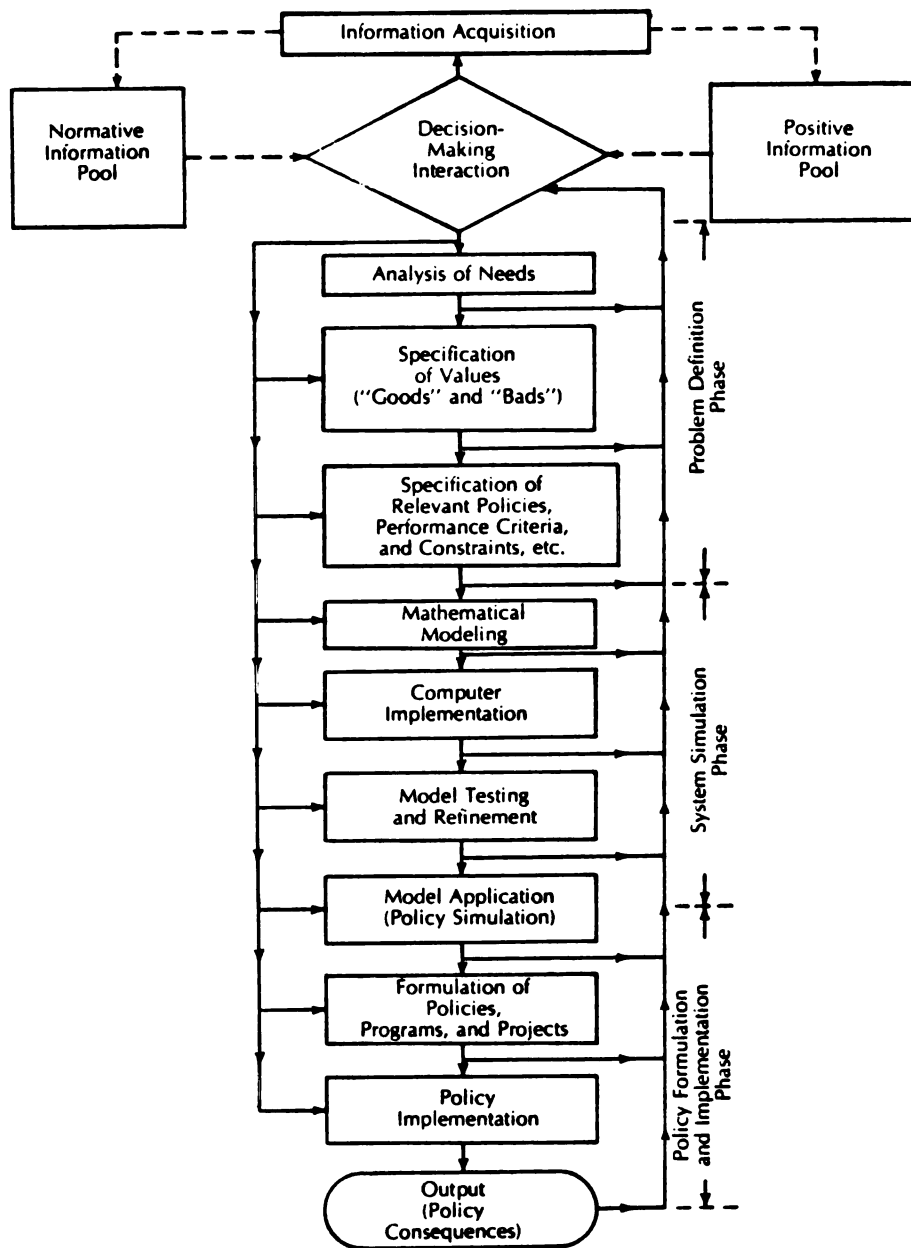


Figure 7. System Simulation and the Decision-Making Process
(Source: Johnson and Rossmiller, 1978, Figure 10, p. 48)

application of the tests of coherence, correspondence, clarity and workability, the formal models can become institutionalized directly into the decision structure as part of the investigative capacity. Hence, the credibility gap often observed among decision makers, professional analysts, and modelers is greatly diminished (Johnson and Rossmiller, 1978).

Applications in Agricultural Sector Development Decision-Making

Applications of the general system simulation approach in agricultural sector development decision-making are exemplified in Manetsch and others (1971), Rossmiller and others (1972), and Rossmiller (1978). However, the models developed in these works do not include explicit treatment of deliberate income distribution policies such as property-rights redistribution typical in agrarian reforms.

Application in the Analysis of Income Distribution, Economic Growth and Land Reform

An attempt to incorporate the income-distribution aspect in a simulation model was made by Kim (1975) for Korea, although it was not carried out in elaborate enough detail to permit experimentation with land reform policies. On the other hand, Hoque (1977) succeeded in incorporating land reform as a policy variable in his simulation model for Bangladesh agriculture. He did policy experiments with the model in the context of regional planning under a so-called integrated rural development program. Also, Byerlee (1973) used the Nigerian simulation model to study income distribution in Nigeria.

Analytical Framework for the Study of Agrarian Reform Policy Decision-Making in the Philippines

A Feedback Control System Model

From the foregoing theories, agrarian reform policy decision-making in the Philippines can be viewed as a feedback control system. Figure 8

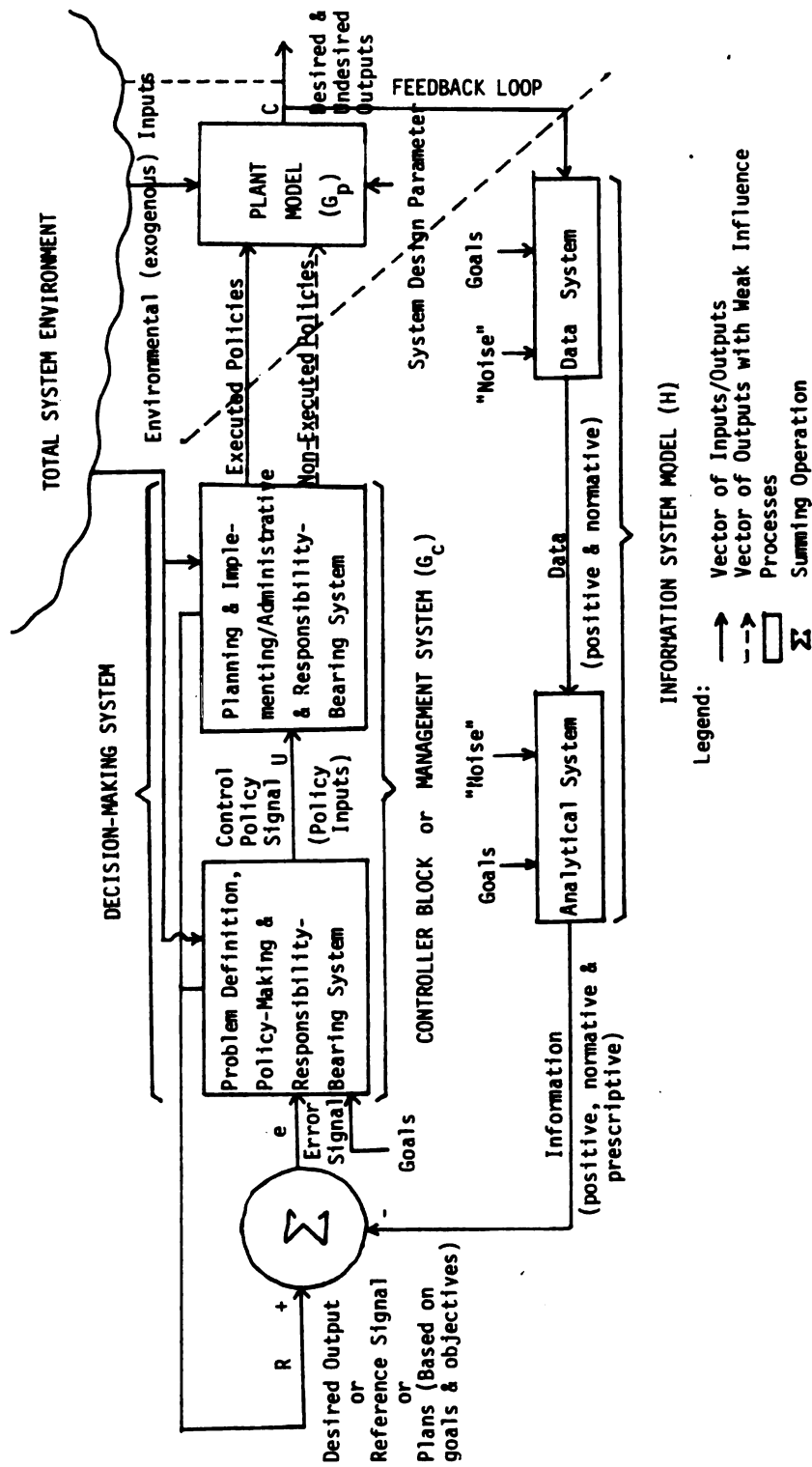


Figure 8. A Feedback Control System Model of Agrarian Reform Policy Decision-Making

is a model of such a system based on an elaboration of the model of Manetsch and Park (Figure 2). This model constitutes the broad analytical framework of this study. Its various components, relevant inputs and outputs and other system characteristics are described.

Identification of the Total System

In modeling a system, the first step a systems analyst takes is to conduct a system identification. This involves delineating what is part of the system and what is not. Anything outside of the system constitutes the system environment.

A whole system may be broken down into a network of various interconnected components. The interlinkages of these components are by means of their inputs and outputs, that is, the output(s) of one component is (are) the input(s) of another component. A component of a system may be further broken down into sub-components which, again are interconnected or interlinked with each other through their inputs and outputs.

Basically, the model is theorized as composed of three components, namely: (1) management; (2) plant; and (3) information. The management component can further be broken down into two sub-components, namely: (1) policy-making; and (2) planning and implementing/administrative. Likewise, the plant component is thought to be composed of sub-components which, for the purpose of this study, need not be fully identified. One merely enumerates them as agrarian-based economic, socio-cultural and political sub-components. Similarly, the information component breaks down into three sub-components: (1) data; (2) analytical; and (3) decision-making. What is peculiar in the way the information component is viewed is that its last sub-component, i.e., decision-making, is

actually the management component described above. In other words, the management component is merely re-labeled as the decision-making sub-component of the information component (Figure 8). The specific descriptions below will further clarify this point.

Management Component

In the overall context of the feedback control system, the management component is synonymous with what systems analysts usually refer to as the "Controller Block" (Figure 2). It is the component of the system that provides control to the "plant". The manager can influence the output of the plant by varying the level and timing of the plant's inputs which are under his control (i.e., controllable inputs). These inputs are in the form of men, money, materials and information.

However, there are inputs which have to be provided to keep the plant operating but whose level of timing are considered by the manager to be, for the time being, irrelevant in influencing the plant's outputs. These are the non-controllable overt inputs.

A final category of inputs are those which impinge upon the plant from the system environment whether the manager likes it or not; he simply has no control over their occurrence. These are the environmental (exogenous) inputs.

In this study, the concern is not so much with the actual inputs, like men and materials, which management applies to the plant, as it is with the "policy" or the settled course of action (or strategy) adopted by the management--determining the kind, level, mix and timing of these controllable inputs--which depend on the information which management receives from the information system.

Another concern in this study is the system design parameters which management's policy can also change but only over the long run, again, affecting the performance of the system. This contrasts with management's basically short run manipulations of the controllable inputs.

A separate section below is devoted to a more specific discussion of the various policy inputs.

Policy-Making Sub-Component

This sub-component of management circumscribes those processes having to do with problem definition, policy-making, and responsibility bearing. The manager defines problems on the basis of both his/her positive and normative knowledge about the plant's processes, environment, inputs and outputs. Such knowledge may be partly or wholly contributed by the information system (Figure 8).

Policies are management's decisions on "what ought to be done" so that problems affecting the plant's outputs can forthwith be solved. This means bringing the plant's outputs to the quantitative and qualitative level that management wants to achieve, given its goals and objectives. The issuance of policies is an indication that management has decided how things must be done. However, whether or not things do get done according to policies is another question, for policies have to be implemented before their intended results can be achieved. In both private and public organizations, policies formulated by the policy-making body are handed to executives for implementation. The policy outputs of the policy-making sub-component pass on as inputs to the planning and implementing sub-component (Figure 8).

Planning and Implementing Sub-Component

This sub-component encompasses all those processes which translate expressed policies into actuality. Again, whether in private or public organization, putting policies into effect involves an important first step, planning. A plan guides the executive in actually allocating men, money, materials, time and information as inputs into the plant in order to achieve the objectives set forth by policy.

However, somewhere along the time path of implementation some policies actually become implemented while others remain partly, if not wholly, unimplemented. Whatever the final result at the time of the evaluation of the policy implementation, the final outcome is the responsibility of the executives or administrators. They have to bear the responsibility for both the implementation and non-implementation of their policies. In the private sector, failure to implement a policy may cost a manager his/her job. In the public sector, at least in a democratic society, ultimately both policymakers and implementors are accountable to the public for the decisions and actions they take. The costs of bad or wrong decisions and actions could be losing a promotion, a job, an election or even impeachment from one's position.

Plant Component

From the standpoint of the whole feedback control system, the plant component may be considered as the main body of the system. It is this component which produces the system outputs. Without the plant, there is no justification for the existence of the management component (which is instituted precisely to control the plant) and the information component (which is a mechanism created by management as a means of getting

information feedback on the plant's outputs and for analyzing political options).

The plant cannot be under complete control by the management, however, if one or more of the inputs influencing the outputs of the plant cannot be subjected to management's control. Thus, for example, complete controllability is normally easier to achieve in an industrial manufacturing operation than in agricultural production processes since the latter involve a number of environmental (exogenous) inputs such as weather, pests and diseases, world market prices, etc., which are not completely under the control of the manager (Figure 8).

System Environment

The system environment is not a component of the system. However, it must be specified since it is the source of environmental (exogenous) inputs that affect both the plant and management (Figure 8). The plant's outputs, in turn, affect the system environment, although by convention they are considered to do so only weakly. Otherwise, a strong effect would clearly indicate that a component of the system is included in the environment. Such component would therefore need to be separated out from the environment for inclusion as an additional component of the whole system. Once fully identified, the plant can now be seen as clearly delineated or set apart from its environment.

Information Component

In any real-world system where a management component is instituted to provide direction to the plant's operation, the manager tries to find a way by which to obtain feedback information about the plant's outputs. Only when such information is available can the manager determine the

plant's response to his/her control policy and thus be guided accordingly in his/her controlling function. Differential attempts by different management systems to acquire such information result, depending on the technology at their disposal, in information systems which are at various stages of development. The most advanced of these systems may be currently characterized by the use of sophisticated electronic computers which could provide a manager, at the push of a button, with the necessary information either visually (e.g., tabular or graphic display) or in audio or both; and in one- or two-way communication. The least developed counterpart may be one in which many relevant data about the plant's output are not being gathered at all, thereby creating serious data gaps. Or even if these relevant data are gathered, a long time delay may intervene before the information finally reaches the manager by which time the information may already be obsolete or outdated.

Irrespective of their level of development, information systems possess three common and basic elements--data, analytical and decision components. If viewed separately as consisting only of data and analytical components, and isolated from the feedback control system, it would appear incomplete in that there is no "user" for which the system was supposedly designed (Figure 8). To have a complete picture of an information system, therefore, one must include the management component, herein re-labeled as the decision-making component (Figures 8 and 9). This third component makes information systems teleological in design; they are created for specific purposes (Bonnen, 1975 and 1977; Riemen-schneider, 1977). These purposes are those of the decision makers in the management system.

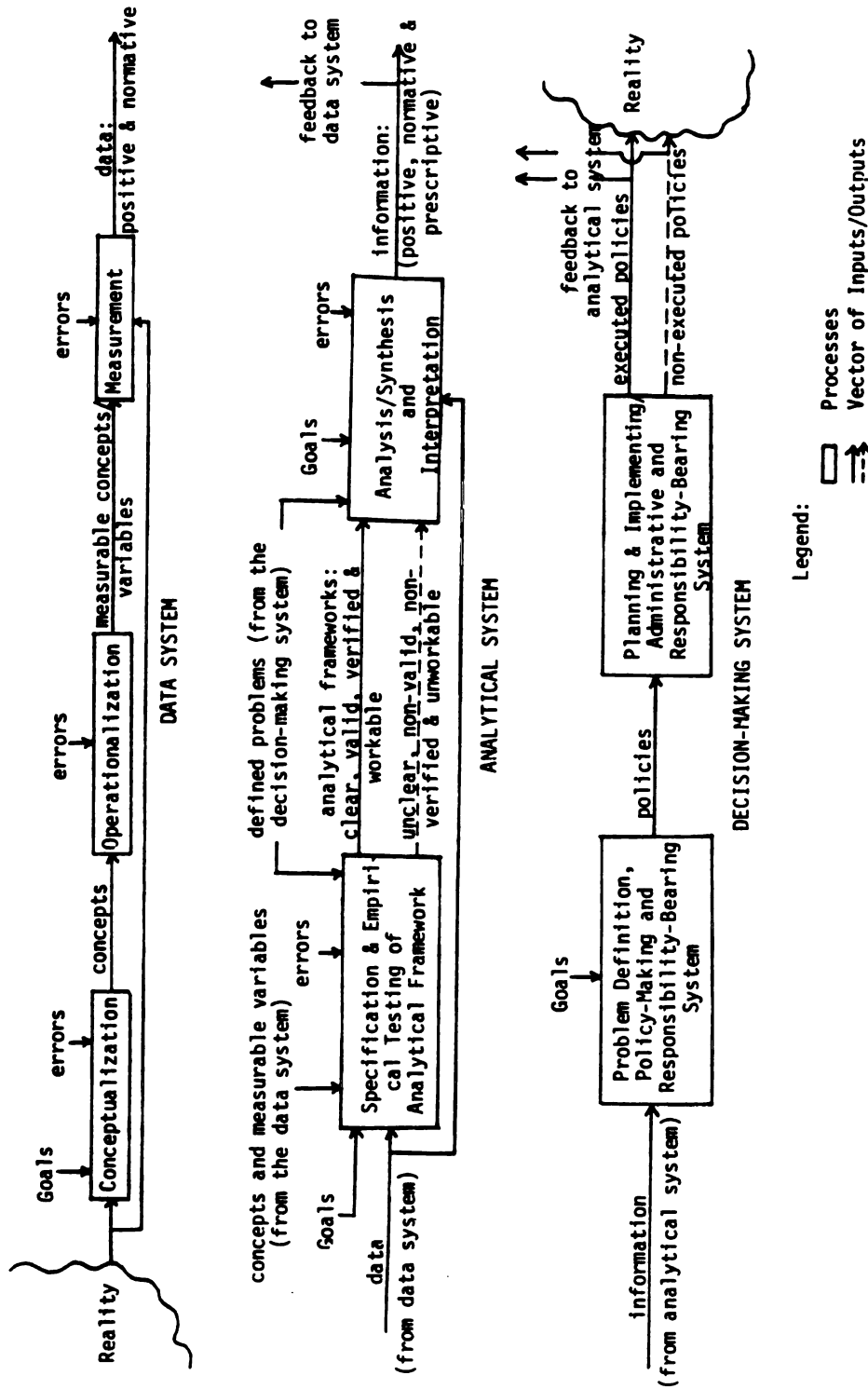


Figure 9. A Generalized Information System Model

Data System

The information system in Figure 8 is reconstructed and generalized in Figure 9. Thus, the plant and its desired and undesired outputs in the former figure can be simply imagined as forming part of "reality" in the latter figure, which presents in more detail the various components of the data and analytical systems.

The data system is the data-generating component of an information system. Its outputs are positive and/or normative data--not information-- which are disseminated or stored in various kinds of media (e.g., paper print, computer cards, tape or disk and people's heads). Its components, following Bonnen's paradigm, consist of: (1) conceptualization; (2) operationalization; and (3) measurement. Bringing together Figures 8 and 9, it may be noted that the plant's outputs, like other complex aspects of reality, have to be ordered and simplified (i.e., categorized and conceptualized) in some fashion so that they can be grasped by the human mind. Conceptualization of reality is always dictated by the purposes or goals for which the data eventually generated are to be used. However, since concepts are abstract ideas not directly measurable, they have to be made operational by being defined in a manner that will permit measurement. In each of these three successive processes to produce data, errors (or "noise") could be generated along the way. These are respectively designated as: (1) conceptual error; (2) operationalization error and (3) measurement error (synonymous with statistical error represented by such statistics as standard deviation or coefficient of variation).

Analytical System

The analytical component of the theorized information system is divided into two sub-components: (1) specification and testing of analytical frameworks; and (2) analysis/synthesis and interpretation (Figure 9). Data generated by the data system serve as inputs to the analytical system which in turn processes these data into information (Bonnen, 1975).

The first sub-component involves the processes of specification and empirical testing or verification of various analytical frameworks or theories from one or several disciplines. Such testing constitutes one of the essential steps of the scientific method (Kemeny, 1961; Johnson, 1977). It is a procedure common to all scientific research regardless of discipline. Oftentimes, analysts have become so used to the routine tests of hypotheses that they go about it without being on guard for the possible presence of both conceptual and operational errors in the data they are using. They conventionally are concerned with measurement or statistical error.

What is given here is the ideal empirical testing of theory which begins with the specification of the variables in the analytical framework or model. Assuming that the analyst does not himself generate the data against which the theory's validity will be tested, he would need to compare his model variables with those in the data source (i.e., data system in Figure 9) and see whether the two sets coincide in their definitions. If they do not, the analyst runs the risk of operationalization error. The outputs of this sub-component are the empirically-tested analytical frameworks which are (1) clear (or unclear), (2) valid

(or non-valid), (3) verified (or non-verified) and (4) workable (or unworkable).⁷

Ideally, only the empirically-tested analytical framework that is found to be valid and verified can be accepted as an input into the second sub-component--analysis/synthesis and interpretation. In this sub-component, the empirically-tested, valid and verified analytical framework (model or theory) is used to analyze the data (from the data system) which may have been used also in the empirical-testing process. Both the analysis and interpretation of the data, when done in a decision-making context (i.e., when used by decision makers), result in information. This information can be positive, normative and/or prescriptive (Figure 9). Note that errors (or noise) can also arise from the analytical system (e.g., wrongly-specified model and wrong interpretations) such that no matter how good the quality of the data, information derived from them could still be incorrect and, hence, unreliable.

Decision-Making System

This sub-component corresponds exactly to the management system described earlier.

⁷In order for analytical frameworks or models to gain sufficient credibility and acceptance by decision makers (and, thus, become useful for problem-solving purposes), they must pass four tests, as follows: (1) clarity--the model's concepts and theories must be explainable and understandable to those who use them; they must be clear and unambiguous; (2) validation or test of coherence--the concept, theory or model must have internal logical consistency; (3) verification or test of correspondence--the concept or model must have the ability to reflect accurately the real-world situation or phenomenon it is intended to represent through its capacity to track historical data and to project accurately the behavior of important variables of a system into the future; and (4) workability--this test of the model's prescriptive ability requires that prescriptions based on the model help solve problems of real-world decision makers (Johnson and Rossmiller, 1978, pp. 49-51).

Policy Inputs

With reference to the management component in Figure 8, policy inputs are control signals which the policy-making sub-component transmits to the implementing sub-component. They are designed to "steer" the plant's outputs along a desired course or reference path. The policy inputs influence the plant outputs insofar as they affect two types of policy variables, namely: (1) controllable inputs (short-run control instruments); and (2) system design parameters (long-run control instruments).

Over the short-run time frame, i.e., given that the system is already in place (and, hence, the system design parameters have already been fixed), the only inputs that policies could affect are the controllable inputs. In this case, the structure and processes in the plant remain basically the same throughout the short time period.

From the long-run viewpoint, however, a relaxed time constraint permits policymakers to make adjustments in the plant's structure and processes. It now becomes possible to redesign the plant itself by changing the system design parameters.

Moreover, both short-run and long-run adjustments could take place simultaneously in a dynamic framework. For example, while the plant is going through a redesigning phase, there may be regularly recurring (e.g., every year) "fine tuning" necessary to keep the plant's output through time on the desired track. This short-run fine tuning is achieved through the manipulation of the controllable inputs by way of policy guidance.

Program Outputs and Performance Variables

In this theorized feedback control system model, the Philippine agrarian reform program is viewed as having a "plant" system or model

which generates both desired and undesired outputs. The desirability or undesirability of the plant's outputs depends on societal values or preferences. Programs such as agrarian reform are designed to achieve objectives which reflect the constellation of values held by a given society. These objectives indicate what outputs society wants to achieve (e.g., income, employment) and what outputs society wants to avoid (e.g., violent social conflict, environmental pollution).

Performance variables are the plant's outputs (desired or undesired) which are periodically (e.g., annually) accounted for as a basis for project, program, or policy evaluation and monitoring. These, therefore, are the relevant indicators that planners, policymakers and executives of, say, a private manufacturing corporation or a public department or ministry, want to see indicated in their periodic reports.

Processes and Entities in Each Component

The foregoing discussion on the theorized feedback control system has been mainly confined to the various components making up the whole system and to the general processes involved in each component, including their inputs and outputs. The present section elaborates on the processes involved in each component, identifying the entities (i.e., persons or organizations) that comprise them.

Policy-Making Sub-Component

As mentioned earlier, this sub-component encompasses the processes of problem definition, policy-making and responsibility bearing (Figure 8)--three of the six behavioral steps in a rational decision-making process (Johnson, 1976; Figure 5).

In the public policy-making process, especially of the democratic and participative type, several policy-making participants can be identified. They may be grouped into: (1) public participants or actors; and (2) private interest groups or actors.

Public Participants or Actors

These are government officials representing any of the subdivisions of the three usual branches of government, namely: (1) executive; (2) legislative; and (3) judicial. These officials have authority and jurisdiction in determining policies which affect the programs and projects of various bureaus, departments or ministries, and ultimately the greater public.

Private Interest Groups or Actors

Policy-making participants from the private (or non-governmental) sector can be divided into: (1) target groups; and (2) non-target groups.

The target groups are those segments of the population who are the main objects of policy; policies are designed primarily to affect them whether favorably or unfavorably. An example would be the tenants and landlords in an agrarian reform program.

The non-target groups are segments of the population who are not the main objects of policy, but whose lives or interests may also be indirectly affected by whatever changes in society a policy might bring about. Again, in an agrarian reform program, an example would be the mass media; rural bankers or merchants; church groups; etc.

Planning and Implementing Sub-Component

This covers the processes of planning, implementation/execution and responsibility bearing--processes which are also part of the six behavioral steps in a rational decision-making process (Johnson, 1976). Policy decisions reached in the policy-making sub-component are acted on or implemented in this sub-component.

The planning and implementing processes for public programs like agrarian reform are usually carried out by the government agencies charged with the planning and implementing functions for the program.

However, most governments now recognize the importance of private-sector participation in both the planning and implementing processes. Private individuals, groups or their representatives are therefore being increasingly drawn into various facets of planning and implementation.

The implementing government bureaucracy in the Philippines is structured to have a national (or central) level administration, with subdivisions spread throughout the various regions of the country. This structure accordingly facilitates local-level planning and implementation and broadens grassroots participation.

Plant Component

The processes that take place in the plant component are those which produce the plant outputs and use resource inputs of men, money, materials, time and information. With reference to the Philippine agrarian reform program, the plant conceivably includes all those tenanted farms as well as resettlement areas that fall under the coverage of the program including the farmers, landowners, and various other personalities in the infrastructural and supporting services institutions (e.g., credit, marketing, extension, physical and social infrastructures).

System Environment

While not a component part of the whole feedback control system, the system environment has, by itself, processes which generate outputs that impinge upon the plant and management components as environmental (or exogenous) variables. The environmental processes could be within the country (e.g., domestic weather conditions) or in the rest of the world (e.g., a bumper crop of sugarcane in Cuba and other sugar-producing countries could depress world price of sugar and affect Philippine sugar producers).

Data System

As explained earlier, the data system is the data-generating component of an information system. It may be either (1) public or (2) private.

Analytical System

As described earlier, the analytical system is that component of the information system which processes data (from the data system) into processed data and ultimately into information on which decisions depend. Its entities can likewise be divided into (1) public and (2) private.

Dynamic Interactions Among System Components

Taking the feedback control system as a whole (including the entities that are involved in each of its several components) in a real-world setting, interactions among the system components take place continuously over time in an iterative and interactive fashion in a decision-making context (Johnson and Rossmiller, 1978). Thus, as reality changes, partly because of the impact of executed policies, the management

component may initiate a change in the data system because the problems and issues to be addressed concerning the plant have changed, sometimes drastically.

Focus of the Study

To fulfill the objectives cited in Chapter 1, and considering time and other limitations, this study is focused on the management and information components of the feedback-control-system model of agrarian reform policy decision-making described above. Additionally, the program's policy inputs, outputs, and performance variables were also identified.

CHAPTER 3

RESEARCH PROCEDURE

Rationale, Objectives and Design of the Survey

This section describes both the planned and actual research procedures for meeting the objectives of this study listed in Chapter 1. The first part of this chapter explains the rationale, objectives and design of the survey conducted among agrarian reform policy-making participants in the Philippines. The second part is a discussion of the techniques of non-participant observation and the collection of data from both primary and secondary sources which were employed to supplement the survey data. Finally, the analysis and synthesis of these data are described.

Rationale and Objectives

The survey design assumes that public decision-making concerning the agrarian problems of the Philippines is a rational process. Within the context of Philippine agrarian problems and Agrarian Reform Program, the survey was designed to determine empirically the units or entities involved in the decision processes. Essentially, the task was to identify the policymakers, implementors, analysts/investigators/researchers and affected persons or parties, who collectively constitute the decision structure.

Then, through intensive interviews with policy-making participants, the survey attempted to determine: (1) priority problems and issues on

agrarian reform, both at present and in the future; (2) normative and positive information used/needed to define and solve both present and future problems and issues; and (3) availability, timeliness, accuracy, consistency, and adequacy of the information.

Finally, the survey sought to examine the linkages and interactions among the various components and subcomponents of the information system as well as the dynamic interrelationships among policy-making participants as they assume their roles in the various components of the information system.

Population and Relevant Stratification

Population

The population covered in the survey consists of persons and/or individual representatives of organizations who were the direct or indirect participants in the agrarian reform decision-making process (the six steps in Figure 5) under martial law. Individuals representing organizations include participants in the formulation of PD 2, PD 27 and succeeding agrarian reform policies enunciated during martial law. The rest are individual citizens acting independently in pursuit of their self-interests.

Stratification of Participants in the Policy-making Process

The participants can be categorized in several ways. In terms of their roles in the policy-making process of the feedback control system, they are as follows: (1) policymakers; (2) implementors/administrators; (3) analysts/investigators/researchers; (4) statisticians; (5) affected Parties (e.g., tenants and landlords); and (6) other interest groups (e.g., mass media, political parties, etc.).

Modifications Made in the Field

Among the difficulties encountered in designing research away from the operating system to be studied, was the inaccessibility of up-to-date data and information on which to base decisions to narrow the research focus, delineate the relevant population, and prepare the sampling frame. All that could be done in East Lansing initially was to plan in general terms. Once in the Philippines for the fieldwork, it became possible to make the necessary adjustments to the research design, particularly in scope of the study, in specifying the relevant population and in sampling procedure.

Scope of the Study

The decision to focus the scope of the study on land tenure improvement was made in consideration of the fact that, given the program's broad thrusts and the researcher's time and funding constraints, it was virtually impossible to accomplish a study of the entire agrarian reform program. An equally significant consideration also surfaced during consultations with knowledgeable informants. It became apparent to the researcher that policy issues relating to land tenure or property rights were still largely unresolved. At the same time, there was a general realization among persons consulted that the effective implementation of the program closely depended on the clarification of the same policy issues.

The analytical framework discussed in Chapter 2 (Figure 8) specifies that, in the decision-making component, the outputs of the first sub-component are policies which serve as inputs into the implementation/administrative sub-component. Many policies relating to agrarian reform

have been issued since the declaration of martial law on September 21, 1972, but the Presidential Decree (PD) on agrarian reform for which other PDs provide support is PD 27, or the Tenant Emancipation Decree. This researcher therefore selected PD 27 as a reference point from which to gain understanding of the decision-making structures and processes and the input/output linkages of the information-system components. Specifically, the policy-making process chosen for this study was the formulation of PD 27.

Operation Land Transfer (OLT), the strategy to implement PD 27 and the supporting decrees that were subsequently issued, provide the next sub-component, that is, the implementing sub-component. OLT then became the appropriate focus of this study for understanding the process of implementing PD 27. The outputs expected from this process are the executed or non-executed policies which constitute inputs to the plant (Figure 8).

The initial plan was to achieve a spatial stratification by selecting Regions 3 and 8, where implementation of land tenure improvement could be observed at the regional, district, and team levels. However, it later proved impossible to cover both regions in view of time, manpower, and logistical constraints. Region 8 (Leyte) was the study area finally selected since: (1) the MAR had chosen this region as the pilot area for implementing the automated data system for OLT; and (2) the timing of the pilot implementation offered the researcher a chance to observe at first-hand how data-gathering is conducted in the field. The coverage of the information-system study then is confined to the data and analytical systems on land tenure improvement, or more specifically, systems relating to PD 27 formulation and OLT (Figure 8).

Relevant Populations

Under the reduced scope of this study, the relevant population was divided into four sets as follows: (1) policy-making participants in the formulation of PD 27; (2) implementors of OLT at the local level; (3) entities involved with the data and analytical systems on land tenure improvement (i.e., PD 27 formulation and OLT); and (4) affected parties or target groups and other interest groups (non-target groups) of the land tenure improvement component of the agrarian reform program.

Samples

Altogether, four sets of purposive samples from the four populations were obtained, with each set designed for a given purpose as described below:

Set 1. Purposive sample of policy-making participants who formulated PD 27 in order to develop a case study of the policy-making process centered on the formulation of PD 27 (cf. Figure 8);

Set 2. Purposive sample of OLT implementors in Region 8 in order to develop a case study of the process of OLT implementation;

Set 3. Purposive sample of entities involved with the data and analytical systems of PD 27 and OLT in order to develop a case study of the processes in the data and analytical systems relative to PD 27 and OLT; and

Set 4. Purposive sample of affected parties and other interest groups with respect to land tenure improvement in order to study the participation of target and non-target groups in the policy-making process (e.g., as sources of feedback information) and implementation.

The composition and sizes of these four sets of purposive samples are shown in Appendix A.

Sampling Procedure

To draw a sample, one must have a sampling frame. To construct a frame, one needs to define and delineate the population. However, constructing the sampling frame for each set was a problem because one faced the dilemma of not being able to identify all of the sampling units that made up each set. Under this circumstance, purposive sampling of the key sampling units in each population set was considered the appropriate sampling technique.

Purposive Sampling of Core Policy-making Participants

It was decided that the only means of identifying participants would be to ask directly those persons who were actually involved in the policy-making process. This procedure parallels the reputational panel approach used elsewhere in a sociological study of Filipino technocrats (Arcega, 1976).

The sampling procedure using this approach ideally consists of the following steps:

1. Formation of the reputational panel;
2. Getting nominations from all the panel members of persons whom they believe belong to a specific population; and
3. Drawing a sample from the completed list of the population.

In the study reported here, certain modifications had to be made, however. It was recognized that the formation of a reputational panel, as well as getting their nominations, are time-consuming steps. If these steps had to be undertaken prior to sampling and the actual interviews, considerable time would be needed, particularly in a situation where it

is difficult to set up appointments with the prospective panel members, and even more so with the nominated units of the population.

The modified method used in this study involved the following:

1. A top-level executive of the MAR, whom the researcher knew from previous association to have participated in the formulation of PD 27, was picked as already constituting part of the would-be purposive sample for the case study on PD 27 formulation. An in-depth interview was made with this respondent. He was asked to name other persons who participated in PD 27.
2. Each of those participants mentioned by the first informant was contacted, and once a nominated participant was verified as an actual participant, an in-depth interview was made. So, from the information given by the first informant, second, third, fourth, etc., participants were identified. In turn, these succeeding informants were each asked to name those whom they remembered to have participated in the policy-making process.

For various reasons, some participants could not be contacted for an interview, but when the whole sequence of listing and contacting of informants was completed, a good cross-check of the names of the participants was achieved. Participants whose actual participation were confirmed by at least two persons were considered to be members of the population of policy-making participants who formulated PD 27.

There were names mentioned which were not cross-checked in this sequential process, however. Using the above criteria, they were dropped from the list, leaving what may be called the "core policy-making participants". Because of this, one cannot claim that the derived list of the population is an exhaustive one. There still remains the possibility that some members of the population may have been left out. The probability of their being central to the formulation of PD 27 is very low, however.

Purposive Sampling of OLT Planners and Implementors

The population of implementors of interest to this study were those involved in implementing OLT in Region 8, particularly in the pilot area of Santa Fe.

Time, budgetary, and other constraints made it necessary that the purposive sampling select only those higher-level executives (e.g., director of a bureau) in a given coordinating agency who were in a position to give a description and assessment of the implementation process. Nevertheless, as one moved from the central to the regional, district and team levels of administration, purposive samples were sought of implementors with actual field experience in OLT implementation and who were still involved in the same implementation process.

Purposive Sampling of Persons and/or Institutions Involved with the Data and Analytical Systems of PD 27 and OLT

The persons and/or institutions involved in PD 27 formulation as sources or providers of information for the policy-making process, were identified in interviews with the policy-making participants. Identifying the OLT data and analytical systems was not as difficult since the core of the system was well established and headquartered in the Center for Operation Land Transfer (COLT) of the MAR. Other supporting units of the data and analytical systems located outside the MAR, however, required far more legwork before they could be delineated. Of the units that make up the OLT data and analytical systems, the purposive sample drawn was similarly limited to top-level administrators who were themselves statisticians or analysts.

Purposive Sampling of Affected Parties and Other Interest Groups

The target groups of the land tenure improvement component of the agrarian reform program are the tenants and their landlords under the coverage of PD Nos. 2, 27, and other succeeding policies. The non-target groups include such interest groups as the mass media, religious and civic organizations, political parties, etc.

Tenants are organized into three main farmer organizations: (1) Federation of Free Farmers (FFF); (2) Federation of Land Reform Farmers (FLRF); and (3) Foundation of Agricultural and Industrial Toiling Hands (FAITH). Landlords also have their own organizations in certain parts of the country.

The government-directed cooperatives program also provides an avenue for tenants to work together for a common purpose through the Samahang Nayan (Barrio Association) or Kilusang Bayan (full-fledged cooperatives). However, membership in the cooperative is not limited to tenants. A landowner can likewise be a member. In this study, it was possible to draw purposive samples only from the farmer organizations and Samahang Nayan because of time, budgetary and other constraints.

Survey Scheme

The survey was done in a logical sequence following the linkages theorized in the information system model. The model conceives of the information system as composed of three components as in Figure 10. These components are linked with each other in that the output from one component becomes the input to another.

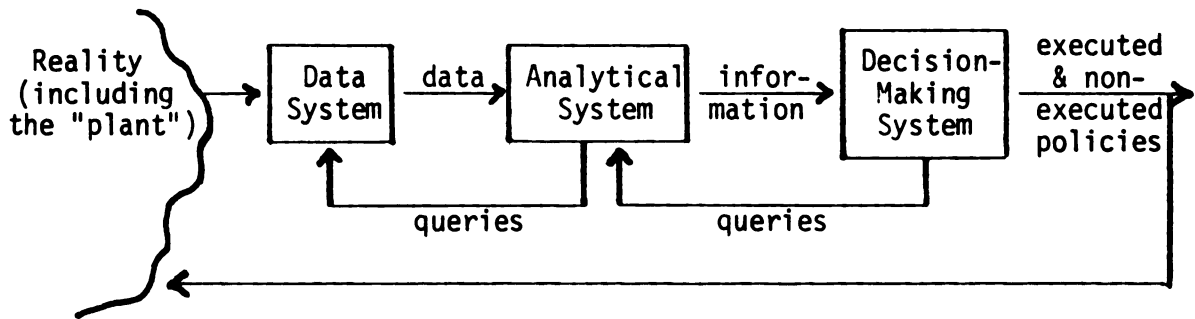


Figure 10. An Information System

Following the theory of information systems, which says that the specification of information design arises out of usage, the first set of respondents interviewed were policymakers who participated in the formulation of PD 27. The in-depth interview was designed to determine, among others, the policymakers' sources of information in making specific policy decisions.¹ The idea applied was that the input (information) used by the decision maker is the output of the analytical system (Figure 10). The policymakers' sources of information would, in effect, be the analytical system as represented by the various analysts who make up this system (e.g., independent researchers and representatives of private or public research institutions). From an interview with analysts, it became possible ultimately to trace where the analysts obtained the data used in the analyses whose results were interpreted and provided to the policymakers concerned. These data sources would logically be the entities that constitute the data system.

¹The interview schedules for this study can be found in Appendix B.

Observation of Pilot Implementation of Automated Data System for OLT in Region 8

Another aspect of data gathering in this research was the observation done on the pilot implementation of the MAR's new automated data system for OLT in Leyte, the eighth administrative region of the country. The pilot area covered the barrios (barangays) of San Roque and San Isidro in the municipality (or town) of Santa Fe in Leyte province (Figure 11).

The pilot project was the first test of the workability of MAR's newly designed procedures for a more systematic, integrated and speedy implementation of OLT. As in the old procedure, the same government agencies coordinate their activities with the Ministry of Agrarian Reform in implementation. These are the Bureau of Lands, Bureau of Cooperative Development, and the Land Registration Commission. Intra- and inter-agency teamwork and proper sequencing and scheduling of activities were emphasized. The new procedures for filling in, summarizing, and forwarding data forms were also stressed.

Other Means of Collecting Data

Supplementary data were also gathered from primary and secondary sources such as official government documents and newspapers. Many primary data of enormous research significance were obtained from policy/implementation workshops or conferences (see, e.g., MAR, 1978).

Analysis and Synthesis of Data

Records of the in-depth interviews had been preserved in two forms: (1) summary notes on the interview schedule responses; and (2) full coverage of the same interview on cassette tapes. Using the interview schedule

MUNICIPAL INDEX CONTROL MAP

SITUATED IN THE
MUNICIPALITY OF STA FE
PROVINCE OF LEYTE
ISLAND OF LEYTE
CONTAINING AN AREA OF HAS
SCALE 1:30000



NOTES:
This sketch is prepared solely for the
purpose of OPERATION LAND TRANSFER

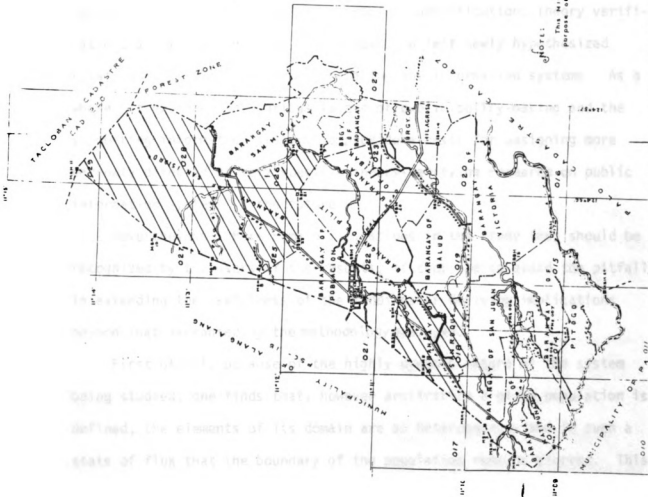


Figure 11. Map of the Municipality of Sta. Fe Showing the Study Area

as a guide, the full text, that is, both questions and answers, of the interviews were transcribed on the back pages of the interview schedule.

Many of the findings reported in this study are the results of the analysis as well as synthesis of the information obtained through the various means described. Cross-references and notes are provided in the text to indicate these varied sources of information.

Limitations of the Study

In terms of its objectives, scope, and methodological approach, this study may be classified as exploratory, descriptive and diagnostic research. It is more a basis for problem identification, theory verification, and theory building than a means to test newly hypothesized relationships related to decision-making and information systems. As a whole, it explores the various facets of public policy-making and the supporting information systems to provide a basis for designing more narrowly directed or very specific theory-verifying research on public information systems in the future.

Nevertheless, there remain limitations in the study that should be recognized by the users of the results, if they are to avoid the pitfalls in extending the usefulness of the findings or deriving implications beyond that warranted by the methodology employed.

First of all, because of the highly dynamic nature of the system being studied, one finds that, however arbitrarily a given population is defined, the elements of its domain are so heterogeneous and in such a state of flux that the boundary of the population remains blurred. This makes the use of random sampling meaningless and forces a resort to purposive sampling. Unfortunately, with purposive sampling, it is not possible to draw inferences about the population on the basis of a sample,

with any known precision or accuracy. This is not a very serious limitation in a basically descriptive study such as this, where detailed inferences of specific accuracy about a population is not the main goal. Rather, its primary purpose is a qualitative one, namely, to describe processes and identify the various elements that interplay in those processes, as well as to examine the forces that may influence the same processes.

The other limitations relate to the failure to apply, due to time and related resource constraints, what could have been parts of a better methodology. These are the following:

1. Sampling and interviewing other target groups (i.e., landlords, share and leasehold tenants, amortizing owners (OLT beneficiaries), and landless agricultural workers) as well as non-target groups such as the mass media, church groups, and agribusiness;

2. Exhausting the search for members of the analytical-system population and then drawing a sample;

3. A close and thorough observation of the step by step processing of the data and forms in the data system (especially in the COLT and the Land Bank) in order to trace through the sources of identified problems in this system;

4. A close and thorough observation to trace through the connection between information-system inadequacies and weaknesses in policy formulation; and

5. Further interaction with policymakers who were previously interviewed to elicit suggestions on how the information system can be improved, once a description of the structure, dynamics and dysfunctions of the information system--that is, the findings of this study--were written up.

Note on Confidentiality

The respondents in this study were assured that the interview will be held in confidence and that no names will be mentioned in the results. In keeping with that promise, strictly no respondent's name appears in the text. In fact, even a respondent's specific position/title in an organization is never mentioned unless it is absolutely necessary to do so, i.e., unless not mentioning it will substantially alter the accuracy of the findings. Nevertheless, as many safeguards as necessary were employed to avoid disclosure.

Part III

FINDINGS

CHAPTER 4

PHILIPPINE AGRARIAN REFORM POLICY-MAKING STRUCTURE UNDER MARTIAL LAW

This chapter presents part of the results of the analysis and synthesis of the data and information gathered following the research design detailed in Chapter 3. It describes the structure of the Philippine Agrarian Reform Program as a feedback control system, focusing first on the management component and turning next to the information component. The last section discusses the outputs, program performance variables and policy inputs.

It is important to note at the outset that the agrarian reform program is only a part, although a significant one, of the government's thrust towards national development. As such, agrarian reform policy-making is only a subset of the national policy-making process that encompasses the entire range of concerns of government from domestic food production to health, housing, tourism and trade, and so on.

The Ministry of Agrarian Reform

Martial law was declared on September 21, 1972. Five days later, Presidential Decree (PD) No. 2 declared the entire country subject to land reform; land reform was called the "cornerstone of the New Society." Exactly a month after the declaration of Martial Law, PD No. 27 declared the emancipation of all rice and corn tenants. The Ministry of Agrarian

Reform has the main responsibility for formulating policies relative to PD Nos. 2 and 27. Once these policies are approved by the President, the Ministry of Agrarian Reform has the responsibility for implementing them.

The Agrarian Reform Coordinating Council

The Ministry of Agrarian Reform is aided in its policy-formulation tasks by the Agrarian Reform Coordinating Council. This is an inter-ministry body, chaired by the Agrarian Reform Minister. The other members are the ministers of National Defense, Finance, Justice, Agriculture, Natural Resources, Public Works, Transportation and Communications, Local Government, Community Development, and Public Highways.

The ARCC, besides its policy-formulation function, is also a device to secure coordination in the activities of the different ministries which are relevant to agrarian reform. These ministries have bureaus and personnel in the field whose cooperation is essential to the success of agrarian reform.

The Land Bank

The agrarian reform involves the transfer of ownership from landlords to the tillers of the soil. This transfer of ownership requires financing by a bank. For this purpose, the Land Bank, which is the financial arm of agrarian reform, is described as a

government corporate body created by law to provide timely and adequate financial support to the implementation of the agrarian reform program . . . particularly the financing of land acquisition pursuant to PD No. 27, and to administer agricultural guarantee funds covering certain loans extended by selected lending institutions (PIO/LBP, n.d.).

Moreover,

to insure coordination and harmonization of policies in the implementation of the agrarian reform program, the Land Bank of the Philippines (LBP) and the Agricultural Credit Administration (ACA) are attached to the Ministry of Agrarian Reform (Figure 12) (Labayen, 1977, pp. 5-6).

The MAR Minister and other members of the ARCC are ex-officio members of the LBP Board of Directors--to insure coordination of its policies with the other phases of the agrarian reform program.

The Agricultural Credit Administration

The former share-crop tenants who become farm owners will require financial assistance, support which they used to receive from their former landlords. The ACA is intended to serve as the financing arm of the small-farmer beneficiaries of the agrarian reform program. Its loaning activities are directed to stimulate development and operation of farmers' cooperatives, particularly in the landed estates and resettlement areas under the administration of the MAR. To insure the alignment and coordination of policies between the MAR and the ACA, the MAR Deputy Minister functions as the Chairman of the ACA Board of Governors.

Field Offices Under the MAR

Figure 12 shows the MAR organizational chart in which are also indicated those agencies cooperating with it and those which are attached to it both at the Central Office and at the Regional and District levels. As of October 21, 1978, the MAR had 12 regional offices, one for each administrative region of the country, 40 district offices and 305 team offices (Labayen, 1977; Estrella, 1978).

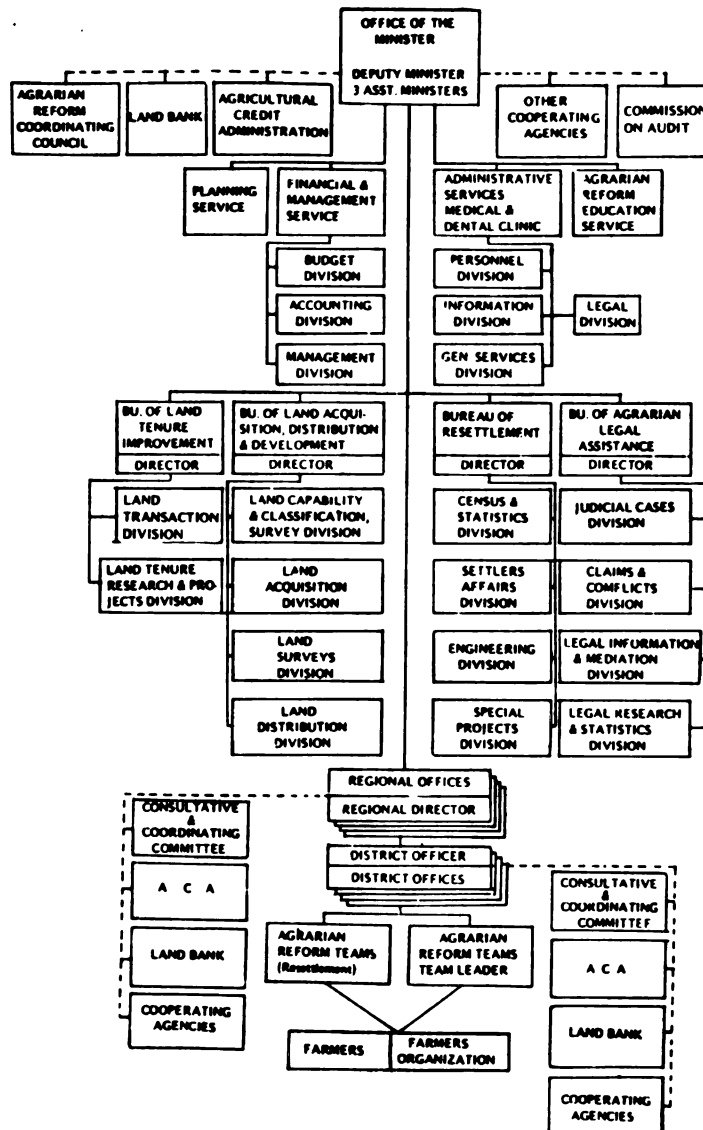


Figure 12. Organizational Chart of the Ministry of Agrarian Reform (MAR)

The hub of policy-making in the MAR is the Office of the Minister. Policies can originate from any of the four bureaus whose functions are essentially staff in character. They exercise functional supervision over the field offices but have no line functions unless properly directed by the Minister (Estrella, 1978).

Two special bodies internal to the MAR assist the Minister in coordinating and integrating the formulation, clarification and interpretation of policies within the Ministry. One is the Policy Formulation Office (PFO) whose jurisdiction on policy matters is confined to Operation Land Transfer (OLT) (see Appendix C). This is chaired by the Assistant Minister for Field Services with the Directors of the Bureaus of Agrarian Legal Assistance (BALA), Land Acquisition, Distribution and Development (BLADD), and Land Tenure Improvement (BLTI); the Chief of the Center for Operation Land Transfer (COLT); and the Head Executive Assistant as members.

The other is the Management Staff (MS) which is chaired by the Deputy Minister with all the Bureau Directors and Service Chiefs as members. The policy-matter concerns of this staff cover the entire scope of the agrarian reform program, including OLT. Hence, any policy matters threshed out or decided in the PFO are taken up in the MS prior to the final endorsement to the Minister.¹

The Bureau of Agrarian Legal Assistance

The Bureau of Agrarian Legal Assistance (BALA) is responsible for:
(1) the development of plans and programs on the extension of legal

¹Based on an interview with a MAR official who is a member of the PFO and the MS.

information to farmers, including share tenants, agricultural lessees, owner-cultivators, agricultural farm workers and members of their immediate farm household; (2) the extension of legal services to them; and (3) the execution of leasehold contracts. The BALA also discharges functions transferred to it from the Office of the Agrarian Counsel (OTAC) and the Agricultural Tenancy Commission (ATC).

The Bureau of Land Acquisition, Distribution and Development

The development of plans, programs and policies relative to the acquisition of both public and private agricultural lands, their distribution and development and all land surveys, including land capability and classification survey is carried out by this bureau.

The Bureau of Resettlement

The Bureau of Resettlement (BURE) is responsible for: (1) the development of plans, programs and policies for the resettlement of displaced farmers, landless families and urban workers in the settlement projects of the Ministry pursuant to R.A. No. 6389 and other related laws; (2) the management of settlements under the administration of the Ministry; and (3) the census of settlements.

The Bureau of Land Tenure Improvement

The Bureau of Land Tenure Improvement (BLTI) provides staff services for: (1) the development of policies, plans and programs, and standard operating procedures on land tiller-landowner identification; (2) tenurial security and leasehold arrangements, land transactions leading to the transfer of landownership to tenant-farmers including related records, land valuation and landowners compensation, land tenure

research; and (3) joint projects with other government offices and private institutions to be established in tenanted areas and landed estates that will improve land tenure and land use and for establishing and operating a monitoring and information system on land tenure improvement (Estrella, 1978).

Cooperating Bureaus of Other Ministries

Membership of other ministries in the Agrarian Reform Coordinating Council and in the Board of Directors of the financing agencies of agrarian reform has also involved the bureaus under them in many aspects of the program.

The Bureau of Lands

This is a bureau of the Ministry of Natural Resources. Its involvement in OLT is in parcellary mapping, that is, the sketching and production of parcel maps of tenanted rice and corn land to indicate ownership, boundaries and areas of lots actually occupied by each tenant-farmer and other pertinent information. Areas to be retained by the landowner are also indicated on the parcellary maps. Organizationally, the BL is composed of a central office, 13 regional offices including Metro-Manila, 83 district land offices and 56 regular survey parties (Figure 13).

The Bureau of Cooperatives Development

PD 175 articulates that it is

the policy of the State to foster the creation and growth of cooperatives as a means of increasing income and purchasing power of the low-income sector of the population in order to attain a more equitable distribution of income and wealth (CETD/BCOD, n.d.).

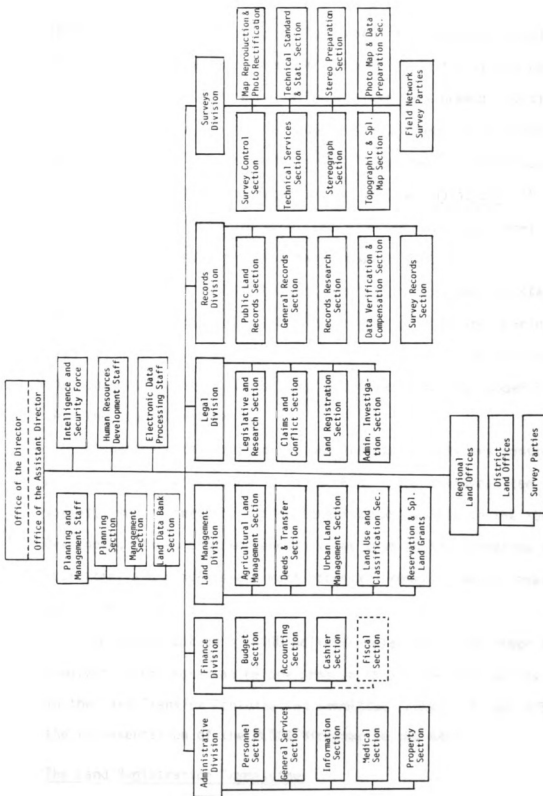


Figure 13. Organizational Chart of the Bureau of Lands (BL) (as of January 1978)

The program is administered by the Bureau of Cooperatives Development (BCOD) of the Ministry of Local Government and Community Development (MLGCD). There are 12 regional MLGCD offices in the entire country. Each such regional office has a Cooperative Development Division which is responsible for the general supervision, direction and coordination of the operations of the Ministry within the region (CETD/BCOD, n.d.).

In the promotion and organization of Samahang Nayons (SN) or Barrio Associations, the BCOD has deputized some MAR field personnel to organize SNs, thus expediting the organization of SNs.

The BCOD is composed of four staff divisions and six staff units (Figure 14). Functionally, the Resource Allocation and Development Division has more policy-making involvement relative to the development of SNs, Cooperative Rural Banks (CRB) and Area Marketing Cooperatives (AMCs) than the other Divisions.

Altogether, the staff divisions and staff units are considered the pillars of policy development in the BCOD. For instance, the KSN Secretariat, among others, "provides technical assistance to the KSNs in developing plans, programs and policies that would strengthen the KSN activities and programs and make necessary remedial policy measures" (CETD/BCOD, n.d., p. 12).

The harmonization of BCOD policies relative to the other agencies involved in the agrarian reform program is also ensured by its membership in the Land Transfer Coordinating Committee (LTCC) (cf. pp. 175-176) and the representation of the MLGCD Minister in the ARCC.

The Land Registration Commission

The LRC's involvement in the agrarian reform program pertains to the registration of all Certificates of Land Transfer (CLTs) before they

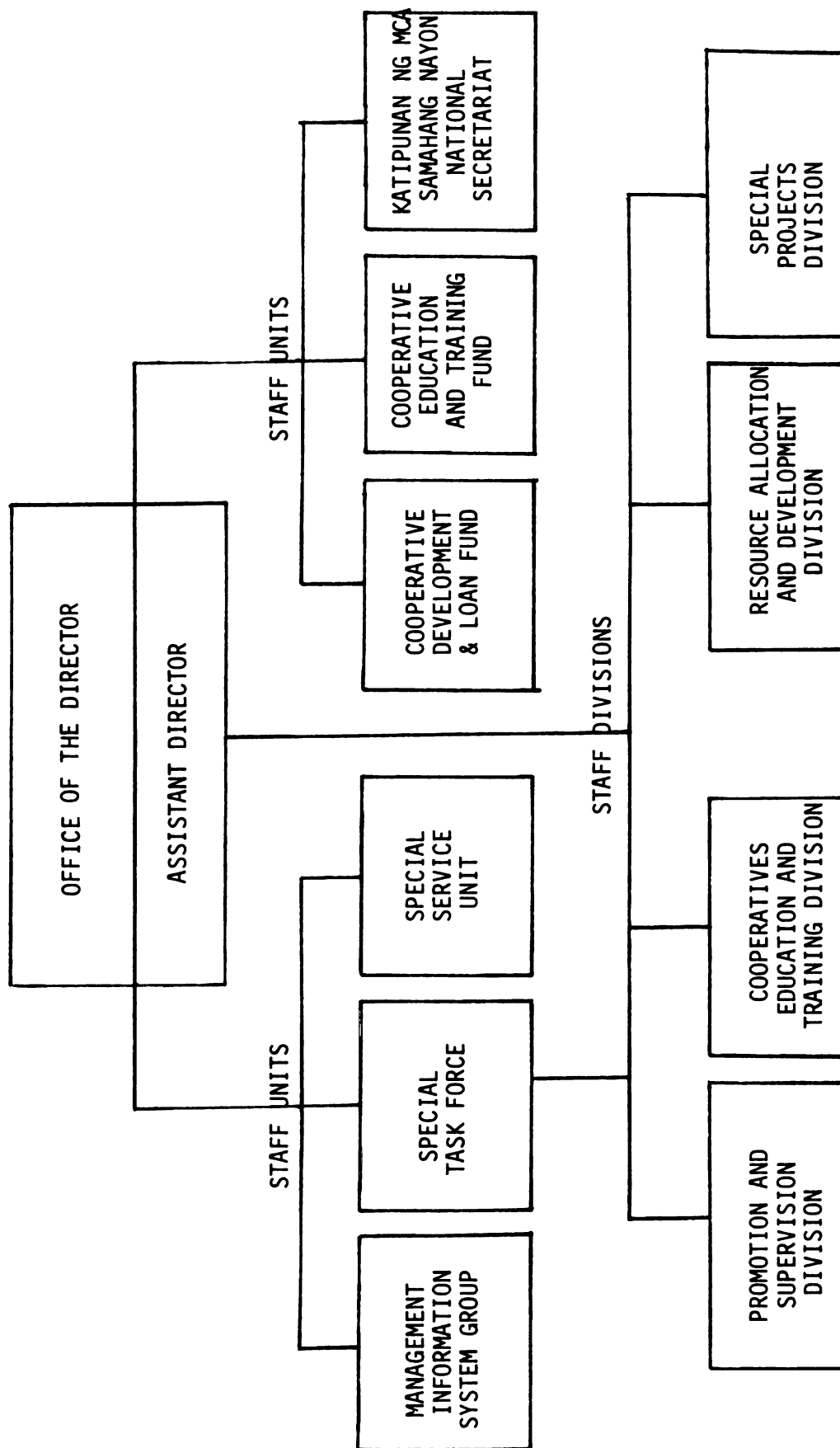


Figure 14. Organizational Chart of the Bureau of Cooperatives Development (BCOD)

are issued to the tenants and the registration of Emancipation Patents (EPs) which are issued by the MAR of PD 27 farmer-beneficiary who have completed amortization payments (Labayen, 1977; and Estrella, 1978).

Bureaus in the Ministry of Agriculture

Out of five major components of the agrarian reform program, the Ministry of Agriculture (MA) is involved in two, namely: (1) institutional development, particularly in cooperative farming; and (2) agricultural development. Cooperative farming is a joint effort among the Ministries of Agrarian Reform, Agriculture, and Local Government and Community Development (Medina, 1977).

As Figure 15 indicates, the MA has an Agrarian Reform Unit (ARU) whose functions are: (1) to coordinate the Ministry's work with that of the MAR in the areas of agricultural extension, soil survey and classification; and (2) to advise and assist the Minister in the formulation and implementation of policies and guidelines in orienting agricultural development towards helping the effective attainment of agrarian reforms (DA/NFAC, 1977).

Inasmuch as the MA's involvement in the agrarian reform program has nothing to do with the land transfer operation, it is not a member of the LTCC. However, the MA is represented in the ARCC by the Minister of Agriculture.

Important Influences on the Agrarian Reform Program

The agrarian reform program while mandated by a Presidential Decree under Martial Law is, in fact, receptive to the opinions and pressures of those who are, or are going to be, affected by it.

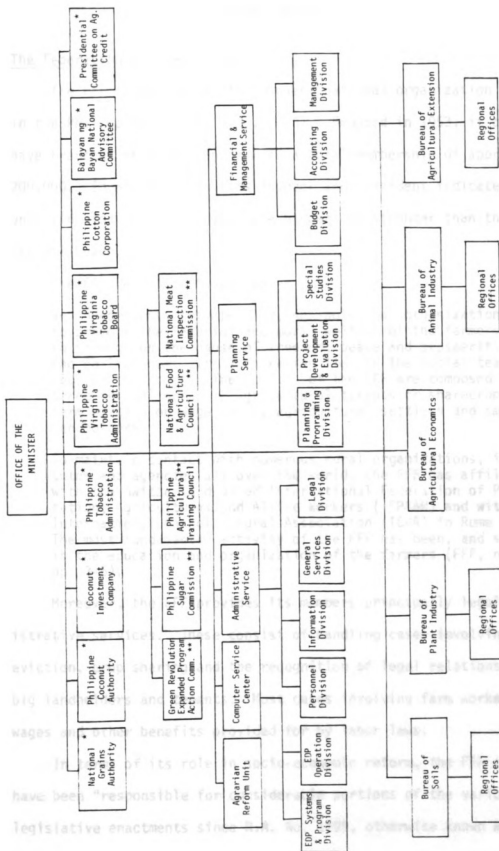


Figure 15. Organizational Chart of the Ministry of Agriculture (MA)

Target Groups

The Federation of Free Farmers (FFF)

The FFF claims to be "the biggest national organization of peasants in the Philippines" (FFF, n.d., p. 3). Founded in 1953, it claims to have branches in 60 provinces with a total membership of approximately 200,000. In an interview, its founder and President indicated that FFF units in visayas and Mindanao are bigger and stronger than those in Central Luzon.

The FFF describes itself as

an independent, private, lay, non-political organization . . . to promote the material and moral welfare of the farmers and to strengthen the cause of freedom; peace and prosperity in the Philippines. Its inspiration lies in the social teachings of the Popes. The members of the FFF are composed of three general groups: agricultural tenants or sharecroppers, farm workers on wage basis, agricultural settlers and small landholders.

To maintain contact with numerous rural organizations, institutes and agencies all over the world, the FFF has affiliated with the Switzerland-based International Federation of Plantation, Agricultural and Allied Workers (IFPAAW) and with the International Catholic Rural Association (ICRA) in Rome . . . The most fundamental activity of the FFF has been, and still is the education and organization of the farmers (FFF, n.d., pp. 3-5).

Moreover, the FFF provides its members principally legal and administrative services. These consist of handling cases involving tenant eviction, crop sharing and the recognition of legal relations between big landholders and tenants. Most cases involving farm workers concerned wages and other benefits provided for by labor laws.

In terms of its role in socio-economic reform, the FFF claims to have been "responsible for considerable portions of the various agrarian legislative enactments since R.A. No. 1199, otherwise known as the

Agricultural Tenancy Act of the Philippines, enacted in 1954, up to and including the last amendment to the Code of Agrarian Reforms, enacted in 1971" (FFF, n.d., p. 5). Moreover, it claims to have inspired constitutional provisions and many governmental measures on socio-economic reforms.

The Federation of Agrarian and Industrial Toiling Hands, Inc. (FAITH)

This is a national federation of various organizations whose memberships include peasants, squatters, public market vendors, apartment dwellers, fishermen and sugarcane and coconut farm workers. An outgrowth of the Filipino Agrarian Reform Movement (FARM), which was also headed by Luis Taruc in 1969, it joined forces with the FFF and the Khi Rho Movement to picket the old congress for the passage of the Agrarian Reform Code (R.A. 6389) in 1971.

Unlike the FFF, FAITH has no economic arm. It depends on the ₱60.00 per year membership fee from each of some 150 affiliated organizations, and on voluntary contributions of ₱1.00/year from members through their purchase of an I.D. card.

FAITH provides its members personal and collective services. Personal services are in the form of direct assistance to members who come to the national office for various problems. For example, a member may be an eviction victim whose hut has just been demolished by a landowner of sugar or coconut land. In such a case, the organization prepares a formal complaint and becomes the channel for bringing the case to the attention, and hopefully positive action, of appropriate authorities such as the MAR and Bureau of Lands.

A confrontation approach or dialogue is occasionally used by FAITH and its other two fraternal organizations, the FFF and FLRF, on the Ministry of Agrarian Reform. For example, during the MAR's Regional Director's Meeting in June 1978, the leaders of FAITH, FFF and FLRF took the occasion to expose the weaknesses of the agrarian reform program and to counter the pressure exerted by the landlords upon the fieldmen which has included subtle efforts to bribe the MAR's District Officers.

In sum, through the petitions, exposes, dialogues, and other means--including the leader's consultancy participation in such agrarian reform implementing agency(ies) as the MAR and the Land Bank--FAITH, FFF and FLRF aim to influence the direction of agrarian reform policies in the country.

The Federation of Land Reform Farmers, Inc. (FLRF)²

Founded on May 12, 1970, the FLRF presently claims an estimated membership of 100,000. It has chapters in the provinces of Pampanga, Cavite and Batangas. Chapters are established in the villages (barrios or barangays). For each province, there is a Provincial Committee with a Provincial Coordinator. The Coordinators are in the forefront in conducting seminars for chapter members or in personally assisting local members bring their problems to the National Office for appropriate action.

In the formulation of PD 27, the FLRF, along with the other farmers' group, gave its policy stand to the DAR Committee on the question of the area to be retained by the landowner. They were for zero retention.

²This section is based on an interview with an FLRF's officer on July 6, 1978.

In 1978, the FLRF formed an affiliate organization, the Sugar Tenants and Workers Union (STWU), in the province of Pampanga. The STWU has listed about 3,000 sugar tenants in the area, sharing on a 50-50 basis. The organization anticipates to expand its membership beyond Pampanga into other sugar producing provinces of Luzon.

In Muntinlupa, Rizal, 200 tenants of a mango grove owned by hacienda Madrigal, affiliated with the FLRF because the land was being converted into a subdivision and the farmers were being ejected.³ Collectively, the FLRF now has to deal with this ejection problem in court as well as with the "PC" (Philippine Constabulary) and local police.

The Landlords

Landlords are landowners who do not till or operate their lands but collect land rents in money or in kind (Flores and Clemente, 1975). They are, therefore, the owners of tenanted lands, whether planted to rice, corn or other crops. Under this definition, technically, owners of plantations such as the sugar haciendas in Negros and the banana and pineapple plantations in Mandanao, which are operated under labor administration (i.e., not tenants, but employing hired agricultural laborers or wage earners), are not landlords, but simply landowners. These landowners may be distinguished from owner-operators who own and personally till or operate their lands (i.e., they have no tenants from whom land rents can be collected), but can employ hired agricultural labor.

³ A tenant of a mango grove or plantation does not own the fruit-bearing trees which belong to the landowner. His job is to smudge (or build smoke all over) the mango tree and spray it with pesticides as well as chemicals to induce flowering and fruiting. After deducting the cost of the chemicals, the harvest is shared between the landowner and the tenant on a 50-50 basis. According to an FLRF officer, the law recognizes such people as "tenants".

Thus far, the Philippine agrarian reform program has been directed mainly at tenanted farms (hence, to landlords) especially those planted to rice and corn. The policy excludes a large segment of the landowning population (i.e., the landowners and owner-operators) who make up the elites and the oligarchy. For example, the program exempts from coverage the well-organized and politically influential "sugar bloc", the sugar barons of Negros island; the huge pineapple and banana corporations in Mindanao which produce mainly for export using highly mechanized technology; and the owners of coconut--and even rice--plantations (Kerkvliet, 1974).

It has been observed that, unlike these plantation industries, the landlords of rice and corn farms in the Philippines "have never had strong organizations through which they might have tried to exercise political influence" (Hanisch, 1977, p. 10). Paradoxically, they:

were always better at making their influence felt through their diffuse, non-organized representation in the parties, through representative bodies, the bureaucracy, the military staffs, and the judiciary. This has not changed in any way as a result of martial law. Their anti-reform tactics correspond to this situation: they have not mounted a concentric organized opposition--which would have put the regime at risk and therefore would hardly have been tolerated--but confined themselves to isolated dilatory actions in and outside the state agencies and institutions (Hanisch, p. 11).

Furthermore, Hanisch notes:

The promulgation of PD 2 and PD 27 gave rise to the spontaneous formation of a number of landowners' associations which for the most part have no definite organizational form but merely arrange more or less informal gatherings of the local (land-owning) gentry. Most of them have made no attempt to overcome their local limitations (p. 11).

In a study on Philippine interest groups, Agpalo (1976) notes that in the agricultural sector, the most comprehensive interest group is the

Chamber of Agriculture and Natural Resources. This association brings together various organizations (12 of them) under one roof, thus integrating the various crops, regions where they are produced, and the people producing them into one system with a common socializing organ, the Philippine Farmers Journal. Among the organizations included are the following: (1) National Federation of Sugarcane Planters; (2) Philippine Coconut Producers Federation; (3) Philippine Abaca Federation; and (4) Philippine Federation of Rice and Corn Planters.

Agpalo observes that under the martial law regime, the Philippine interest groups were not abolished, but regulated. After the initial months of uncertainty, tensions have subsided and interest groups have begun articulating their interests, positions, and claims upon the government, both to the civilian and the military bureaucracies.

The Federation of Agro-Industrial Toiling Hands, Filipino Agrarian Reform Movement, and the Federation of Free Farmers pressed for wider and wider scope of social justice through agrarian reform, but the Association of Landowners for Agrarian Reform Movement (ALARM) asked for delimitations. The Association of Rice and Corn Producers, as well as other landlord organizations, also asked for delimitations (Agpalo, 1976, pp. 35-36).

Non-Target Groups

Mass Media

At the outset of martial law, only one newspaper, one television station and the government-owned radio station were permitted to resume operations in order to broadcast the president's announcement of Proclamation No. 1081, the declaration of martial law. By the end of 1972, four daily newspapers were allowed to operate. Two had been operating before martial law; the remaining two were new but purportedly replaced terminated dailies.

Among those affected by the administration's crackdown on the mass media were newspaper and radio networks which were either owned or affiliated with a religious organization. Before and for some time after martial law was declared, many of these media had served as channels for the dissemination not only of local, national and world news but of ideas on agriculture and life in general as well as citizens' opinions on agrarian reform and related events in the New Society. One such radio station on the island of Negros, had particularly developed a following as a forum for the discussion and search for solutions of peasant problems. In October 1972, however, the two American priests working in the station were deported. They had been accused of advocating rebellion over the radio (Youngblood, 1978).

Church/Religious Groups

Youngblood has observed that:

The elimination of institutionalized opposition by martial law left the (Roman) Catholic church as one of the few organizations able to challenge the policies of the government. Much of the church's power derives from the fact that 85% of the population professes (Roman) Catholicism and from the existence of a nationwide structure of parishes where local priests (especially in the rural areas) are often key molders of public opinion (p. 506).

Within the Roman Catholic hierarchy, as represented by the Catholic Bishops Conference of the Philippines (CBCP), there are three basic groups with different approaches to the role of the church vis-a-vis the martial law government--the "traditionalists", "moderates", and "radicals". The "traditionalist" group (of ten) is led by Julio Cardinal Rosales who believes that the Catholic Church should not venture into nonecclesiastical affairs and should confine itself to spiritual matters.

His view is shared by most of the older secular priests who try to remain aloof from politics (Youngblood, 1978; Muego, 1978; and Rajaretnam, 1978). Secular priests are not affiliated with any of the religious orders such as the Society of Jesus, Order of St. Augustine, Oblates of Mary Immaculate, or the Order of St. Francis of Assissi; they are trained in and committed to service in a specific diocese, an area containing parishes under the sole jurisdiction of a specific bishop.

The largest faction of the CBCP are the "moderates" who count on the support of 56 prelates, a clear majority in a body of 81. This is led by Jaime Cardinal Sin, Archbishop of Manila. Cardinal Sin is the principal author of the policy of "critical collaboration" with the martial law regime.

A numerically smaller (about 15) but very vocal faction of the CBCP--the "radicals"--is led by Bishop Francisco Claver who heads the Central Mindanao diocese of Bukidnon. Bishop Claver wants the Catholic church to take a less ambivalent stand towards martial law. "The Claver group . . . contends that the Catholic church should oppose the degradation of the dignity of the individual and his 'callous manipulation by government for such ends as national security and economic development'" (Muego, 1978, p. 222).

Technocrats in the Private Sector

In contrast to technocrats in the public sector, private-sector technocrats are not regular employees of the government. They are drawn from the private sector business firms and participate in policy-making only as consultants.

For example, the MAR hires consultants from the private sector (other than the peasant leaders cited earlier), a number of whom are affiliated with private academic institutions. However, it is not known to what extent these consultants influence policies originating from the MAR.

Civic/Social-Action Groups

To this category belong such groups as the Manila-based Civil Liberties Union of the Philippines (CLUP), an association of judges, lawyers, former politicians, former Constitutional Convention delegates, publishers, and academicians (Rajaretnam, 1978), and the People's Convention on Human Rights, an ad hoc association convened on August 20, 1977, both as a supplement and an alternative to the World Law Conference in Manila from August 22 to 26, 1977 (Muego, 1978).

The People's Convention on Human Rights adopted several alternative positions to the policies and programs of the "New Society" including the following:

Farmers should have the right to free association and expression including the right to refuse to join government programs without fear of government reprisal (Muego, 1978, p. 220).

Agribusiness Sector

This sector includes all businesses related to agriculture such as commercial (corporate) farming, agricultural financing/banking, farm input supply and output marketing, food storage and processing, and the like. Only a partial description can be provided concerning the influence of this sector on agrarian reform policies since the literature on the subject is scanty.

On rural banks, Kerkvliet (1979) cites a USAID report indicating that in 1972-73, local elites in the province of Nueva Ecija resisted any efforts by small farmers to buy into the banks in order to influence banking policies. However, a reform on credit services, brought about probably by the clamor of the small farmers, saw the promulgation of PD 584 in November 1974 "establishing a procedure for acquisition by small farmers of equity in rural banks" (Section 1 of PD 584 in PID-MAR, n.d.). Under this decree, rural banks are mandated

to make available for sale to farmers who are members of a Samahang Nayon or to any Samahang Nayon of which said farmers are members, common shares of stock of the rural bank representing in the aggregate up to forty percent (40%) of the voting stock of the bank.

As for the influence of agribusiness, Kerkvliet's analysis has led him to conclude thus:

The combined opposition of agribusiness and the landed elite and middle classes make it unlikely that President Marcos will achieve his ostensible goal of social equity for the rural peasantry (Kerkvliet, 1979, p. 131).

Individual Citizens

A few prominent individuals continue to speak out publicly against martial law policies. Among these are: Salvador P. Lopez, former University of the Philippines President, former Ambassador to the United States, the United Nations, and former Secretary of Foreign Affairs; former Senators Jovito R. Salonga, Jose W. Diokno, Lorenzo M. Tañada, Francisco "Soc" Rodrigo, and Eva Estrada Kalaw; former President Diosdado P. Macapagal; and a former Speaker of the defunct House of Representatives, Jose B. Laurel, Jr. (Muego, 1978).

Foreign Nationals/Scholars/Academicians

A number of American intellectuals have publicly demonstrated their criticism of martial law. Particularly, they have formed their own anti-martial law organization, the Friends of the Filipino People (FFP).

Individual members such as Daniel B. Schirmer of the Goddard-Cambridge Graduate Program in Social Change and Benedict J. Kerkvliet of the University of Hawaii, have testified before U.S. Congressional Committees, in opposition to the martial law regime (Schirmer, on the foreign policy of the Marcos regime, and Kerkvliet, on the land reform program of the New Society (Muego, 1979, pp. 219-220).⁴

Planning and Implementation

In agrarian reform as in other areas of governmental concern, some degree of overlap exists between the policy-making structure and the planning and implementing structure. Most entities which participate in the former process, especially the governmental/public entities, are also involved in the latter process. Like policy-making, planning and implementation are essentially the government's undertaking. The private sector is listened to, consulted or called upon to participate or cooperate with the government only at certain stages of the process.

The NEDA and the Executive Office played significant principal roles in the formulation of the Four-Year Development Plan 1974-77 and the subsequent policies to affect its speedy implementation (Cardenas, 1974). However, the current successor plans (i.e., the Five Year (1978-1982, Ten-Year and Long-Term Philippine Development Plans) reportedly "evolved with the participation of the whole government machinery, both at the

⁴Such testimony is aimed at influencing U.S. Congress into, among other purposes, discontinuing U.S. military and economic assistance to the martial law regime (Cf. Muego, p. 218).

national, regional and subregional levels. In addition, the active and meaningful involvement of the private sector in the planning process was indispensable in the drafting of these plans" (NEDA, 1978, p. 31).

As inferred from Figure 16, the preparation of these plans generally followed the top-down and the bottom-up approaches to plan formulation. The former involves "a flow of guidelines and preliminary position on objectives, strategies and targets from the national level to the sectoral and agency levels and from the national level to the regional, provincial and other local levels" (NEDA, 1978, p. 30). The bottom-up approach involves a reverse process.

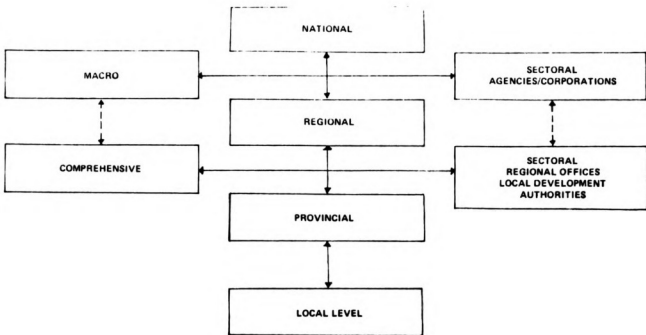
Regional Planning and Program Development

The Planning Service of MAR prepared the Agrarian Reform Plans with the cooperation and assistance of other units of the agency and approval by the ARCC (DAR-PS, 1976).

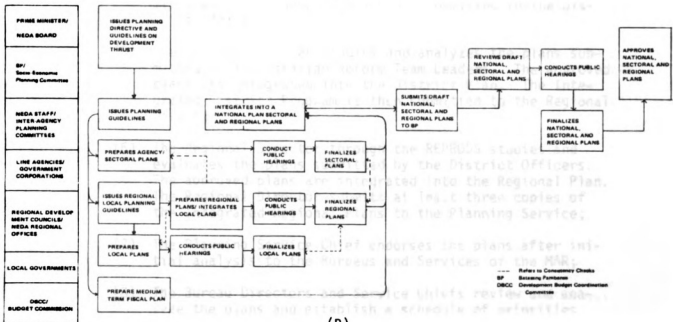
It has been the policy of the Ministry that planning, programming and project development should emanate from the field units. The plans, programs and projects prepared and submitted by the field units are reviewed, evaluated and finalized by the Central Office within the scope of a national plan.

For each regional office, a Regional Planning and Program Development Staff (REPRODS) has been created. Under the immediate supervision by the Assistant Regional Director and the technical guidance of the Planning Service, the REPRODS performs, among others, the following functions:

Assist the Regional Director in the translation of socio-economic goals and policies of the Ministry into more specific regional objectives which shall be reflected in the regional plans prepared for the region;



(A)



(B)

Figure 16. Philippine Planning Set-up (A) and the Principal Steps in the Plan Preparation Process (B). (Source: NEDA, 1978, pp. 31 and 34)

Formulate regional plans and programs for the region; and

Coordinate their activities with local planning agencies, particularly the Regional Development Councils (NEDA Regional counterparts) wherever they are established (DAR-PS, 1976, p. 25).

The preparation of the Agrarian Reform Annual Program, FY 1975-76, was therefore undertaken based on the following procedures (DAR-PS, 1976, pp. 26-31):

- (1) The MAR's central office prepared the policies and guidelines by collaboration of its services and Bureaus with the various government agencies;
- (2) The Regional Directors receive the detailed policies and guidelines and brief the REPRODS members and the District Officers;
- (3) The District Officers inform the Agrarian Reform Teams which are at the village level of planning and implementation;
- (4) The Agrarian Reform Team prepares development plans in its area of assignment, which are submitted to the District Officer;
- (5) The District Officer studies and analyzes the plans submitted by the Agrarian Reform Team Leaders. The approved plans are integrated into the District Plan. The Integrated District Program is then submitted to the Regional Director;
- (6) The Regional Director through the REPRODS studies and evaluates the plans submitted by the District Officers. The approved plans are integrated into the Regional Plan. The Regional Director submits at least three copies of the Integrated Regional Plans to the Planning Service;
- (7) The Planning Service Chief endorses the plans after initial analysis to the Bureaus and Services of the MAR;
- (8) The Bureau Directors and Service Chiefs review and analyze the plans and establish a schedule of priorities. They make revisions and recommendations and return the revised plans to the Planning Service;
- (9) The Chief of the Planning Service endorses the plans to the Planning and Programming Division which (a) makes the final review and analysis, (b) integrates the plans with the Regional Offices, Bureaus and Services, (c) coordinates with the Budget Division of the Finance and

Management Service for funding requirements and phasing, and (d) recommends the Integrated Agrarian Reform Plans to the Minister of Agrarian Reform for approval;

- (10) The Minister submits the budget requirement to the President of the Republic;
- (11) Upon the approval of the MAR Budget by the President, the Minister of Agrarian Reform directs the Bureau Directors and Head Executive Assistant to reconcile and adjust their respective plans in accordance with the priorities and the approved MAR Budget, and forward to the Planning Service;
- (12) The Planning Service makes the final review and analysis and submits the plans to the Minister of Agrarian Reform for approval;
- (13) The Minister distributes the approved plan to NEDA and to the various government and non-government agencies related to the Agrarian Reform Program; and finally,
- (14) Upon approval, the plans are forwarded by the Planning Service to the Regional Directors for implementation, with copies furnished to the other units concerned.

However, it is important to note that the MAR, to a certain extent, also engages in informal planning, in contrast to the procedures outlined above. That this is realistically recognized is explicit in the following statement:

The Bureaus and Services of the MAR exercise certain freedom to carry out planning and implementation of specific technical or administrative functions, without having to follow the strict planning procedures. For example, the planning of Compact Farms (has been) done by the Bureau of Land Tenure Improvement (BLTI) (DAR-PS, 1976, p. 31).

Private Participation

The private sector's participation in the planning process was sought by the government through public consultations or hearings. Consultative meetings were held at the national, regional and sectoral levels to get the reactions and suggestions of the private sector and

the general public to the plans as drafted under NEDA's coordination.

The process has been described as follows:

the President instructed the line ministries to hold sectoral hearings to discuss further the sectoral plans and to take careful note of the views expressed, with the end in view of adjusting the plans as would seem fit.

Accordingly, sectoral public hearings were initiated by the line ministries of the government from August 8 to August 19, 1977. Hearings were also held in the regional areas through the Regional Development Councils (NEDA, 1978, p. 33).

These public hearings reportedly influenced a change in the orientation or emphasis of the plans from mainly economic growth to social justice/equity and social development.⁵

Information Component

Information is the basic stuff with which policies, plans, and strategies of implementation are formulated. Of course, information is derived from data. The sources of data are the entities which are engaged in the successive processes of conceptualization (of reality), operationalization (of concepts) and measurement (of variables or operationally defined concepts).

Public Data System

These data systems, in the case of the entire Philippine government, include all government ministries, bureaus, offices, agencies and instrumentalities of the national and local governments and all government-owned or controlled corporations and/or smaller units within them that

⁵Information gathered in a Pre-departure Orientation Seminar held at the Philippine Center for Advanced Studies (PCAS), University of the Philippines, Diliman, Quezon City, on November 18, 1978.

are engaged in the generation of data or statistics either as their major functions or as necessary parts of their administrative and regulatory functions (Cf. NEDA, 1975).

The data/statistics generated by these systems are accessible on demand to all units of the government which are involved in agrarian reform and other programs, as well as to the general public (which includes the private sector). However, only a subset of the varied array of statistical outputs emanating from this entire system is relevant to the data needs of the agrarian reform management system, data needs which, in turn, depend on the nature of the problems and issues confronting decision makers in this management system. The entities producing this subset of data constitute the public data system on agrarian reform, which is a subsystem of the entire Philippine government's data system.

Philippine Public Data System and Coordinating Bodies

The government data system during martial law is best described as decentralized but well integrated. It is composed of about a dozen agencies which are major producers of primary statistics and more than a hundred other agencies with statistical units, all of which are centrally coordinated by the NEDA. To facilitate the NEDA's performance of this coordinating function, the Statistical Advisory Board (SAB) is attached to it (Figure 17). This Board: (1) advises the NEDA on the development of a unified system of statistical services and the formulation of basic policies for government statistical operations; and (2) formulates and develops policies and programs that will insure an adequate supply of technically and professionally trained statisticians. Comprising the SAB are the following who serve in ex-officio capacity:

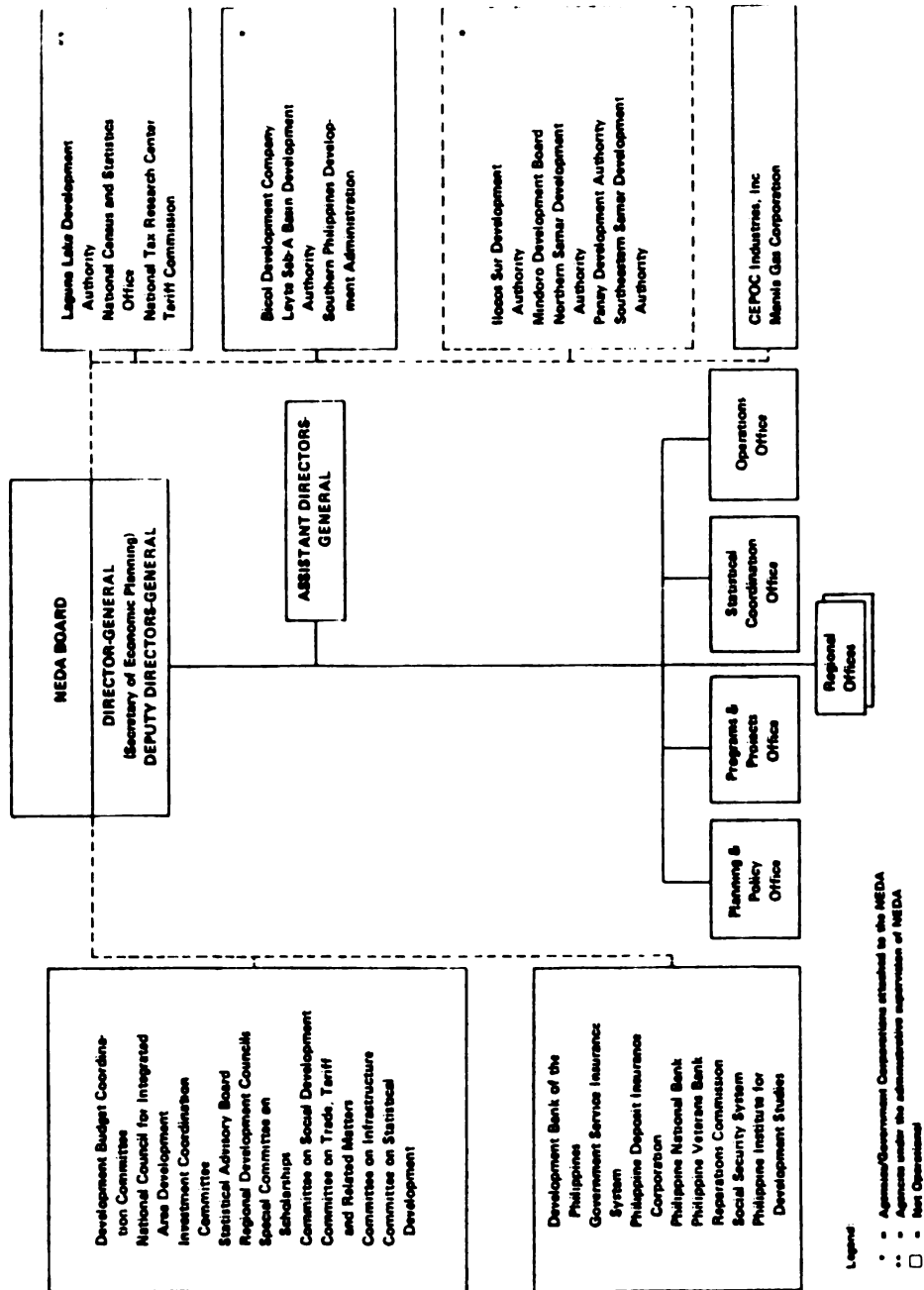


Figure 17. The NEDA Complex (as of December 1977)
(Source: NEDA, 1978, p. 30)

(1) The Deputy Director-General of the NEDA, as Chairperson; (2) The Director of the National Census and Statistics Office (NCSO), as Vice-Chairperson; (3) The Director of the Bureau of Agricultural Economics (BAEcon) of the Ministry of Agriculture; (4) The Dean of the University of the Philippines Statistical Center; (5) The Chief of the Disease Intelligence Center of the Ministry of Health; (6) The Chief of the Department of Economic Research of the Central Bank; (7) The Chief of the Labor Statistics and Information Service of the Ministry of Labor; (8) The Director of the National Computer Center of the Office of the President; and (9) The Deputy Commissioner of the Budget Commission (NEDA, 1975).

To implement its statistical function, the NEDA established its Statistical Coordination Office (SCO) (Figure 17) as the central coordinating body to promote and maintain an efficient statistical system to meet the requirements of government, especially of NEDA.

The agencies which are engaged in major statistical activities and produce primary statistics are the following: (1) National Census and Statistics Office (NCSO); (2) Bureau of Agricultural Economics, Ministry of Agriculture; (3) Department of Economic Research, Central Bank of the Philippines; (4) Labor Statistics and Information Service, Ministry of Labor; (5) Disease Intelligence Center, Ministry of Health; (6) Wage Commission, Ministry of Labor; (7) National Manpower and Youth Council, Ministry of Labor; (8) Ministry of Finance; (9) Insurance Commission, Ministry of Finance; (10) Bureau of Internal Revenue, Ministry of Finance; (11) Food and Nutrition Research Institute, National Science Development Board; (12) Bureau of Public Works, Ministry of Public Works,

Transportation and Communications; (13) Land Transportation Commission, Ministry of Public Works, Transportation and Communications; and (14) Specialized Regulatory Boards; Boards of (a) Transportation, (b) Communication, and (c) Power and Waterworks, Ministry of Public Works, Transportation and Communications (NEDA, 1975, p. 37f). All these agencies belong to the Executive Branch of the government.

NEDA's listing of government agencies which produce primary statistics as by-products of their administrative and/or regulatory functions does not appear to be exhaustive. Appendix D lists those agencies which contribute data related to agrarian reform.

Public Data System on Agrarian Reform

This subsystem is composed of government agencies/units whose data outputs are relevant to the analysis of problems and issues confronting decision makers in the agrarian reform management system. The actual identification of specific agencies/units belonging to this subsystem can only be done after having determined at least the following elements: (1) data outputs of the agency/unit; (2) problems and issues being addressed by the management system, which changes over time, along with changes in reality and people's values (Bonnen, 1975); and (3) the relevance of (1) to (2), which is partly a function of analysis. All agencies under the Ministry of Agrarian Reform and those which are cooperating with it generate data pertinent to the agrarian reform program (Appendix E).

Research-Related Data

Other suppliers of primary data on the agrarian system are government and other publicly funded agencies engaged in research and whose

research outputs (data and information) are available to the public. Their activities go beyond the collection of data; they are also engaged in analysis/synthesis and interpretation of data. Therefore, these agencies can be viewed as belonging to both data and analytical sub-components.

Development Academy of the Philippines (DAP), Office of the President

This was established in May 1973 as a joint project of the Central Bank, Social Security System, Government Service Insurance System, Development Bank of the Philippines, Philippine National Bank and the NEDA. Described as a "center for learning . . . (and) the school for the country's decision makers and the welders of the country's economy and ultimately its destiny", the academy undertakes research, training and a regional role. The research program is aimed at an understanding of development, and research outputs are intended as background materials for use in training.

University of the Philippines (UP) System

The UP System is a state-funded institution with an independent existence outside of the governmental structure or bureaucracy. It is composed of a network of autonomous units in some nine campuses throughout the country. The two major campuses are at Diliman (within Metropolitan Manila) and at Los Baños (UPLB), a town some 65 kilometers south of Manila. At both campuses, a trilogy of functions is pursued, namely: (1) instruction; (2) research; and (3) extension. Many of the colleges, departments, institutes and centers are actively engaged in social science research on agrarian reform and the general area of rural development (Castillo, 1974). These are listed in Appendix F.

National Defense College of the Philippines (NDCP)

Another state-supported academic institution, the NDCP produces data and information on agrarian reform via its students who undertake theses work for a Master's degree in Security Administration. One such thesis with direct bearing on the agrarian reform program is entitled, "Operation Land Transfer: Problems of Implementation" (Berte, 1976).

Research Councils

Various research councils exist to provide research coordination and/or funding to public, and in some cases private, research institutions. These councils promote specific areas of interest (hence directing the allocation of resources for the production of data and information into those areas) such as agriculture and natural resources, community development, or social science in general. Notable among these, where agrarian reform is concerned, are the following: (1) Philippine Council for Agriculture and Resources Research (PCARR); (2) National Research Council of the Philippines (NRCP); (3) National Development Research Council (NDRC); (4) Community Development Research Council (CDRC); and (5) Social Science Research Council (SSRC).

Regional and International Research Institutions

These research institutions can also be considered as public data and analytical systems since they operate through funding contributions from governments of various countries and, as such, their data and information outputs are available to the public. Two such institutions are located in Los Baños: (1) the Southeast Asian Center for Graduate Study and Research in Agriculture (SEARCA); and (2) the International Rice Research Institute (IRRI).

Privately-Supported Academic Institutions

Privately-supported academic institutions which generate data and information related to agrarian reform are generally church-related (Appendix G). Most of these are located in the Luzon and Mindanao areas and are generally affiliated with a Catholic organization (see also Castillo, 1974).

Privately-Supported Non-Academic Institutions

Private non-academic institutions engaged in rural development oriented research can be broadly categorized into the following regional groupings (see also Castillo, 1974):

(1) LUZON

- (1a) Philippine Business for Social Progress (PBSP)
- (1b) National Secretariat for Social Action
- (1c) International Institute for Rural Reconstruction (IIRR)
- (1d) Philippine Rural Reconstruction Movement (PRRM)
- (1e) Program Planning Research Evaluation Office, Family Planning Organization of the Philippines (FPOP)

(2) MINDANAO

- (2a) Davao Action Information Center

Program Objectives and Outputs

Like other development programs, agrarian reform generates not only desired but also undesired outputs. The desirability or undesirability of the program's outputs would depend on the values held by the Philippine society. Values, or concepts of goodness or badness of a condition, situation or thing, can be viewed either as instrumental or basic. Basic values are "goods" for the sake of which instrumental values are

actualized. Basic values (e.g., life itself) may be actualized by a number of different instrumental values (e.g., values of food and shelter; which, in turn, are more basic than money) (Rossmiller and Johnson, 1978).

The Philippine agrarian reform program is designed to achieve objectives which reflect the constellation of values held by the Filipinos and are presumably expected to satisfy the identified real "needs" of program participants (i.e., the target groups, policy-making and implementing actors and other interest groups). Program outputs which are instrumental in satisfying what Filipinos regard as "goods" are desired outputs and are therefore to be achieved (e.g., land productivity, employment and equitable income and wealth distribution). However, in the process of generating these outputs, the program also produces outputs which are regarded as "bads", i.e., undesired outputs. These include: (1) intended and unavoidable outputs (e.g., program costs) and (2) unintended consequences or side effects (e.g., violent conflicts between landlords and tenants; environmental pollution). These undesired outputs must therefore be minimized, if not entirely avoided.

Program Objectives

The government's agrarian reform policies under martial law (i.e., agrarian reform-related decrees such as PD Nos. 2 and 27 including the Agrarian Reform Code) are directed principally at fulfilling three objectives: (1) the political objective of preventing the resurgence of widespread unrest among farmers and ensuing violent conflicts and social tension (PD Nos. 2 and 27; Kerkvliet, 1974; Overholt, 1976); (2) the social (equity) objective of bringing about a more equitable distribution

of land and income (Mangahas, et al., 1976; World Bank, 1975), thus also of land-based wealth, status, opportunity and power (ADB, 1978; UNDP, 1979); and (3) the economic objective of increasing agricultural productivity (Mangahas, et al., 1976; Ruttan, 1966; De los Reyes, 1972; and ADB, 1978).

The Program's Assumed or Expected Effects/Outputs

Implied in the agrarian reform program and its objectives are a number of propositions regarding the various tenure arrangements. Mangahas, et al. (1976) outline these propositions as follows:

The first proposition is that the share-tenancy system which has existed over the years is inimical to the general welfare of the tenant farmers and to increased production.

The second proposition is that the share tenant's shift to leasehold arrangements will break his dependence upon his landlord and thus increase his productivity.

The third proposition is that amortizing ownership will break the remaining link between landlords and tillers.

Full ownership of the land has been thought most beneficial to farmers, for it frees them from sharing, rental, and other obligations to their landlords and makes them owners of all their produce. In addition, it is anticipated that landownership will provide farmers with a long overdue measure of social security.

The Program's Actual and Projected Effects/Impacts/Outputs Based on Research Findings

The patterns of landownership and land use in different regions of the world are influenced by the interaction of a complex of factors, namely: (1) the political system and situation; (2) the structure of the economy; (3) the social system; (4) the legal system; (5) the demographic situation; (6) the agricultural system; and (7) the national resource base. By its very context, agrarian reform interlinks political,

economic and social dimensions, all of which have significant implications for development (World Bank, 1975).

In view of the three objectives of the Philippine agrarian reform program, impacts/outputs can be similarly categorized for analytical purposes in terms of the economic, social and political dimensions.

Agrarian reform has been conceptualized as involving changes in: (1) land tenure structure; (2) production structure; (3) supporting services structure; and (4) other related rural institutions such as local government, public administration, rural education, etc. (FAO, 1979). Therefore, the impacts of an agrarian reform program with respect to the above objectives would depend on the actual and specific changes (reforms) introduced in the agrarian system under consideration.

The methodological issue concerning the effect of agrarian reform on agricultural productivity or any of the other objectives essentially revolves around the problem of determining: (1) the separate effect of tenure change (or improvement); (2) the separate effect of a change in the production structure; (3) the separate effect of a change in the supporting services structure; and (4) the combined effects of either 1 and 2; 2 and 3; 1 and 3; or 1, 2, and 3. Appendix H presents a conceptual matrix which was used to help systematize the discussion concerning the various impacts of the program.

Economic Impacts/Outputs

These may be subdivided into impacts on: (1) productivity; (2) marketed surplus and savings; (3) capital formation; (4) income and wealth distribution; (5) effective demand; and (6) employment.

(1) Productivity. Most empirical studies of rice farming fail to find a significant difference in yield (or average productivity or production per unit area) among owner-cultivators, lessees and share-tenants which is due to tenure alone (i.e., (1,1) in Appendix H). The one exception, Takahashi (1972) found that a majority of village farmers have converted to leasehold; that leasehold conversion was accompanied by improvement in farm management, more intensive use of family labor, abandonment of off-farm jobs, increase in average yields, and an overall improvement in the standard of living (Mangahas, et al., 1976; Harkin, 1976). However, there has been a lingering suspicion among analysts that such a productivity increase was due not to the tenure change alone (Appendix H (1,1)) but also to other confounding factors (i.e., actually (7,1) of Appendix H).

The insignificant differences in yield across tenure groups were obtained in both cross-sectional (Estanislao, 1965; Ruttan, 1966) and combined cross-sectional and time-series studies (Sandoval and Gaon, 1971; De los Reyes and Lynch, 1972; Mangahas, et al., 1976), with the latter studies conducted mainly in Nueva Ecija or the whole of Central Luzon where massive conversion of share tenants to reform leaseholders has taken place. Since no significant differences were found with respect to the use of labor and other inputs, as well as the adoption of high yielding seed, the lack of yield difference is attributed mainly to the landowners' participation in making certain important farming decisions (especially regarding the variety to be planted) jointly with the tenant and in providing credit for the purchase of inputs like fertilizer and other chemicals (ILO, 1974).

Thus, expected increases in productivity due solely to changes in tenurial status have weak empirical foundations. On the other hand, what is considered "more important are the potential gains in land productivity that could be expected from a meaningful redistribution of large operational holdings among smaller farms, regardless of type of tenure, so long as the tenure is secure (i.e., (2,1) or (4,1) or Appendix H).

The Asian Development Bank (ADB) notes:

There is . . . enough evidence to show that smallholdings achieve higher per hectare productivity compared with large holdings with traditional technology, mainly due to more intensive use of labor. With the introduction of new technology and its greater requirements for purchased inputs, the association between size of holdings and productivity level is not clear cut. However, the reasons for this relate to the functioning of factor markets and the better access to inputs enjoyed by the large landholders, and not to inherent production efficiencies per se on large farms (p. 14).

However, in the case of the Philippines, it is unlikely for such productivity to be achieved because the reform introduced "breaks up only ownership and does not affect the operating decision unit, which is the tenancy" (Harkin, 1976, p. 22; see also ILO, 1974).

(2) Marketed surplus and savings. A reduction in land concentration through agrarian reform could lead to a fall in the marketed surplus, at least in the short run. Smallholders tend to consume more of their own produce and, therefore, market less per unit of output, than do large farmers; this may necessitate food imports to meet the needs of urban consumers. On the other hand, the additional food consumed by small farm families might have otherwise been purchased if members of the family had moved to the city. The consumption of food by poor growers may also be less costly than the consumption of imported or capital-intensive consumer goods by the better-off farmers (World Bank, 1975).

The evidence suggests that there is no difference in marginal savings behavior among farming households in different size groups in Asian countries (Berry and Cline, 1976) and thus a redistribution of land is not expected to curtail the volume of farm savings (ADB, 1978).

(3) Capital formation. The ILO (1974) has concluded that changes in tenurial conditions cannot of themselves be expected to improve productivity in the short term (because the reform structure has not in fact touched the size of the operating unit), but that productivity may rise in the long run if the new owners invest in their farms. Security of tenure may encourage amortizing owners to invest, either individually or jointly, in irrigation pumps, land leveling, diking, drainage, etc., and thus raising productivity in the long-term (ILO, 1974). Sandoval (1976) reports of "indications in the Philippines that there is nominal capital accumulation in the land reform areas. The Central Luzon study showed that capital investments were made in land and non-land usually in the form of animal stocks, tools and equipment (Sandoval and Gaon, 1971). These investments were made possible due to increased income" (p. 9).

(4) Income and wealth distribution. "Equity" is oftentimes used by economists in the context of agrarian reform to mean an improved distribution of land and land-based income and wealth (ADB, 1978; World Bank, 1975). Sometimes, however, it is also used broadly to mean "the equality of opportunity for employment and the equality of earnings from occupation on the land compared with those from non-farm occupation" (Dalisay, 1972, p. 2; see also World Bank, 1975).

As for the income and wealth distribution impact of agrarian reform, it has been estimated that the potential income gains of share tenants,

ordinary leaseholders, and reform leaseholders under PD 27 would be on the order of 84, 23 and 2 percent, respectively, with a weighted average of about 50 percent (ILO, 1974).

Using a slightly different set of assumptions, Harkin estimates the benefit of land transfer to the share tenant (expressed in present values) to be on the order of P1,267 for an assumed farm size of 1.9 hectares. What is more surprising is his estimate that, with the Land Transfer, the lessee will incur a decrease in annual income of about P108 per ha or P204 per 1.9 ha farm. However, he points out that his estimate of average annual loss to natural disasters needs verification through research, and therefore, caution must be exercised in using them.

Extending the present value analysis to landowners (but this time using a lower rate of time preference of 15 percent), the ILO (1974) estimates that a landowner who used to have share tenants, ordinary leaseholders and reform leaseholders, would suffer a cut in the present value of his income stream of 54, 26 and 12 percent, respectively.

Harkin observes that under a fully enforced leasehold conversion, the loss of value to the landlord is much greater than the loss under Land Transfer because there is no compensation to the landlord for the rent reduction of his lessee while there is almost full compensation for land transfer (p. 21).

(5) Effective demand. Increased purchasing power among amortizing owners is anticipated to lead to an increased demand primarily for wage goods, including food grains as the products of rural industry. Additionally, some decline in demand for consumer goods by landowning families could also be expected. The products that will be affected may be

markedly different from those which ex-tenants will begin to purchase, since landowning demand will tend to be for the products of more capital-intensive and more urban-based producers whereas tenant farmers' demand, at least initially, would be for the products of more labor-intensive and more rural-based producers (ILO, 1974).

(6) Employment. The World Bank (1975) notes that "the cross-sectional evidence of the higher productivity of small farms indicates their long-run equilibrium potential" (p. 217). Equally as important as this relationship, however, is the evidence that the use of labor per hectare is greater on smaller holdings than on larger ones. Moreover, it has been observed that:

. . . the organization of an effective extension-cum-input supply system for small farmers must accompany land reform. Where there is such a system--as in Japan, the Republic of Korea and the Republic of China--the labor absorptive capacity of agriculture tends to be high even though holdings are small; at the same time, output per hectare is high (World Bank, 1975, pp. 217-218).

The reform can also be expected to improve employment through, as mentioned above, the creation of effective demand for products of labor-intensive and more rural-based industries (ILO, 1974, p. 492). Moreover, the settling of landless workers in newly opened areas--a resettlement activity undertaken as integral part of agrarian reform (Estrella, 1978, p. 28)--will likely have a strong positive impact on rural employment (Sandoval, 1976, p. 11).

Social Impacts/Outputs

Land reform has become synonymous with forms of institutional change which could satisfy the emerging demand for equality among people. The ADB (1978) aptly articulates thus:

It is the social leveling aspect of land redistribution which satisfies the equity urge in the sense that a small and well-entrenched elite would lose its claim to the major asset upon which its predominant position in economic matters has been established. From a broader point of view, land reform should encourage the emergence of a more balanced social ordering in which the promise and opportunity for economic mobility become more real, even to the landless (p. 235).

An outside observer has argued that the agrarian reform is the most radical program of the New Society because of its potential social impacts:

The effective severance of tenant-landlord ties due to land transfer, and the substantial severance due to leasehold, will be the aspect of the reform that will bring about the most fundamental changes (Harkin, 1976, p. 23).

Political Impacts/Outputs

In assessing the actual or expected political impact of agrarian reform in the Philippines, the following observation is relevant:

Land reform can change the political balance and the power structure in a country. Reforms have stripped large landholders, whether they were military, religious or private, of their power. It is not surprising then, that land reform is often a central issue in political debates and that these debates are often couched in terms of redistributing political power as well as wealth. The political implications of land reform must be taken into account; ambitious programs of land reform will seldom be implemented unless shifts are made in political sentiment and power (World Bank, 1975, p. 212).

Analyzing the Philippine agrarian reform under martial law, a political scientist made this observation:

The agrarian reform program may bring some gains, at least in the short run, for the Marcos regime insofar as it deflects agrarian unrest by converting a few hundred tenants into very small landowners and by holding out a promise to do the same for thousands more. But for the vast majority of Filipino peasants the major obstacles that stood in the way of meaningful reforms in the past still exist and seem likely to continue . . . Finally, the government bureaucracy, which the elite continues to dominate and which is responsible for the program's implementation, has no meaningful peasant participation (Kerkvliet, 1974, p. 302).

Program Outputs: Integration and Analysis

This section presents an integrated list of program outputs obtained from the various sources. The clarity of the definition of these outputs relative to the program's objectives are examined. Towards the end, an identification is made of the objectives and/or outputs which present potential areas for complementarity or trade-offs which are important for the management system to take into account.

From a review of the values (to be achieved or avoided) underlying the Philippine agrarian reform program as well as of the program's actual and expected outputs, one can derive the program's desired outputs and undesired outputs. These are given in Appendix I in what are considered to be their appropriate units of measurement.

Relative to Economic Objectives

The desired and undesired outputs relative to the economic objectives can be grouped into eight categories (Appendix I), namely:

- (1) Productivity,
- (2) Marketed surplus and savings,
- (3) Capital formation,
- (4) Income and wealth distribution,
- (5) Effective demand,
- (6) Employment,
- (7) Diversion of landlord capital in agriculture to industrial development, and
- (8) Availability of program-sponsored credit.

Under the first category, desired outputs A(1a), Land productivity of rice and corn farms covered by the program, would indicate how

efficiently the scarce land resource (relative to labor and capital) is being utilized towards land-intensive food production. It would also allow analysis of the effect of tenure, size of farm, etc., on yield.

While the program aims at increasing the productivity (output/hectare) of the beneficiaries by removing the constraints of tenure and supporting services, the negative environmental impact of such a program may worsen the quality of life of the target sectors (e.g., disease due to water pollution). Thus, Pollution of ponds, rivers, lakes and ocean due to increased use of polluting herbicides/insecticides/fertilizers, is a counterpart undesired output A(1a) (Appendix I). Based on desired output A(1a), A(1b), Total rice and corn produced in the program area, would provide a basis for measuring agricultural output's contribution to economic growth.

Under the second category, desired output A(2c), Volume of farm savings generated from marketed rice and corn, is based on A(2b), Amount and proportion saved out of income from marketed rice and corn. Under the fourth category, desired output A(4a), Increase in income of reform beneficiaries due to tenure change, should take into account the effect of the following: (a) rent reduction in the case of lessees, conversion of share or lease-rent into 15-year amortization in the case of amortizing owners, or increase in income (relative to opportunity cost) of a settler in a settlement project; (b) new charges for real property tax, irrigation fees, and Samahang Nayon; and (c) allowance for annual loss in yield due to natural causes (e.g., weather, pests and diseases).

Regarding desired output A(4b), Decrease in income of former landlords due to tenure change, the loss in income of the landlord would not

necessarily correspond exactly to the increase of income of the beneficiary because of the role of the Land Bank in providing subsidy to the landlord via the land compensation payment.

In contrast to desired output A(4a), A(4e), Level of beneficiaries' income from agricultural activities relative to income of non-agricultural workers, measures the total income (rather than just the income increase due to tenure change) from all agricultural activities, presumably including income from poultry or livestock enterprises and crops other than rice and corn, as well as from off-farm employment (i.e., as hired agricultural labor). The variable also attempts to capture the state of income inequality between the agricultural sector and the industrial sector.

In view of the peasant organization leaders who mentioned desired output A(4f), Number of beneficiaries who have obtained a homelot, the homelot (another of the land-based wealth owned by the landowner), is part and parcel of the farm⁶ without which the farmer will be greatly incapacitated "like a commuting urban worker without a car". Thus, the homelot must also be subjected to the reform.

Desired output A(4g), Non-land production assets transferred to beneficiaries/cooperatives, is prospective since it is indicative of a more radical agrarian reform than the present wherein, in addition to the farmlot and homelot, land-based wealth (e.g., irrigation, tractor, thresher, farm transportation, warehouse, rice mill, input dealership and rural bank) belonging to the landlord class are "transferred" to

⁶They found support for this claim from Section 24 of the Agrarian Reform Code which considers the homelot as included in the leasehold.

the peasant class. However, there may be instances where such a performance variable can be partially applicable. An example is when irrigation and drainage systems are transferred together with the farm-lot and homelot to the beneficiary covered by PD 27, or in a situation where these functions are taken over by the community or cooperatives.

Other desired outputs cited by respondents are either intermediate outputs (instrumental values), which simply reflect the extent of actual execution of agrarian reform policies, or final outputs (basic values).

The sixth category listed above has to do with employment (Appendix I). Lands are cleared to resettle the landless, thus providing them productive employment (desired output A(6b)). If the newly-opened land is not properly managed, however, soil erosion may be aggravated, reducing the land's productive capacity. Thus, Resettlement-enhanced soil erosion is an undesired output A(6a).

Under the seventh category above, A(7a), Amount and proportion of landlord compensation invested in industries, is a desired output (definitely an instrumental value) based on the policy of diverting landlord capital in agriculture to industrial development (Section 2, Paragraph 1, Agrarian Reform Code).

The eighth category above pertains to the availability of program-sponsored credit (Appendix I). Desired outputs A(8a), Amount and proportion of beneficiaries' credit obtained from program-sponsored sources, and A(8b), Volume of program-sponsored credit obtained by beneficiaries, should reflect the extent to which credit through cooperatives has replaced the credit provided by the landlords--an output based on the objective of "freeing the small farmers from pernicious institutional restraints and practices" (e.g., credit at exorbitant interest rates).

Relative to Social Objectives

The desired and undesired outputs relative to social objectives are combined into two categories (Appendix I), namely:

- (1) Severance of exploitative patron-client relationship, and
- (2) Participation in community affairs.

Note that because of the time lag between the issuance of the Certificate of Land Transfer (CLT) and full completion of the required amortization payments (a period of at least 15 years), desired output B(1a), Number of former share tenants who have become full owners, can be alternatively expressed as number of amortizing owners (or lessees covered by a written and registered leasehold contract in the case of those whose landlords are exempted from Land Transfer). Full ownership would indicate complete severance of the patron-client relationship in tenancy, with the consequent social and political effect permeating society.

Desired output B(1b), Permanency and inter-generational transfer of land ownership, expresses the hope that the land "transferred" to the beneficiaries would not be sold to other farmers or the government, but retained to provide the beneficiaries' needs and eventually transferred to his heirs. Of course, this criterion has yet to be operationalized.

Mentioned and particularly singled out as crucial by peasant leaders, undesired output B(1b), Rate of eviction of tenants, can be considered an unintended consequence of the implementation of PD 27. One often reads of eviction cases in government reports and the newspapers, but such cases have not apparently been quantified as a rate or percentage.

Other outputs related to the severance of the patron-client relationship via land transfer are in the nature of intermediate desired outputs. These are:

- (a) Repayment record on land amortization
- (b) Tenants, landowners and land identified
- (c) Parcellary maps prepared
- (d) BCLP organized and land value established
- (e) Landowners paid (land compensation) and area and amount involved.

Relative to Political Objectives

The desired and undesired outputs relative to political objectives belong to three categories (Appendix I), namely:

- (1) Prevention of agrarian unrest, violent conflicts and social tension,
- (2) Participation in political life, and
- (3) Political independence from landlord.

Under the second category, desired output C(2a), Beneficiaries' active membership in Barangay Council and Samahang Nayan, is a specific example of participation in political life, or the exercise and enjoyment of power. There are many avenues through which the beneficiaries could actively participate in political life. At the village level, the more accessible avenues would be the Barangay Council and the Samahang Nayan. Participation at this level could lead on to issue-oriented exercises of suffrage at the municipal, provincial and national levels. The rest of the desired and undesired outputs on the list are self-explanatory (Appendix I).

If one now compares these desired outputs, which have been derived on the basis of the program's objectives, with those outputs which the MAR reports (1977 Annual Report) to be the outcome of its land tenure improvement activities (Appendix J), it will be noted that the outputs reported by the MAR are conceptualized not in direct relation to the program's ultimate objectives (or more basic values), but to some intermediate objectives (instrumental values), and even the latter are often not well enough defined to be measurable. Placing emphasis on intermediate outputs when reporting accomplishments of the program, however, leaves a knowledge gap concerning the impact of the program on the target sectors: there remains the need to determine how much the achievement of the intermediate outputs has contributed to the attainment of the ultimate outputs. One of the questions that remains to be answered, for example, concerns the comparative impacts of upgrading a settlement versus opening a new settlement, on employment, productivity, and income distribution in a given region and over a given time period. This indicates, therefore, that the outputs of the land tenure improvement component of the program as reported by the MAR are not conceptualized and operationalized in an entirely appropriate manner for the purpose of measuring and evaluating the impact of the program on the target sectors and the rest of society.

In taking account of the program's outputs, another problem becomes obvious: other outputs that are clearly expected of the program are not being accounted for. One of these outputs is number A(7a) in Appendix I, the amount and proportion of landlord compensation invested in industries. While this program objective is explicitly stated in the

agrarian reform code, no output has been reported to indicate the extent to which this objective has (or has not) been accomplished.

From the standpoint of the needs of the Philippine society, it may be ideal for policymakers and planners to have the agrarian system generate as much of all the desired outputs as possible. However, among certain outputs there exist either complementarities or trade-offs. That is, in the case of complementarity, one can have more of both say, output 1 and output 2, whereas in the case of competitive trade-offs, one has to give up part or all of output 2 in order to have more of output 1. Illustrative cases of these complementarities or trade-offs are presented in Appendix K.

From Appendix K, one notes for example, that a General Order aimed at increasing the domestic supply of rice by harnessing the participation of the private corporations in rice production (GO 47) could produce an opposite effect relative to the employment-creation and equity objectives of PD 27 and the agrarian reform code (particularly resettlement) depending on specific policy guidelines set by the government. If these corporations are allowed to take the path of a capital-intensive rather than a labor-absorptive mechanization and if they are permitted to enter into contractual arrangements with agrarian reform beneficiaries which would reduce the latter to mere wage laborers with restricted management participation, then one has a situation where higher productivity is being achieved at the expense of employment and equity (Land Tenure Center, 1977). However, this potential trade-off may be averted if the appropriate policy mix were applied. Within certain ranges of the outputs, it might even be possible to take advantage of a certain degree of complementarity among outputs.

The same may be said of equity versus productivity when one examines Operation Land Transfer and Leasehold with respect to the actual structural changes in the credit delivery system (bottom row of Appendix K).

An example of a trade-off between political outputs is given in the second row of Appendix K. This shows that strong government action to prevent violent upheaval among the peasantry may spark unrest among small landowners (belonging to the middle class) if the latter are badly hurt by the reforms. The government in this case appears to walk on a tight rope: it has to choose the appropriate policy mix with an impact that balances off the two evils, if it cannot altogether avoid them.

Program Performance Variables

Effectiveness of a given agrarian reform policy is oftentimes gauged on the basis of system outputs, in which case the outputs themselves become the performance variables. However, the performance criteria usually go beyond the system outputs as many intangible consequent conditions strongly affect the people's quality of living; also, the criteria may include the system inputs as well as the various economic, social and political constraints.

Program Performance Variables as Viewed by Policymakers, Implementors, and Peasant Organization Leaders

Key informants among the purposive samples of PD 27 policy-making participants, and among OLT implementors covering Region 8, and peasant organization leaders generally consider the desired and undesired outputs discussed earlier as performance variables also. The success of the

agrarian reform policy, according to them, should be assessed in terms of the degree to which the "desirable" has become actual.

Performance Variables Based on Implicit Intangible Objectives

Besides the performance variables which are the desired and undesired outputs, informants add others which they consider important in making living meaningful and worthwhile. The policymakers consider these outputs important, but oftentimes they are not made explicit because they are intangible and illusive; also, these outputs are often perceived as "ultimate" outcomes of the desired outputs.

(1) Socio-Cultural Objectives

- (a) Involvement of farmers in cultural activities (not quantifiable);
- (b) Farmers knowing and understanding the agrarian reform program, its philosophy and its programs;
- (c) Improvement of farmers' skill in farm management; and
- (d) Liberation of farmers from psychological, cultural, physical and institutional bondage, i.e., man-made or natural bondage rooted in tenancy.

(2) Degree of Happiness of the Beneficiaries

This non-quantifiable variable was mentioned by some PD 27 policy-making participants. The indicators of this variable, as perceived by them, are: balanced diet, better dress, better education and better health. Here, the respondents seem to view happiness as a belief (probably a basic value) resulting from the attainment mainly of economic instrumental values.

(3) Social Status of the Beneficiaries

This criterion is probably synonymous with what the ADB has referred to as the "social (upward) levelling aspect of land redistribution . . ." (ADB, 1978, p. 235). However, this needs to be defined in an operational manner in order to be measurable.

Somewhat related to this social status criterion is another performance variable (mentioned by some peasant leaders) presumably reflecting the expectations which the agrarian reform beneficiaries hold about the agrarian reform implementors: that these implementors would approach and treat them as valuable citizens as well as exert extra effort in getting them convinced about, and united behind, the program. It is the desire to be accorded respect and dignity.

(4) Change in Attitudes of Former Landlords and Tenants

The attitudinal change expected on the part of the tenants relates to his feeling of being independent and free which, in turn, may give him the motivation to become resourceful and hard-working in his farming endeavor. On the other hand, the expected attitudinal change on the part of the landlord has not been specified by respondents who cited this performance variable.

Performance Variable Based on System Outputs, Inputs and Constraints

Another performance variable for the agrarian reform program, mentioned by PD 27 participants, is based not only on the previously-defined program outputs but also on other relevant factors. This performance variable or criterion is in the nature of a Benefit/Cost analysis. The essential features of this criterion can be described as follows:

The measure of success/failure is the extent to which the target population has been alleviated by the benefits, given the resources used which are valued at their opportunity costs. In other words, success must be viewed relative to what could be accomplished in alternative programs or alternative ways of accomplishing the same objectives using the same bundle of resources.

- (1) The target population (or target sector) is defined to be the lowest element in the population in the rural area (i.e., farmers in the Philippines);
- (2) Benefits are expressed in terms of increase in the levels of living, status, etc. of the target population (as defined in 1);
- (3) The resources whose use are to be accounted for are: power (of the top program implementor), money, time, etc.; and
- (4) Costs are expressed as opportunity costs of the resources as defined in 3.

Program Policy Inputs or Policy Instruments

As discussed in Chapter 2, a system's performance is influenced by a number of variables, namely: (1) controllable inputs; (2) non-controllable inputs; (3) system design parameters; and (4) environmental (exogenous) inputs (see Figure 8). However, of these variables, only the controllable inputs and the system design parameters are under the control of the policymaker. Hence, they are commonly referred to as policy inputs or policy variables or policy instruments. These two types of policy instruments differ from each other in terms of the time dimension: Controllable Inputs are short-run policy instruments and are, therefore, varied more often than the System Design Parameters which are long-run policy instruments. Where the system under control is well in place (thus, the system design parameters have already been fixed), short-run "fine tuning" of the plant/system (Figure 8, Chapter 2) is accomplished using the controllable inputs.

It is important for policymakers not only to know the whole range of policy instruments which they can manipulate to "steer" the system along the desired "course" but also to understand the actual or expected impact(s) of these variables on the target sectors when applied singly or in combination (i.e., as a policy mix). As explained earlier, the attainment of program objectives depends to a large extent on the rational choice and implementation of these policy instruments.

The purpose of this section has been to identify the various policy instruments which agrarian reform policymakers in the Philippines have used under martial law. In addition, the various policy entry points or the offices and officials with the authority, jurisdiction and responsibility to use these policy instruments are identified. As pointed out earlier, this brings the discussion to the issue of system controllability, one of the important issues to consider in the design of an information system.

In identifying the various policy instruments, a logical starting point would be an analysis of the responses to interview questions on the subject among PD 27 policy-making participants, implementors covering Region 8 and peasant organization leaders. Besides the questions on performance variables, respondents were also asked two succeeding questions on policy inputs and policy entry points as follows:

Policy Inputs

There are specific policies which policymakers could introduce or change in order to influence the performance or output of a program. With respect to our agrarian reform program, what are these specific policy inputs?

Policy Entry Points

What agency and who in the administrative structure of the program have the authority, jurisdiction and responsibility to determine these specific inputs?

The responses, along with the information on the decision-making structure of the program (see first part of this chapter), provide the basis for the derivation of the more detailed list of policy instruments presented in Appendix L. Also indicated in this Appendix are: (1) policy issuances (i.e., PD or LOI, etc.) containing the specific policy instruments; (2) categorization of each policy instrument into controllable input (short-run policy instrument) or system design parameter (long-run policy instrument); (3) policy entry points; and (4) programs and operations through which these policy instruments are being implemented.

The concern here is not to make a complete list of all the relevant policy variables in Philippine agrarian reform under martial law. Rather, it is to illustrate the point that in this program, policymakers are dealing with a large number of policy instruments some of which are routine in nature (e.g., budget allocation to various agencies, levels and timing of credit support) while others involve complex but more long-lasting institutional changes, non-market changes which redefine the rights and responsibilities of people with respect to land. The latter type of policy instruments could result in a socio-economic restructuring of society by changing the "rules of the game" (Schmid, 1978). Hence, these variables are appropriately termed system design parameters because they are useful, in effect, in redesigning the structure of the social system which is called the agrarian system.

Another important conclusion that can be derived from the responses and Appendix L is that the Ministry of Agrarian Reform, while regarded as the Ministry responsible for overseeing the whole agrarian reform program (and hence, presumably responsible for its success or failure),

does not have full control over all the various critical policy inputs that affect the performance of this system. In the so-called integrated approach to agrarian reform, the only component over which the MAR has a relatively better control is the Land Tenure Improvement. This includes OLT, Leasehold, resettlement and training operations. This observation is an important point to consider in deciding "for whom?" to design the program's information system, a topic which will be dealt with more fully in Chapters 8 and 9.

Summary

This chapter has presented a description and analysis of the Philippine Agrarian Reform Program in a feedback-control-system framework. The underlying purpose has been to understand the agrarian reform policy-making structure under martial law. Toward this end, the inner operations of the management and information components of the Agrarian Reform (feedback control) system were examined at considerable detail and the program outputs, performance variables and policy inputs identified.

The agrarian reform policy-making structure is seen as embedded in the entire national policy-making structure dealing with the entire range of governmental concerns from nutrition to tourism. The next chapter discusses the case of PD 27 formulation to illustrate how the policy process operates within the agrarian reform policy-making structure.

CHAPTER 5

THE DYNAMICS OF AGRARIAN REFORM POLICY DECISION-MAKING UNDER MARTIAL LAW

One of the five components of the Philippine Agrarian Reform Program, as discussed in Chapter 3, is Land Tenure Improvement. This component includes Operation Land Transfer (OLT), the single most massive operation ever undertaken by the government to turn sharecroppers into amortizing owners and eventually full owners. OLT is a scheme for implementing Presidential Decree (PD) No. 27, the basic tenant emancipation decree under martial law. With this decree, the President declared the agrarian reform program as the "cornerstone" of the "New Society".

The other components of the program (e.g., physical and institutional development) are equally as important as land tenure improvement in bringing about a synergistic impact on wealth redistribution and increases in productivity in the rural areas. Nevertheless, land tenure reforms or improvement is considered the basic prerequisite for a successful agrarian reform. Without first correcting the defects in land tenure, the development of supporting services such as credit and marketing can only aggravate the income disparities in the rural communities.

It was in recognition of the foregoing that, when the need arose to narrow the scope of this research to reasonable size, the decision was made to focus on PD 27 and OLT (as implemented in Region 8) as the primary subjects of the case study.

Formulation of PD 27: A Case Study

Core Decision-Making Participants

Sector and Affiliation

It was the President's decision and responsibility to issue PD 27. However, several persons in various departments of the government and the private sector were involved in the policy-making process that culminated in its issuance.

Using the reputational panel approach, 22 persons were identified as the core decision-making participants in the formulation of PD 27. Their sector and agency affiliations are summarized in Appendix Table A.1.

As this table indicates, only 10 of 22 core decision-making participants were interviewed. Out of the ten, curriculum vitae were obtained from six. Four of the six were from the MAR; the remaining two were from the private sector (Table 2). Those whose curriculum vitae could not be obtained were either not easily accessible for follow up or, if they were accessible, were unwilling to provide the information.

Sex and Age

All core decision-making participants were male. The six with curriculum vitae (and from whom data on age and other characteristics were therefore available), range in age from 44 to 71 years (Table 2). Retirement age for government employees in the Philippines is 65. Table 2 shows this.

Table 2. Sex and Age of Sample Core Decision-Making Participants Who Submitted Curriculum Vitae

Sector/Agency	Sex		Age (years) ^a			
	Male	Female	41-50	51-60	61-70	71-80
Public						
DAR	4	-	2	1	1	-
Private	2	-	-	-	-	1
TOTAL	6	-	2	1	1	1

^aThe age of one participant from the private sector was neither shown nor can be determined from his curriculum vitae.

Educational Background

Table 3 presents participants' formal educational attainment. The formal educational background of the policy-making participants provides an indication of their perspectives as analysts of the country's agrarian reform problems. However, their knowledge base may have also been influenced by their work experiences and their exposure to in-service training, as well as local and foreign travels. For example, the subset of the core decision-making participants interviewed reveal an impressive range of work experiences, a wealth of in-service training undertaken in their respective areas of specialization, and considerable exposure to various other knowledge sources. Those occupying higher positions in the department, such as at the level of Assistant Secretaries, have higher frequency of travel to other countries.

Table 3. Educational Attainment of Sample Core Decision-Making Participants Who Submitted Curriculum Vitae

Sector/Agency	Educational Attainment				
	Post-Graduate Certificate/Diploma	M.S./M.A. Candidate	M.S./M.A.	ABD [*]	Ph.D.
Public					
DAR	1	1	2	-	-
Private	-	-	-	1	1
TOTAL	1	1	2	1	1

^{*}All but dissertation.

Principal Features of PD 27 as a Policy Output

It is important to describe the principal features of PD 27 mainly because these features will later be referred to in discussions on the relative influence of the different policy-making participants in shaping the distinctive features of the decree.

Emancipation Thrust

Agrarian reform under martial law has generally been considered as more radical than previous reforms because of its emancipation feature. Unlike Republic Act 3844 of 1963 which sought to improve the tenure of share tenants by having them undergo a transitional but "learning stage" as lessees prior to eventual land ownership, PD 27 shortens the process by automatically converting share tenants and lessees directly to amortizing owners. The tenants, by fiat, are immediately "deemed owners" of the land they till, thus "emancipating" them from the age-old bondage of

tenancy. In conceiving the tenants as capable of complete independence from their landlords, the decree also views lease-tenancy an unnecessary intermediate step towards full land ownership.

Coverage

PD 27 specifically affects "tenant-farmers of private agricultural lands primarily devoted to rice and corn under a system of share-crop or lease-tenancy, whether classified as landed estate or not" (MAR, 1978, p.2). In contrast, PD 2 (which reaffirmed RA 3844 as amended by RA 6389) and other previous laws (e.g., RA 1199 covers coconut plantations) extended agrarian reform to all other crops throughout the country.

Farm Size

PD 27 provides that tenant farmers

shall be deemed owner of a portion constituting a family-size farm of five (5) hectares if not irrigated and three (3) hectares if irrigated (MAR, 1978, p. 2).

Landlords' Retention Limit

Landowners

in all cases may retain an area of not more than seven (7) hectares if such landowner is cultivating such area or will now cultivate it (MAR, 1978, p. 2).

Land Valuation

To determine the cost of the land to be transferred to the tenant-farmer, PD 27 articulates that

the value of the land shall be equivalent to two and one-half ($2\frac{1}{2}$) times the average harvest of three normal crop years immediately preceding the promulgation of this decree (MAR, 1978, pp. 2-3).

Tenant's Amortization Obligation

The decree specifies that

the total cost of the land, including interest at the rate of six (6) percent per annum, shall be paid by the tenant in fifteen (15) years of fifteen (15) equal annual amortizations (MAR, 1978, pp. 2-3).

Limits on Transferrability of the Land

PD 27 provides that

Title to land acquired pursuant to this Decree or the Land Reform Program of the Government shall not be transferable except by hereditary succession or to the Government in accordance with the provisions of this Decree, the Code of Agrarian Reforms and other existing laws and regulations (MAR, 1978, pp. 2-3).

Tenant's Membership in a Farmer's Cooperative

PD 27 mandates the tenant's compulsory membership in a farmer's cooperative by providing that:

No title to the land owned by the tenant-farmers under this Decree shall be actually issued to a tenant-farmer unless and until the tenant-farmer has become a full fledged member of a duly recognized farmer's cooperative.

In case of default, the amortizations due shall be paid by the farmers' cooperative in which the defaulting tenant-farmer is a member, with the cooperative having a right of recourse against him (MAR, 1978, pp. 2-3).

A Broad Policy Statement

Even though PD 27 appears to contain fairly specific provisions, such as those given above, the eight core policy-making participants interviewed viewed it as a broad policy statement. Their reasons are given in Table 4. Except for one who interprets the decree as "broad" in terms of its impact on income distribution in society, all the rest

Table 4. Respondents' Reasons for Considering PD 27 as a Broad/General Policy Statement

Sector/Agency	Reasons
<u>Public</u>	
Office of the President	It does not affect only one person but a broad sector of our landowners. In other words, if this were a tax law, those who could afford are the ones affected and not the small people. And as the President said, he is just trying to uplift the living condition of the poor into more or less a middle-class.
Dept. of Agrarian Reform	It's really what a policy should be. The details should be taken care of by the implementing arm. It leaves enough elbow room for policymakers to interpret. Now, we are still formulating rules to carry it out. It is still subject to the promulgation of a detailed rules and regulations for its implementation. It is as any policy generally should be, i.e., short; clearcut; serves as a framework for implementors to design ways and means to implement it; firm but flexible and with room for maneuver; and enumerating the important points. I think it should have more details. There are so many details that are needed to implement it. When PD 27 was promulgated, the first thing that we needed was to prepare Rules and Regulations to implement it. While it lacks certain details that need to be implemented by Rules and Regulations, it authorizes the DAR Secretary to promulgate such Rules and Regulations. If you look at the Decree, it's very short. It was short enough for the President to put it in his own handwriting. There were some details in the policy as stated, but it is still definitely broad. And it is elastic. They made it elastic in the sense that, I think, there was an amendment that they did. There were 2-3 already. They were introducing amendments to it, where now, they are declaring land reform in all kinds of crops. So they tried to make it bigger.
<u>Private</u>	

consider the decree broad from the standpoint of implementation, i.e., broad and short, for reasons such as "for the President to put it in his own handwriting" and "to leave enough elbow room for policymakers to interpret".

The Policy-Making Process

Presidential Decree 27 was promulgated on October 21, 1972, one month after the declaration of martial law. At the time this study was conducted, the country was in its fifth year under martial law. To reconstruct the unfolding of the policy-making process five years earlier required piecing together the recollected accounts of the various policymakers who claimed to have been involved in the process. The aim was to arrive at an approximate description of the process.

The Presidential Economic Staff

The policy-making process on agrarian reform began soon after the declaration of martial law with the President instructing the Presidential Economic Staff (PES) to prepare background materials on agrarian reform. Within the next two days, the Agricultural Staff of PES came up with a report which defined the country's agrarian problems and indicated several policy alternatives for solving them. The PES document presented the President with several policy options. An extreme policy option was a recommendation by the bar association which virtually amounted to land confiscation. Another alternative pushed for what was considered the promotion of social justice. Particularly, it recommended proper compensation to the landowner even if all the tenanted rice and corn lands were to be transferred to the actual tiller. In successive meetings with the

Executive Secretary, Assistant Executive Secretary and other members of the Cabinet, the President finally opted to consider this latter alternative.

The President's "Think Tank"

Until the President invited two consultants from the private sector to assist the PES and other members of the Cabinet (principally, the Secretaries of Agriculture, Justice and Finance) draft a decree that would improve the implementation of land reform, the decision-making process was mainly confined to the President's official family. The two consultants together with the PES and the Secretaries of Agriculture, Justice and Finance soon after formed the President's "Think Tank" on agrarian reform. The group was also known as the "Tavanlar Committee".

The Committee participants held divergent views on the issue of retention, some favoring total confiscation while others favored the landowner's holding on to some portion of the land. The final draft which the Committee submitted to the President, even after consultation with landowners, nevertheless proposed a no-retention scheme.

MAR's Drafting of Decree

Meanwhile, a draft of the Committee's proposed decree was sent to the MAR, which was asked to submit its own version of a proposed decree. Within the MAR, the drafting of the decree was delegated to the BALA Director with the concurrence of the Head Executive Assistant and other legal experts. However, their area for policy manipulation was circumscribed by some fixed principles built into the draft decree produced by

the President's Think Tank. These principles involved: (1) land valuation; (2) cooperatives; and (3) limits on transferrability of the land.

The following sequence of activities accordingly typifies the decision-making process that transpired in the MAR: (1) staff discussion; (2) writing of first draft; (3) staff discussion on first draft; (4) opinions of outside experts (e.g., U.P. Law Center) sought on problematic areas; (5) second draft written, incorporating outcomes from staff discussion and consultations with outside experts; (6) staff assessment of revised draft; (7) revision and writing of third and final draft; and (8) submission of third draft to Malacañang.

In Malacañang, the President subjected all the final drafts to further discussions with his immediate staff. On the advice of PES, he made up his mind that a certain area must be retained by the landowner. Then, in the final wrap-up of his ideas on the configuration of the decree, he probably sought final inputs from his close adviser(s) in Malacañang.

About a month after work on the draft started, the President issued PD 27 in his own handwriting in a televised and widely publicized ceremony in the Maharlika Hall of Malacañang. Representatives from the various sectors of society, including tenant farmers, were on hand.

In terms of the broader information-system framework, this section has described the policy-making process in the policy-making sub-system and the output resulting from the process (i.e., PD 27). The succeeding section focuses on the inputs into the policy-making process.

Data/Information Inputs to Policy Formulation

Relative Contribution of Policy-Making Participants to the Features of the Decree

PD 27 is a policy output which emanated from a decision-making process whereby various individuals and/or groups contributed personal as well as collective opinions, ideas, and recommendations. Because of this, it may be difficult to pinpoint whose ideas eventually shaped or formed various features of the decree.¹ Moreover, because the President, who was solely responsible for its contents, personally wrote the decree, all of its features may be simply attributed to him.

However, various individuals had been behind the process. On the basis of the in-depth interviews with the core policy-making participants, it has been possible to determine who of the participants appear to have influenced particular features of the decree.

Out of the ten core decision-making participants interviewed, only nine were asked about their specific contributions to the drafting of PD 27. These contributions were in the form of data/information provided as inputs into the decision-making process or in terms of policy recommendation(s) or prescription(s) embodied in the provision(s) of the decree. Of those interviewed, three claimed making specific recommendations which now formed part of the decree. One of these three came from the public sector (PES); the other two were from the private sector (Table 5). Their specific contributions/recommendations, along with all others interviewed, are shown in Table 5. Interestingly, the two consultants from the private sector also claimed having made recommendations which were not incorporated in PD 27.

¹This contrasts with the legislative process in congress where the sponsor of a bill or any amendment(s) to it are easier to identify.

Table 5. Relative Contributions of Nine (9) Core Policy-Making Participants to the Features/Provisions of PD 27

Sector/Agency	Number of Persons Whose Contributions Are Now		Description of Contributed Data/Information/Prescription/Recommendation to the Features/Provisions of PD 27
	Part of the Decree	Not part of the Decree	
Public			
Office of the President	1	6	*Recommended in his report to the President that, in view of the President's thinking on the promotion of social justice, proper compensation should be considered even if all the tenanted rice and corn lands were to be transferred to the actual tiller
PES	1	-	*Indicated to the President that a certain area should be retained by the landowners
Legal Office	-	1	-Participated in the extensive discussion of the portion about transfer of ownership from the landowners to the tenant-farmer. "We have discussed thoroughly the method used in Taiwan of which I have little personal knowledge."
DAR	-	5	-Could not exactly recall the exact nature of his participation -Provided certain ideas on the concepts of the transfer -"I have not much participation, but I got the opportunity of explaining certain matters that would clarify certain concepts." -"This was a result of collective thinking and the decision of a collective body . . ."
			-Supplied the basic data for decision-making
Private			
Individual Citizen	2	-	*Prepared the first draft of PD 27 wherein the following sections are included: a) retention area, (b) amount of payment, c) mode of payment, and d) valuation *Drafted the wordings "Emancipation of the farmers from the bondage of landlordism" -Recommended zero retention; argued against retention of land -Presented to the Think Tank his idea about full payment rather than installment *Proposed to the President the land valuation formula of "2½ times the average harvest of three normal crop years . . ." and the amortization obligation of the tenant -Proposed a 6-hectares retention -Objected to the compulsory membership of the tenant in a farmer's cooperative on the ground that there was no viable cooperative system to speak of at that time
Agricultural Consulting Firm	1	-	
TOTAL	3	6	

* Incorporated in the decree.

- Not incorporated in the decree or cannot be pinpointed.

Moreover, there was a consensus among the respondents that the President worked out the final version of the decree and that the retention area of seven hectares was his personal choice because, supposedly, seven is his lucky number. Both members of the Think Tank and the MAR group assert that there are features in the decree that were not included in the drafts which their respective groups submitted to the President.

More than likely, therefore, the President adopted and combined parts from both proposals, added his own ideas and/or those of his closest advisers in Malacañang, to make up the whole PD 27.

Kind, Source, Channel and Quality Indications of Data/Information
Used/Provided by Participants

Given the specific recommendations/prescriptions which were contributed by the policy-making participants, it is necessary to work back through the information system to identify the various data/information used by participants in arriving at their prescriptions. In so doing, the analytical and data systems which are the sources of these data/information are also identified.

Table 6 shows the kind, source, channel and quality of the data/information used/provided by the policy-making participants interviewed. The breakdown of the participants on this table is made to parallel the presentation on Table 5 in order to facilitate the side-by-side use of the tables in tracing through the flow of the data/information.

It may be noted in Table 6 that the participants whose prescriptions were eventually incorporated in the decree (Table 5) also had considerable experience from which to draw knowledge that formed the basis of their prescriptions. For example, the policy-making participant from the PES claimed having had the basic information in his mind to make the

Table 6. Kind, Source, Channel and Quality Indications of Data/Information/Prescription Provided to the Committee Drafting the Decree or to the President

Sector/Agency	Number of Respondents	Data/Information/Prescription Provided			
		Kind	Source	Channel	Quality
<u>Public</u>		<u>7</u>			
Office of the President					
PES	1	Providing compensation to landowners	Self-"I had the basic info in my mind since I had been dealing w/ this for a long time."	Self	-
Legal Office	1	Providing certain area for landowners to retain	Self-experience in the drafting of previous laws and little personal knowledge of Taiwan	Self	-
DAR	5	Area; No. of tenants; landowners (in leasehold areas)	Public-DAR Project Team	Group-through regular administrative channel	-
		Attitude of tenants in the field & services req'd by them; has. of tenanted rice & corn land; & No. of tenants to be affected	Self-Relied mostly on experience w/R.A. 3894 Public-Land Authority & NLRC; Under LRPA: BAEExt, BAEcon, OTAC, ACA, Ag. Census	Group-formal reports from LRPA fieldman Mass Media-Published 1960 Ag. Census	Data was not sufficient; covers only few towns 1960 Ag. Census data was the most reliable source on tenanted rice & corn land
		Legal information	Public-as a lawyer, his own readings on decisions & also readings on land reform in other countries, e.g., Taiwan, TVA in the US (on administration) & Japan	Mass Media-published books	-
		How many estates were purchased; how many were surveyed & so-on	Public-Land Authority statistics	Mass Media-Pamphlets	Need improvement; have to add new statistics; Need to have updated statistics
		Raw data on landholdings & ownership especially on 24-ha. Homestead Law	Self-The wealth of info that a person has Public-info provided under Homestead Law; Records of the BL; Congressional records; UP Law Center; Legal consultant to the LBP; DAR consultants	Self Group-BL Director was invited to DAR Committee; & so were consultants from the UP Law Center & consultants to LBP & DAR Mass Media-Homestead Law & congressional records are public documents	-
		Tenanted land area; No. of tenants in rice & corn lands; No. of landowners; % of tenanted area belonging to a farm-size category, etc.	Public-Ag. surveys of BAEcon	Mass Media-published report of BAEcon's ag. surveys	-
<u>Private</u>		<u>2</u>			
Individual Citizen					
	1	Tenancy system; tenancy situation in Central Luzon particularly % of tenancy in Pampanga & Nueva Ecija	Self-stored in memory; was administrator of land reform in the 1950s Public-DA; McMillan report on Central Luzon 1950-1952	Self Mass Media-McMillan report is published	McMillan report is very well done; exhaustive intensive & conclusions were valid at the time it was done & even in 1972
		Size of landownership	Public-BCS & BAEcon	Personal-Technical staff backstopping the Committee	-
		Recommended zero retention; argued against retention	Self-Experiences & studies in the past	Self	-
Agricultural Consulting Firm	1	6-ha. retention	Self-past knowledge	Self	-
		Land valuation (i.e. "2.5 times . . .")	Self-common knowledge of Taiwan experience	Mass Media-Taiwan experience is written up well	-
		Payment period of 15 years	Self-his own calculation	Self	-
		Interest rate of 6% on land amortization	Self-his own calculation	Self	-
		Objected to compulsory membership of the tenant in a farmer's cooperative	Self	Self	-

Abbreviations: DA - Department of Agriculture
DAR - Department of Agrarian Reform
LRPA - Land Reform Project Administration
NLRC - National Land Reform Council
BAEExt - Bureau of Agricultural Extension
BAEcon - Bureau of Agricultural Economics
OTAC - Office of the Agrarian Counsel
ACA - Agricultural Credit Administration
TVA - Tennessee Valley Authority
BL - Bureau of Lands
BCS - Bureau of Census and Statistics
JP - University of the Philippines
LBP - Land Bank of the Philippines
R.A. - Republic Act

prescription since he had been dealing with land reform for a long time and land reform has been his continuing concern.

The private sector participants (bottom rows of Table 6) shared similar views. One of them admitted having the information stored in his memory, which was partly derived from his experiences as administrator of land reform in the 1950s. In addition to his educational background, the same person had considerable experience as advisor on land settlement and community development in other Asian countries.

Summary

This chapter has described the formulation of PD 27, a case of a policy-making process under martial law. The process, which took place in the Agrarian Reform Policy-Making System, involves the use of information as an input brought to bear on the policy problem(s) by the policy-making participants. As an output of the policy-making system, PD 27 can be viewed as a public prescription for solving public problem(s).

However, it is one thing to formulate a policy and another to implement it. A policy is useless if it is not effectively implemented. The next chapter examines how the policies laid down in PD 27 were implemented through Operation Land Transfer (OLT).

CHAPTER 6

PD 27 IMPLEMENTATION AND THE OLT INFORMATION SYSTEM

This chapter focuses on Operation Land Transfer (OLT) and aims to establish the input/output linkages among the components of the agrarian reform feedback control system. The description of OLT related inputs/outputs, structure and processes will, therefore, move backwards from the planning and implementation sub-component to the policy-making, analytical and finally, data sub-components. This OLT case analysis forms the background for the problem identification effort in Chapter 7.

Initial Attempt to Translate a Broad Policy Into Operational Policies

Committee on the Formulation of Rules and Regulations Implementing PD 27

Immediately after the issuance of PD 27, the Secretary (now Minister) of Agrarian Reform, who has the authority to promulgate the rules and regulations implementing PD 27, formed a committee to formulate such rules and regulations. The committee was composed of key officials and some technical staff of the MAR, a mixture of lawyers and non-lawyers. In the course of the committee's work, however, various other groups were invited to contribute to the pool of knowledge considered necessary to draft the rules and regulations. Among these were: (1) officials of other agencies who would be involved in the implementation; (2) peasant

leaders; (3) domestic consultants from both the public (e.g., U.P. College of Law, U.P. Agrarian Reform Institute) and private sectors; and (4) foreign advisers (USAID consultants) with experience in land reform.

Policy Proposals and Actions Taken

The committee completed drafting the rules and regulations implementing PD 27 in approximately one month. This was then presented for Presidential action. A political analysis by the President's staff indicated areas of incongruence between the draft and the President's thinking particularly on the issue of retention. The President, therefore, disapproved the draft which would have made zero retention possible, thereby avoiding potential conflict with small landowners. Thereafter, the implementation rules and regulations were issued by Presidential fiat step-by-step. Nevertheless, it has been estimated that, although the document originally submitted by the committee was not approved en toto, a majority of the less controversial provisions have been implemented.

Operation Land Transfer

In confining the discussion to Operation Land Transfer (OLT), one is looking at the Land Tenure Improvement component of the entire Agrarian Reform Program. The information system associated with this component, which is the focus of the analysis, is not to be confused with the information system for the entire program described in Chapter 4.

The Agrarian Reform Coordinating Council

Among the first administrative steps taken by the Minister of Agrarian Reform was to convene the Agrarian Reform Coordinating Council (ARCC)

and draw up a Memorandum of Agreement among the cooperating department heads. Articulated in the Memorandum were the job allocations and specific assignments of the agencies involved in the agency head's own handwriting. The agreed upon time table for OLT was a three-year period from 1972 to 1975. The targets, based on MAR's benchmark data, were some 1 million tenants and 1.3 million hectares of rice and corn land (Estrella, 1974).¹ All agencies involved, that is, BL, LRC, LBP, etc., had to align their respective agency plans according to the targets.

Pilot Municipalities/Provinces

Agrarian reform under PD 27 was such a complicated and controversial program that its implementation could not be left to chance. The administrative machinery, unused to the new and potentially more radical approach, needed experience to develop operational strategies and attune itself to the new tasks. The program leadership, therefore, decided to set up pilot municipalities and provinces in various parts of the country. It envisioned that those projects would provide the experience necessary for drawing up realistic implementing rules and regulations.²

The OLT implementation strategy was to proceed by priority areas starting with the 17 municipalities in 10 pilot provinces where tenancy had been generating social unrest, and expanding in scope to become

¹These benchmark data, the basic source of which is not indicated in published sources, appear to have been derived from the agricultural surveys of the Bureau of Agricultural Economics, as revealed in an interview with a MAR official (see Chapter 5, Table 6; also Guangco, 1978, p. 2). However, it was later confirmed to have been based on the 1960 Census of Agriculture (see Chapter 7).

²Cf. Presidential Memorandum to the Secretaries of Agrarian Reform and Finance dated November 25, 1972 and LOI No. 46 addressed to the Secretary of Agrarian Reform dated December 7, 1972.

nationwide in 1975 (Table 7) (Casanova, 1978; LOI No. 46 and MAR Memorandum Circular No. 17, 1973). Within the priority areas, implementation was carried out in stages according to land-size priorities. First to be parcelled out were lands measuring 100 hectares and above, followed by lands 50 hectares and above. Next were lands 24 hectares and above, then lands above seven hectares. Finally, by late 1976, the OLT coverage was extended to lands measuring seven hectares and below. Provisions were made for a certain category of landlords to retain seven hectares of their tenanted rice and/or corn lands which would henceforth be under leasehold.³

The Certificate of Land Transfer

The implementors saw a need to break a psychological deadlock to show the tenants that the government meant business in order to win the tenants' participation and get the momentum of the program going. This motivation facilitated an innovation that was to be manifested in the concept of a Certificate of Land Transfer (CLT). With the tenant-tillers having been "deemed owners" of the land they till by virtue of PD 27, a CLT issuance was the fastest means devised for giving the tenant-tiller an immediate legal claim to ownership. In contrast, if the land were to be titled in the traditional way (Torrens System), no title would be issued to a tenant until he had fully paid for the land, implying a waiting period of some 15 years.

³Those who do not own other agricultural lands of more than seven hectares in aggregate areas or lands used for residential, commercial, industrial or other urban purposes from which they derive adequate income to support themselves and their families (Section 1, LOI No. 474 dated October 26, 1976).

Table 7. OLT Pilot Provinces and Municipalities

Provinces	Municipalities
1. Isabela	1. San Mateo 2. Guimba
2. Nueva Ecija	3. Zaragosa 4. Bongabon
3. Bulacan	5. Plaridel 6. Calumpit
4. Laguna	7. Biñan 8. Calamba
5. Camarines Sur	9. Tigaon
6. Iloilo	10. Pototan 11. Dingle
7. Tarlac	12. Concepcion 13. Capas
8. Pampanga	14. Mabalacat 15. Minalin
9. Cebu	16. Carcar
10. Leyte	17. Kananga

Source: DAR Memorandum Circular No. 27, Series of 1973, dated October 25, 1973.

CLT was therefore conceived as a document to simulate a title, something which the farmer could immediately point to as proof of his vested right to the land he tills (Cf. Estrella, 1974).⁴ A CLT is issued to the tenant who has been listed and identified as the actual tiller of the land (Estrella, 1974). Meanwhile, he continues to amortize the land and, upon full payment, is awarded an Emancipation Patent which is equivalent to a land title.

In MAR's view, for all intents and purposes, tenants of rice and corn lands were emancipated on October 21, 1972. In fact, the administrative documentation, titling, payment and other processes being carried out through OLT have yet to be accomplished.

However, the early emphasis on the quantity of output (i.e., number of CLTs distributed) had to give way to a concern for the quality of that output in 1976, when it became clear to OLT planners that a major proportion of their output was plagued with erroneous data (Cf. Guangco, 1978, p. 3). The realization prompted an attempt to improve the quality of the OLT's data output (Pilot Project Systems & Procedures Committee, 1977) (see discussion on data system on OLT, this chapter).

The Implementing Processes

OLT involves complex processes culminating in three key events:

- (1) granting by the MAR of the Emancipation Patent to the tenant-tiller;
- (2) full (land) compensation of the former landlord by the Land Bank;

⁴Under PD 266, dated August 4, 1973, CLTs are "registerable as valid evidences of ownership" and a recipient can use such CLT as collateral for loans from any financing institution (in an amount not less than sixty percent (60%) of the value of the landholdings as determined under PD27) for the "improvement or development of the farmholding or the establishment of facilities that will enhance production or marketing of agricultural products or increase farm income therefrom" (PD 315 dated October 22, 1973).

and (3) complete collection by the Land Bank of the full land amortization payments due from the tenant-beneficiary. To have a systematic basis for identifying and analyzing OLT-information system problems, these OLT implementation processes/activities are described under five phases, namely: (1) Identification; (2) Land Valuation; (3) CLT Issuance and Distribution; (4) Payment; and (5) Collection.⁵

Identification Phase

Operation Land Transfer (OLT) starts with the specification of priority areas for OLT implementation by land-size category. This is done by the MAR Central Office (MARCO). The Office issues directives to the MAR Field Teams (MARFTs), the MAR Regional Offices (MARROs) and the MAR District Offices (MARDOs) to conduct identification operations (Figure 18).

MARFT identifies tenant-farmers and their respective landowners with landholdings of tenanted rice and/or corn lands. They are advised by MARFT to accomplish and submit the Landowner's Identification Sheet (LIS) and Basic Information on Landholdings (to be submitted by the Landowner to COLT) (Appendices M and N) within ten days from receipt thereof. Upon submission, MARFTs evaluate the same and segregate the LISs of those who may want to exercise their retention right. Signed undertakings under oath are required for all small landowners, with or without retention rights.

While awaiting the submission of LIS by small landowners, the MARFT gathers technical data (from documents of ownership such as titles,

⁵Unless otherwise stated, the description in the text of these five phases is a slightly-modified adaptation of Berte, 1976, pp. 47-52.

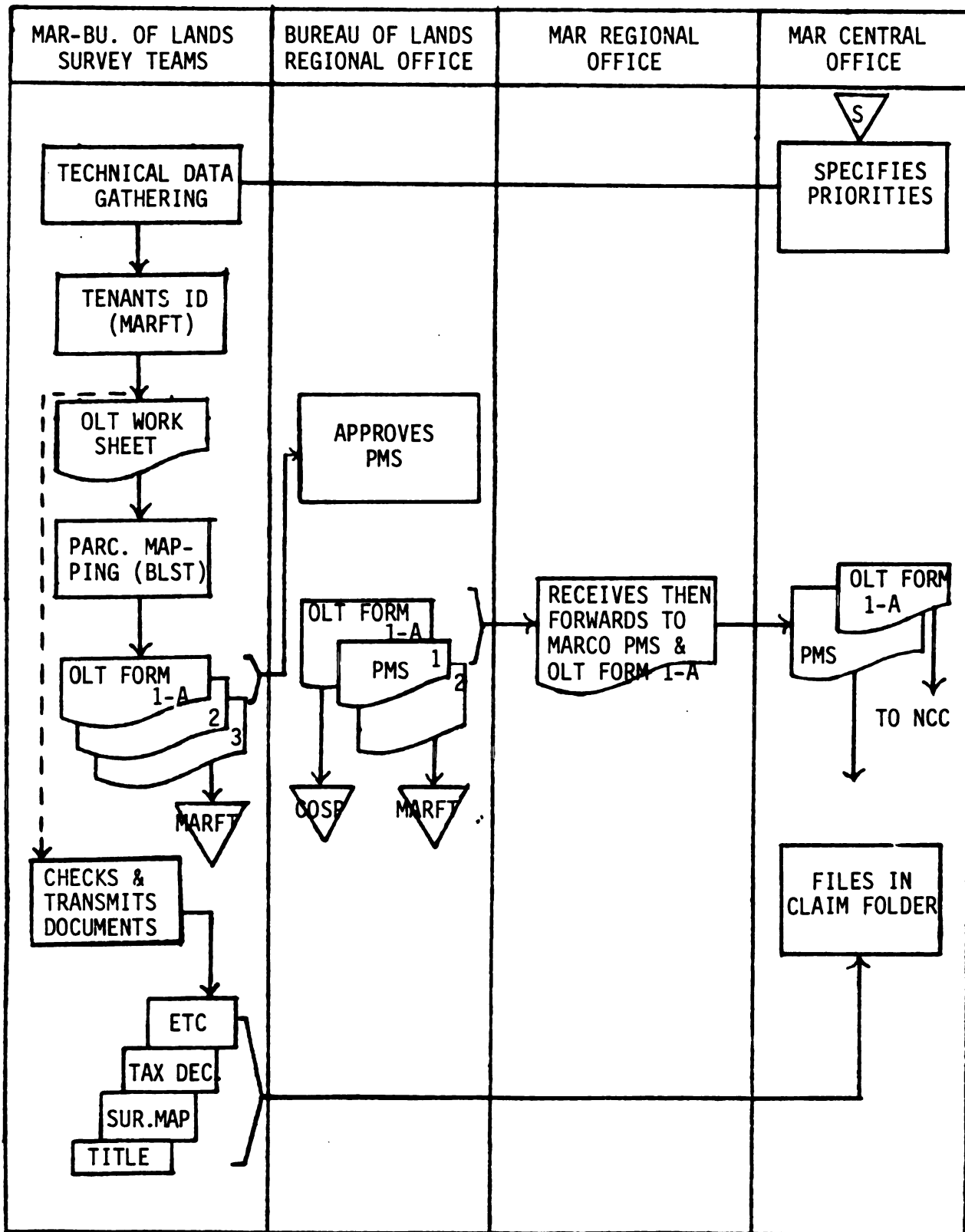


Figure 18. Identification Phase Procedure Flow Process Chart

technical survey maps, etc.) from all possible sources like the local register of deeds, banking institutions, or municipal/city and provincial treasurers and assessors. Using the technical data thus gathered and on the basis of the information taken from the LIS (Appendix M), both the MARFT and the Bureau of Lands Survey Team (BLST) simultaneously accomplish OLT Form 1-A⁶ (Appendix O). The MARFT gets the profile of tenant-farmers through interviews while the BLST identifies the corresponding land parcel through surveys (Appendix P). A total identification of tenant-farmers and land parcels is undertaken.

After identification, the Parcellary Map Sheet (PMS) is posted for 30 days at the Barangay Hall for all interested persons to see and to report any error for rectification, after which the PMS and the completed OLT Form 1-A are forwarded to the LB regional office for approval and reproduction. Two white print copies of the approved PSM and the completed OLT Forms 1-A are forwarded to MARRO for transmittal to the Center for Operation Land Transfer (COLT). After editing and accounting COLT forwards all OLT Forms 1-A to the National Computer Center (NCC) for processing.

MARFT advises landowners to submit technical documents required by the Land Bank of the Philippines (LBP) for land compensation payments. Any agrarian reform office (Field Team, District, Regional or Central Office) may receive such documents. The COLT files these documents in individual Claim Folders according to title(s), until the NCC has generated the Certificates of Land Transfer (CLTs), the Land Valuation (LV) and the Farmer's Undertaking (FU).

⁶The certification indicating that the tenant-farmer named therein is the actual tiller of the farmlot.

The MARFT provides the LBP Head Office with a list of mortgaged properties subject to OLT containing the names and addresses of mortgagees and the amount of the mortgages for LBP's information and for verification purposes.

The district/regional offices of both MAR and BL direct and control the overall operation within their respective jurisdictions. They resolve all conflicts and problems that may arise, seeking the assistance of a higher authority in case of doubt.

Land Valuation Phase

Simultaneous with the identification operation, the MARFT requests the Barangay Committee on Land Production (BCLP) to determine the average gross production for each barangay wherein OLT is being implemented. The production figure thus ascertained becomes the basis for valuation of lands covered by the operation.

Following the valuation guidelines embodied in a series of MAR Memoranda, the BCLP accomplishes OLT Valuation Form 1 (LV) (Appendix Q) (MAR Memorandum Circular No. 26, 1973, and Nos. 19 and 22, 1974). The same is transmitted to the COLT for review. After approval by the MAR Secretary, the same is then forwarded to NCC for computer processing (Figure 19).

Distribution Phase

The NCC forwards to COLT the generated CLTs, LVs, FUs and Master-lists. After these computer outputs have been received, reviewed and the CLTs have been registered with the Land Registration Commission (LRC), they are transmitted to the MARFTs through the MARROs/MARDOs. The MARFTs distribute the CLTs to tenant-farmers who are members of the

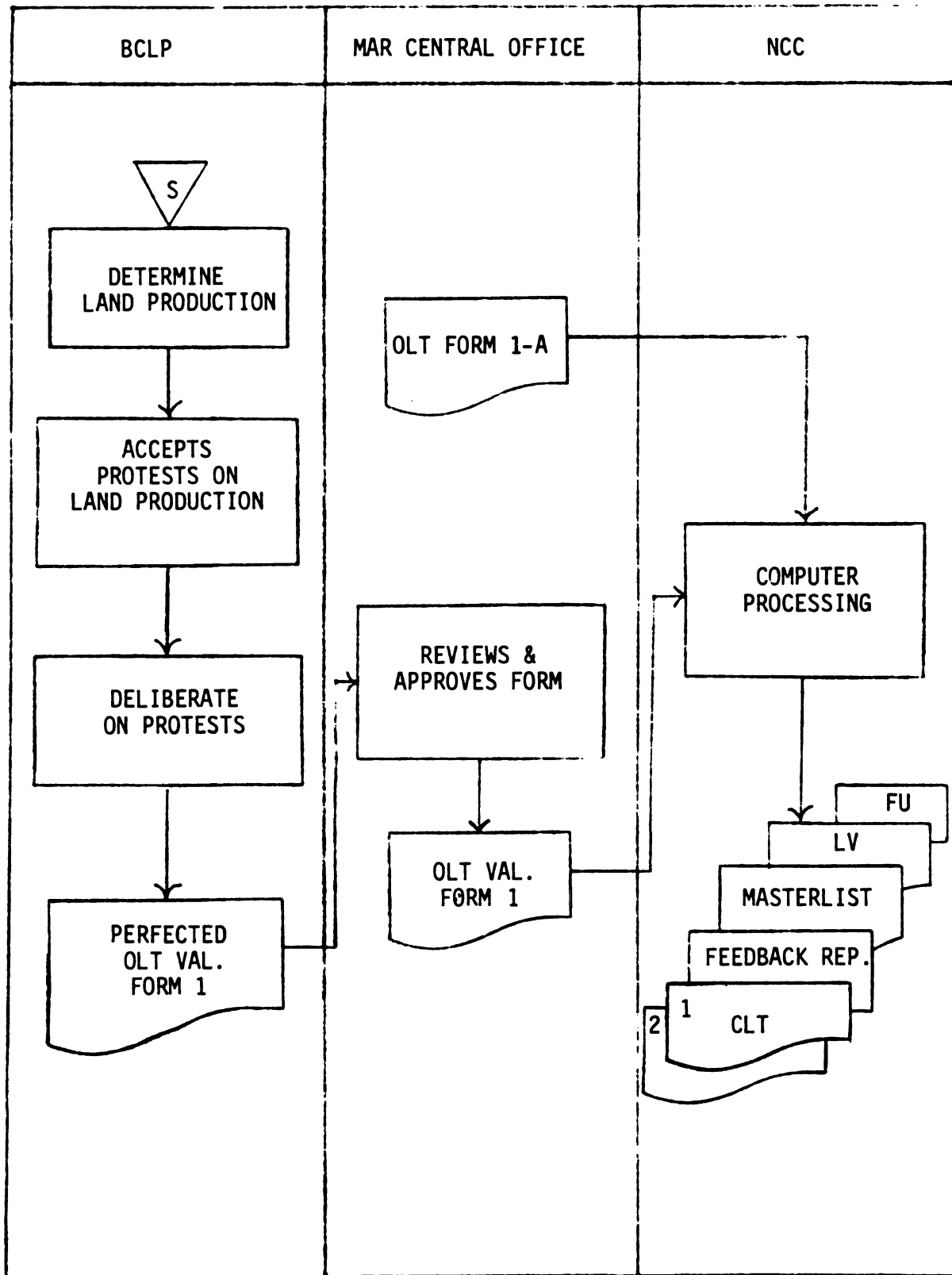


Figure 19. Valuation Phase Procedure Flow Process Chart

Samahang Nayons (SNs) and tear off the duly accomplished CLT feedback Slip (Figure 20).

While undertaking the distribution of correct CLTs, MARFTs, together with the LBP field representative, cause the signing of the FUs by the CLT recipients and the SNs. The CLT recipients and the SNs are each given a copy of the signed FUs.

The accomplished CLT Feedback Slip and a copy of the signed FU are forwarded to the COLT. The remaining copy of the signed FU is given to the LBP field representative. Erroneous CLTs are also sent to COLT for correction and/or cancellation.

Payment Phase

The COLT assembles and maintains the Claim Folder (Figure 21). A copy of the LV and FU are filed in the Claim Folder together with the technical documents submitted by the landowner. Completed Claim Folders are forwarded to the LBP for appropriate action.

After evaluation of the Claim Folder, the LBP effects payment of the land parcels. It furnishes the NCC with a list of paid parcels. Based thereon, the NCC generates the Farmer's Beneficiary Files. The said file is used in monitoring the collection of land amortization from tenant-farmers.

Collection Phase

The LBP collects payments from the tenant-beneficiaries through its collection centers. Collection receipts are transmitted to the NCC which updates the accounts of tenant-beneficiaries and generates collection reports (Figure 21). The NCC produces the lists of fully amortized parcels and MARCO awards the Emancipation Patent to the tenant-beneficiary.

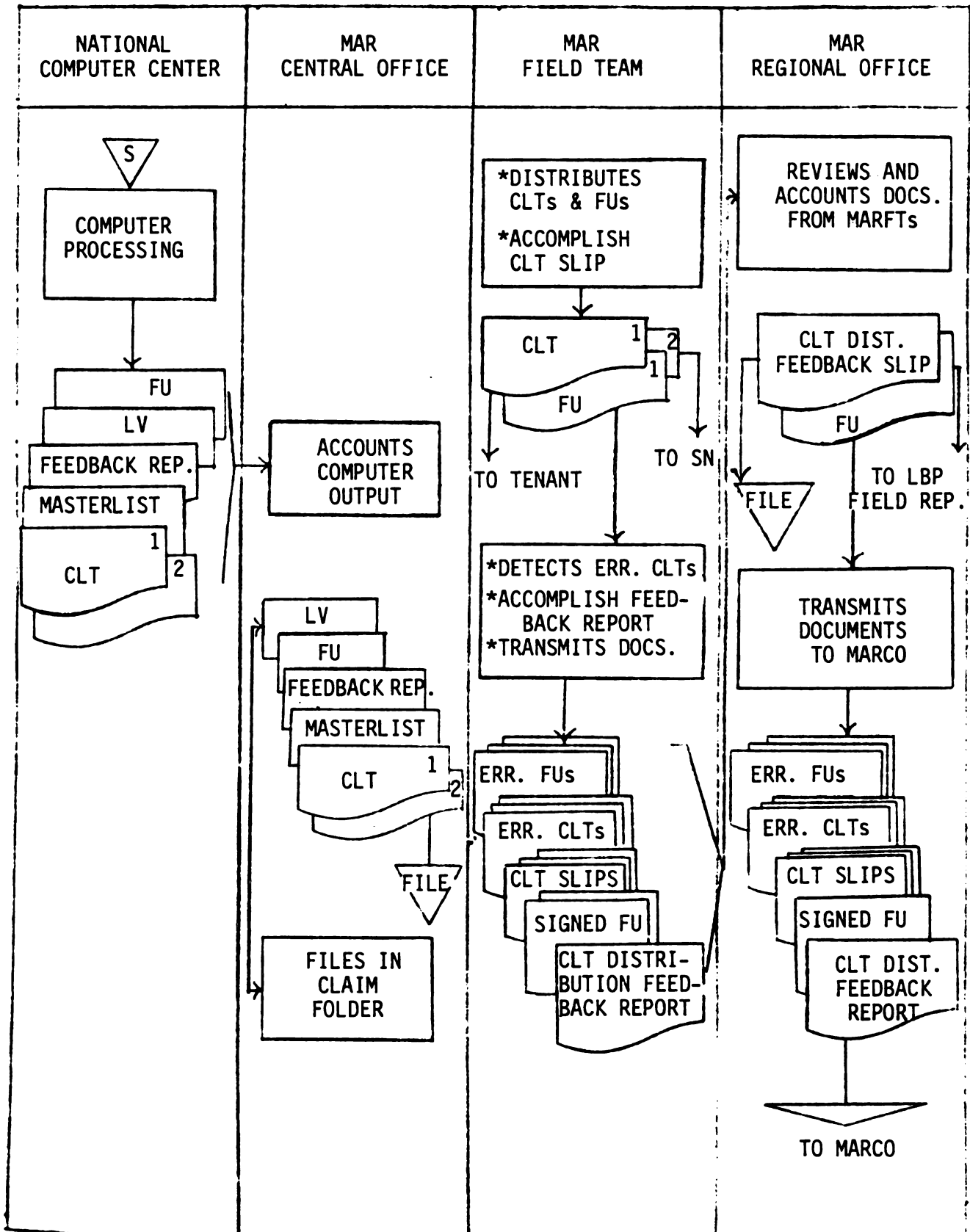


Figure 20. Distribution Phase Procedure Flow Process Chart

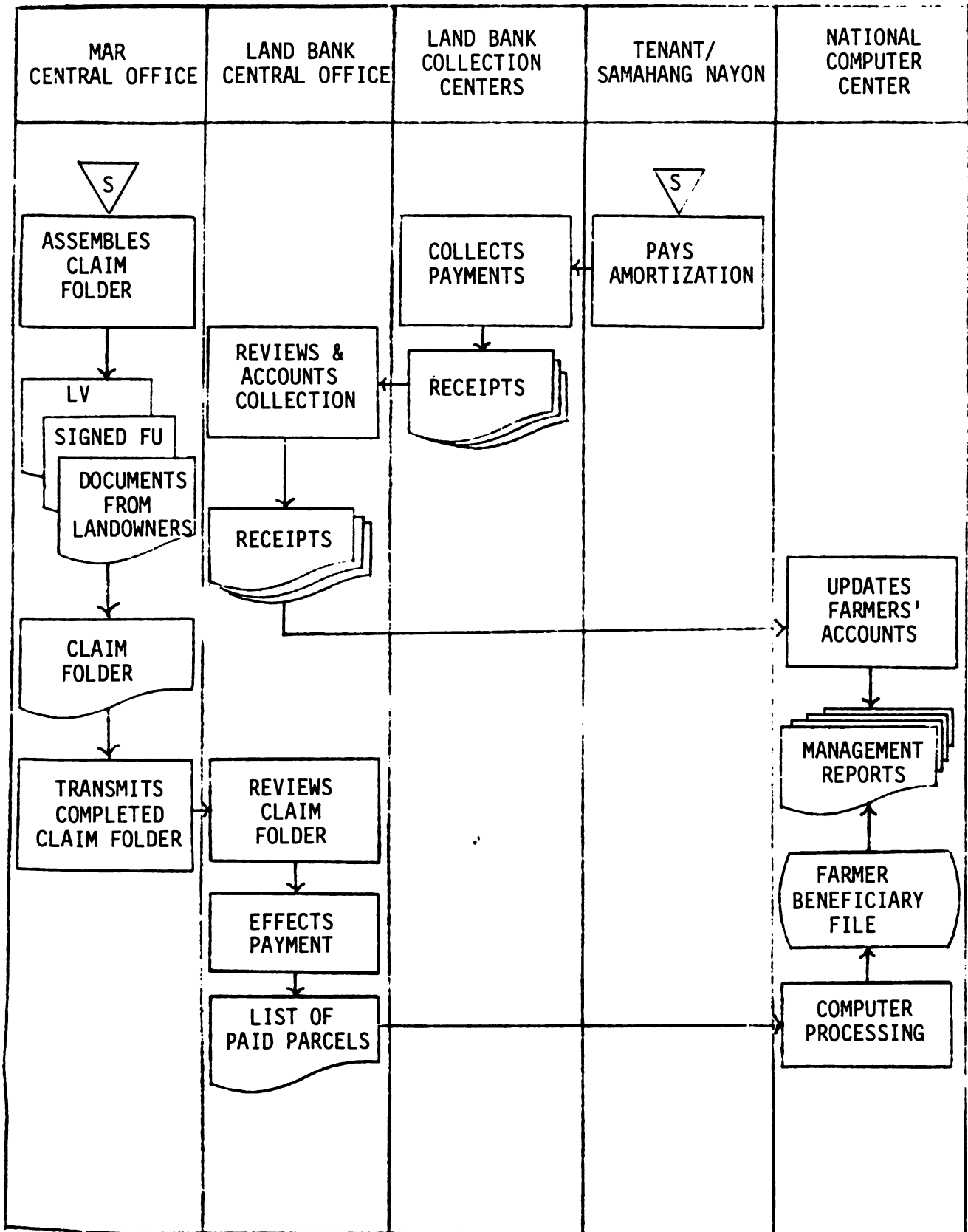
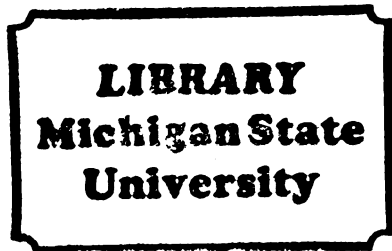


Figure 21. Payment and Collection Phase Procedure Flow Process Chart



3 1293 10523 7501





RETURNING MATERIALS:
Place in book drop to
remove this checkout from
your record. FINES will
be charged if book is
returned after the date
stamped below.

--	--	--

Policy-Making Sub-Component of OLT

OLT policy-making is under the umbrella of the whole agrarian reform policy-making structure from the national to the local levels. Nevertheless, one needs only to single out the key policy entry points in order to determine the critical demand centers for OLT-related information.

Key Policy Entry Points

The following decision-making bodies appear to be the key entry points as far as OLT is concerned: (1) the Policy Formulation Office (PFO) in the MAR; (2) MAR's Management Staff (MS); (3) the Land Transfer Coordinating Committee (LTCC) based in the LBP; and (4) the Agrarian Reform Committee of the Batasang Pambansa (or National Assembly). Each of these bodies needs information: (1) for defining the problems and policy issues which each is designed to address; and (2) for formulating policy proposals. However, none of them has the authority to make a final policy decision; their role is simply advisory. The authority to make policy resides elsewhere, either in the Agrarian Reform Minister, the LBP Board, the Parliament, or above all, the President.

The Policy Process and the Demand for Information

As stated earlier in this chapter, the initial task of translating PD 27 into operational policies was undertaken by the MAR-based Committee on Rules and Regulations implementing PD 27. Where this committee left off, i.e., upon submission of the Draft Rules and Regulations Implementing PD 27 to the President, the MS came in to fill the void, until the creation of the PFO on March 20, 1975.

The PFO is specifically designed to assist the Agrarian Reform Minister in clarifying, as well as formulating, policies and guidelines on land transfer and leasehold. Among the problem areas or policy issues which have come or are still under its consideration are those on (1) retention rights (i.e., conditions under which the landowner can retain seven hectares of his rice and/or corn land in accordance with PD 27); (2) valuation of auxiliary crops; and (3) hereditary succession. These problems are identified in the course of implementation through the built-in feedback channels within the MAR, such as (a) the regular field reports which filter up to the central office, and (b) conferences (e.g., regular Regional Director's Conference); and by way of other information obtained through experience or other sources which the PFO members come to know about. The information brought to bear on these problems are obtained in like manner.

In contrast, the LTCC is an inter-agency body spearheaded by the Land Bank whose main concern is to elicit collective actions among the agencies concerned (i.e., MAR, BL, MLGCD, LRC and LBP) on the problems of land valuation. Thus, it has an advantage of being able to pool together in one setting whatever information is available from the represented agencies, which then are brought to bear on the problems at hand. The crucial problem at the moment, especially from the standpoint of the Land Bank, is the low rate of land compensation payments. Of the landlords whose tenants have already become CLT recipients, only some 15 percent have so far been paid by the Land Bank.⁷

⁷Based on an interview with a Land Bank official. According to the Agrarian Reform Minister, ". . . the problem of land valuation is what caused some irritants and consequent delays in payments to landowners affected" (see Sta. Romana, 1978).

It may be recalled, from the discussion on peasant organizations in Chapter 4, that very serious problems of tenant-members in certain localities (e.g., mass ejection and other forms of "harassment"), which cannot be resolved by the local unit of the organization, are generally transmitted to the national office for further action. In this light, peasant organizations can be viewed as feedback mechanisms through which government agencies at the central-office level gather information about local problems being encountered by tenants, one of the program's affected parties. Through the same feedback loop, peasant leaders, such as those in the Agrarian Reform Committee, learn about the problems of the tenants or landless agricultural workers and settlers. This knowledge hopefully should motivate them into formulating corrective policies.

Illustrative of such policies is a Parliamentary Bill under consideration by the committee which would provide government financial assistance to tenants who are being legally harassed to enable them to hire good lawyers, even from the private sector, for the defense of their cases.⁸

Analytical Sub-Component of OLT

Of the various analytical units described in Chapter 4, a few are in one way or another contributing to OLT-related policy analysis. Yet,

⁸It is historically known that landlords have advantageously used legal means to shield themselves from the incidence of agrarian reform laws. They are "wise" to take advantage of loopholes in the law by hiring the best lawyers around. Put on the defensive in the legal wranglings, many a tenant loses out because the lawyer on his defense is second-rate and often underpaid. Tenants generally do not have resources to sustain protracted court proceedings. This Bill then is intended to make it more costly (i.e., a disincentive) for landlords to take such legal action.

as will be seen, the policy-making units and the analytical units are not well linked or integrated so that policy decision-making can be facilitated or supported by timely and adequate analysis. Many information needs are still unmet.

Public Analytical Units

There are three groups of publicly supported and managed analytical units: (1) those in government ministries; (2) those in academic institutions; and (3) those in non-academic research or research granting and/or coordinating institutions.

Government Ministries

Of the units based in government ministries, an example is the Planning Service and the Bureau of Land Tenure Improvement (BLTI) which provides some form of backstopping to the PFO. The Batasang Pambansa's Agrarian Reform Committee likewise draws support from legal experts and other analysts in the MAR.

The Bureau of Agricultural Economics (BAEcon) is an example of those analytical units which have promising analytical capabilities but are not institutionally linked with the policy-making units or policy entry points.

Academic Institutions

Foremost among this group of analytical units are those in the University of the Philippines (U.P.) System: (1) the Agrarian Reform Institute (ARI); and (2) the Department of Agricultural Economics of the College of Development Economics and Management (CDEM); (3) Institute of Mass Communication (IMC); (4) Institute of Economic Development and

Research (IEDR); (5) College of Public Administration (CPA); (6) Law Center; (7) Department of Agricultural Education; (8) Council for Asian Manpower Studies (CAMS); and (9) Center for Policy and Development Studies (CPDS). Among these, only ARI is functionally linked with the MAR by virtue of the antecedents and rationale for its creation: it was established on April 7, 1970, primarily to provide technical support to the agrarian reform program of the government by way of instruction, research, extension and technical consultancy (see ARI, n.d.). Nonetheless, the others contribute either in information generation (i.e., research, such as IMC) (see Mercado, et al., 1976) or in information dissemination, as when a unit is tapped for expert advice (i.e., technical consultancy, such as the U.P. Law Center)(see Bacungan, 1974). Particularly important is the role of the CPDS in: (1) providing avenues (e.g., conferences and workshops) through which policymakers and analysts " . . . can be brought together to identify and define relevant policy areas for in-depth study as well as evaluate existing and proposed policies relating to agricultural and rural development" and (2) providing opportunities for multidisciplinary and/or interagency collaboration in policy research (CPDS, 1978).

There are other publicly supported academic institutions that conduct OLT-related research primarily through the theses of their students, one being the National Defense College of the Philippines (Berte, 1976).

Non-Academic Research or Research Granting and/or Coordinating Institutions

The International Rice Research Institute (IRRI), particularly through its Department of Agricultural Economics, occasionally deals with

research topics relevant in OLT policy-making (e.g., Ledesma, 1978; Dozina, 1978; and Kikuchi, et al., 1977).

Research granting and/or coordinating institutions such as the Philippine Council for Agriculture and Resources Research (PCARR) and the Southeast Asian Center for Graduate Study and Research in Agriculture (SEARCA), in their role of channeling research resources to priority research projects including OLT, enhance OLT-related policy analysis (PCARR, 1973).

Private Analytical Units

There are basically three groups of analytical units in the private sector which contribute to OLT policy analysis: (1) those in academic institutions; (2) those in non-academic research-oriented institutions; and (3) individual consultants.

Included among the academic institutions is the Institute of Philippine Culture (IPC) of the Ateneo de Manila University (e.g., see Mangahas, et al., 1976). An example of a non-academic research-oriented institution is the J. Walter Thompson Company, a private consulting firm which did a study bearing on LOI 143. As mentioned in Chapter 4, policy-making bodies often seek analytical assistance from consultants. The MAR has a roll of consultants which includes peasant leaders. In the COLT's organizational structure, a Consultancy Group is specifically attached.

Data Inputs to Policy Analysis

The BLTI, which is represented in the PFO by its Director, bases its policy analysis and evaluation primarily on the data obtained through

the COLT by way of the regular reporting system which emanates from the field offices and filters up to the central office. Occasionally, however, actual field verification is necessary to determine whether certain problems do exist and in what magnitude.⁹

Generally, the BAEcon, academic institutions (public or private), and non-academic research-oriented analytical units generate their own data via research, making use of MAR's OLT data as basis for sampling or for citing some facts. On the other hand, technocrats or consultants draw upon their own store of knowledge based on experience, past studies/ research and other sources of data and information.

Information Derived and Their Utilization

The linkage between the BLTI and the PFO provides some measure of assurance that information needs of the PFO will somehow be filled by the BLTI. However, given the range of policy issues being addressed by the PFO, it appears that the BLTI would lose its relevance if (1) data collection were limited to what the COLT could provide and (2) analysis were curtailed by either lack of trained manpower or inefficient utilization of analytical capacity.

It is not known to what extent the information produced by such analytical units as the IPC, IRRI, BAEcon, CAMS, and even ARI, are reaching the policymakers in the various policy entry points. And where they do, the extent to which they are actually being used has not been determined. However, if the policy issues which have so far remained unresolved can serve as an indication, there is clearly still a huge gap in the supply of relevant information.

⁹Based on an interview with a MAR official.

Data Sub-Component for OLT

The execution of each phase of OLT requires several types of data. The data system for OLT, the source of data, employs a so-called barangay carpet approach whereby the identification phase is completed for the whole barangay without regard to land-size categories before moving on to the next barangay (PPSPC/OLT, 1977). It was developed, based on the inventory and analysis of the old (or then existing) system, by the Systems and Procedures Committee which was established in March 1976.¹⁰ The new system was designed for the following purposes: (1) accelerate the output of the Land Tenure Improvement Program; (2) improve the quality of that output; and (3) broaden the old system's scope so that the MAR would have available information/data which could be useful for: (a) providing future support systems to the new landowners; (b) initiating effective control and maintenance of the system and the information gathered; and (c) future land-use planning and real property management (PPSPC, 1977).¹¹

Management and Operation of the New System

The new system is managed and operated by an inter-agency and multi-level structure. Providing overall coordination at the national level is the Center for Operation Land Transfer (COLT) which is based in the

¹⁰The Systems and Procedures Committee, otherwise known as the Management Information System (MIS) Team (see PPSPC, 1977, p. V-1), was composed of representatives from the MAR and BL and supported by technical assistance provided by the USAID.

¹¹Refers to the MAR's responsibility for monitoring various restrictions on the issued CLT such as heirship succession, transfer, amortization and/or rental credit and continued SN participation (PPSPC, 1977, Introduction).

MAR's central office. Integral to the national-level (or top) management are the executives running the central offices of the Bureau of Land (BL), Land Registration Commission (LRC), Land Bank of the Philippines (LBP), Bureau of Cooperatives Development (BCOD), and the National Computer Center (NCC).

A generalized overview of the future MIS which is anticipated to evolve from the new system (Figure 22) indicates the important part played by the NCC, BL, MLGCD and Land Bank as repositories of the integrated OLT data base proposed by the MAR and the BL (Figure 23). For instance, the BL plans to construct a BL Land Use Data Base, and already the BCOD of MLGCD has its own MIS with a data base on cooperatives including the SNs (Figure 14, Chapter 4). Besides providing most of the data-processing, the NCC also holds the data base of the MAR. The Land Bank also envisions having an MIS, not only for purposes of land compensation and amortization collection but for its credit-support operations as well. Equally critical would be the LRC's role in maintaining the data base of the automated Land Register (PPSPC/OLT, 1977).

The lower-level management of the new system is depicted in Figure 24 (PPSPC, 1977). Under the set-up, the former MAR Field Team (MARFT) and Bureau of Land Survey Team (BLST) are re-aligned with the MAR District Office (MARDO) staff who are engaged in OLT activities. This is done in order to establish four specialized working teams who will accomplish all phases of the field activities, provide control and monitoring, and other required research (PPSPC, 1977).

Field Coordinators are designated at the District and Regional Offices utilizing, in the case of the MAR, Senior Agrarian Reform Technologists (SART) or other personnel as may be selected by the MAR

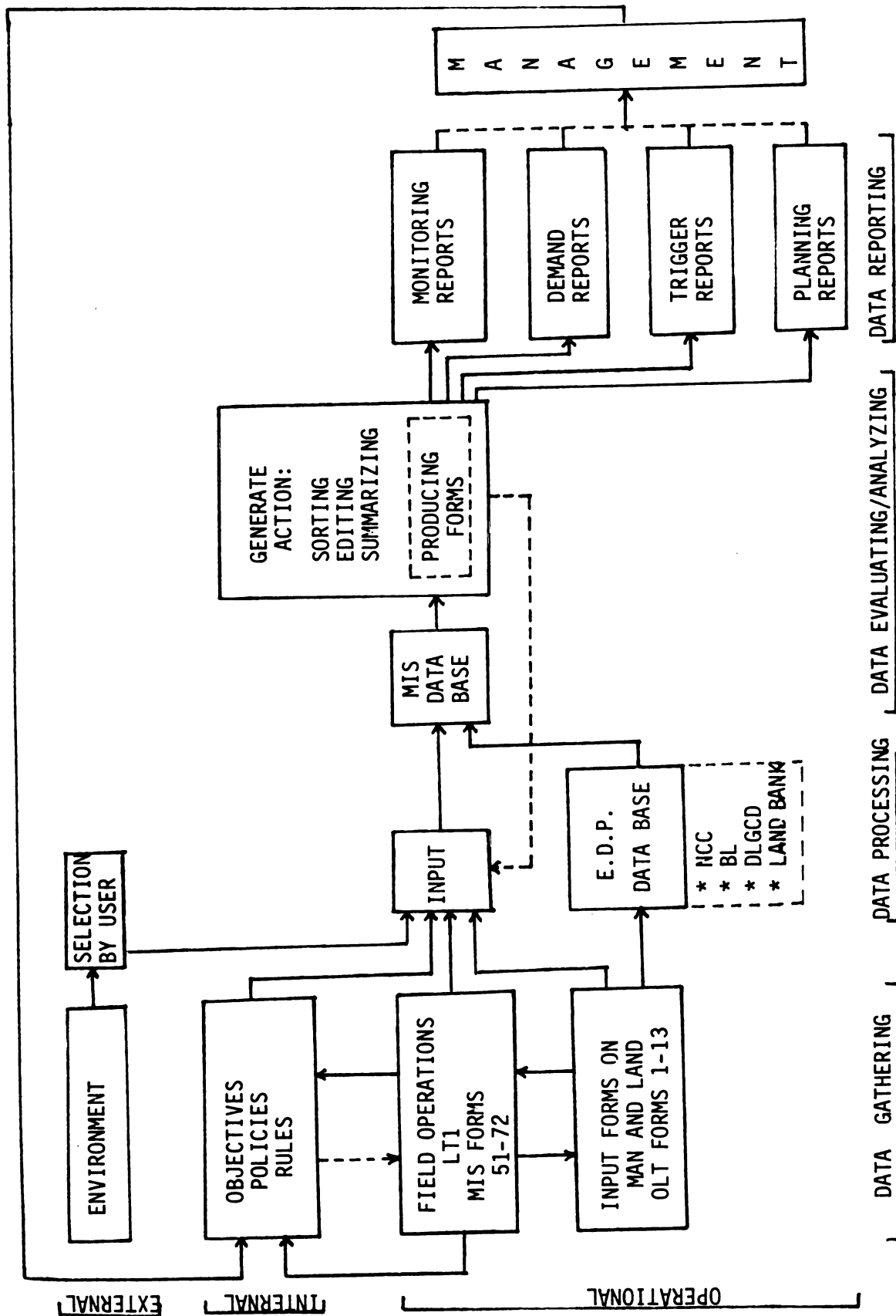


Figure 22. Generalized Overview of the Future MIS
(Source: PPSPC, 1977, p. V-2)

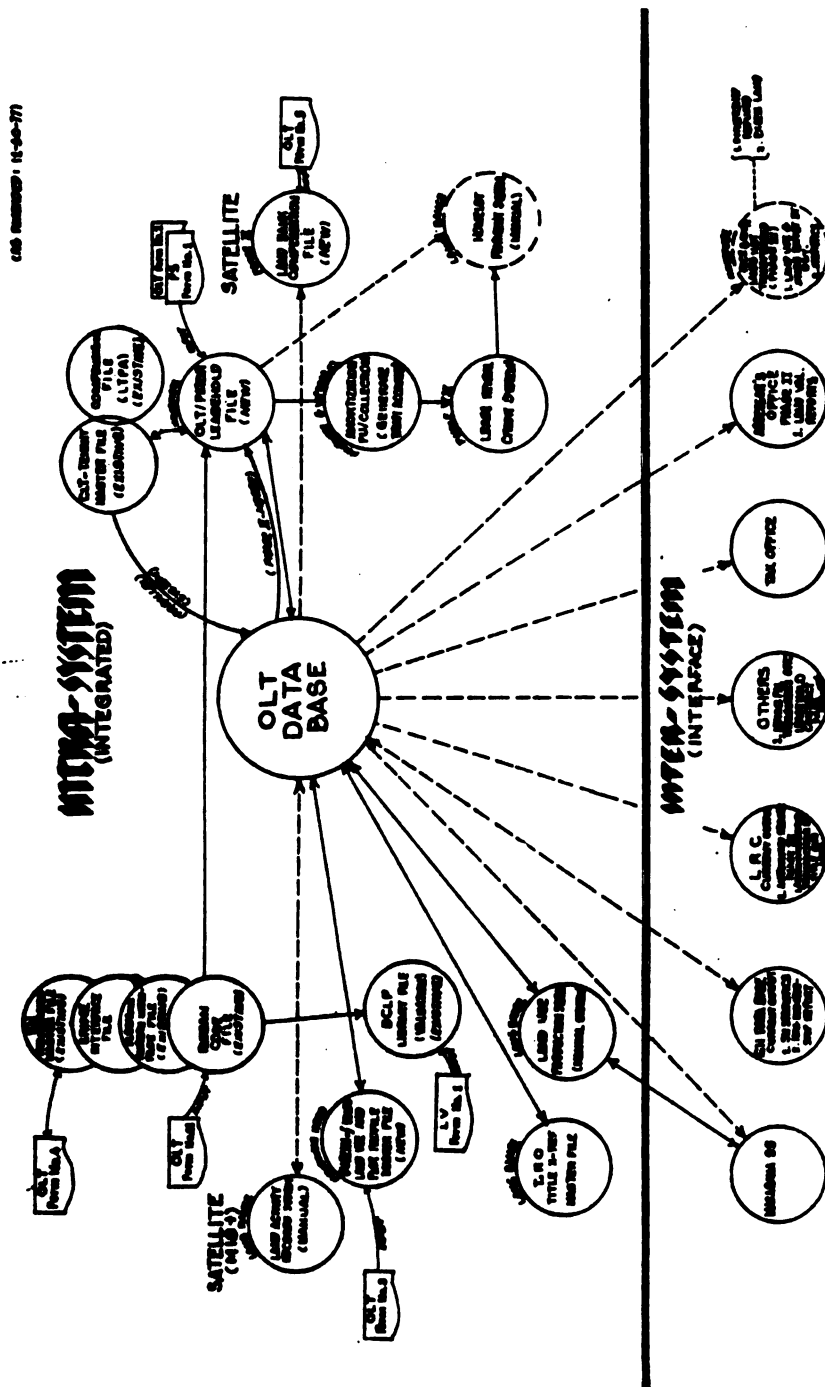


Figure 23. Integrated OLT Data Base (Source: PPSPC, 1977)

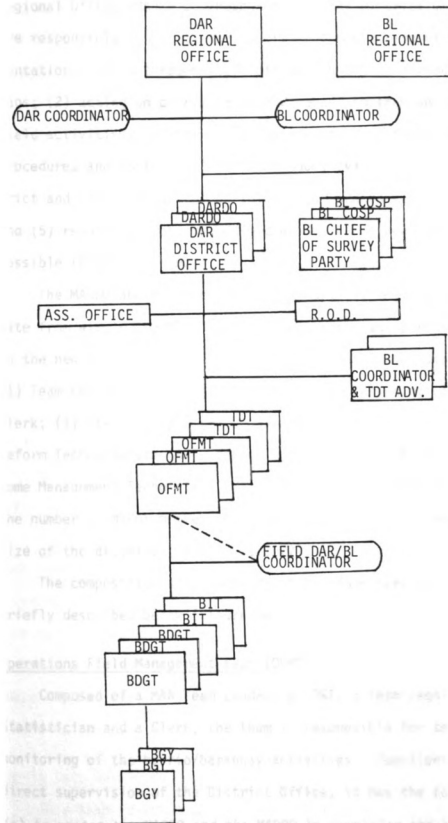


Figure 24. Field Management of the New Data System on OLT
(Source: PPSPC, 1977)

Regional Office (MARRO). These Regional and District Office Coordinators are responsible for: (1) the control and monitoring of completed Documentation Folders through their offices in order to reduce possible time lags; (2) acting on correspondence directed to them which relate to OLT field activities; (3) the dissemination of all information related to OLT procedures and policy; (4) the continuous evaluation of Regional, District and Field Operations to insure that procedures are being followed; and (5) resolving problems and mediating operational disputes as soon as possible (PPSPC/OLT, 1977).

The MARDO and BL Chief of Survey Party (COSP) are expected to designate from within the MARFT and BL complement, the personnel called for in the new team alignment. Normally, the MARFT consists of the following: (1) Team Leader; (2) Senior Agrarian Reform Technologist (SART); (3) Clerk; (4) Statistician; (5) Legal Officer; (6) five to ten Agrarian Reform Technologists (ART) depending on the size of the District; (7) Home Management Technician (HMT); and (8) Rural Youth Technician (RYT). The number of MARFT members may vary from five to ten depending on the size of the district (PPSPC/OLT, 1977).

The composition and functions of the four specialized teams are briefly described below (Figure 24).

Operations Field Management Team (OFMT)

Composed of a MAR Team Leader, a SART, a Team Legal Officer, a MAR Statistician and a Clerk, the team is responsible for the control and monitoring of the barrio/barangay activities. Functioning under the direct supervision of the District Office, it has the following functions:

(a) to assist the MARRO and the MARDO in preparing the barangay priority

listings; (b) to distribute to barangays, landowners, and tenants all information relevant to MARFT activities in the barrio/barangay; (c) to prepare field activity reports and report problems along with recommended solutions to MARDO or other affected agencies; and (d) to assign control numbers to documents used by the BDGT.

Technical Documents Team (TDT)

This team which consists of one MARFT member, a member from the Register of Deeds (ROD), and another from the Assessor's Office in addition to an advisor from the BL, has the following functions among others: (a) to gather technical documents (TD) from the ROD and Assessor's Offices, under the functional responsibility of the MARDO; (b) to document retention or compensation data as well as review and file documents forwarded by a landowner; (c) to make copies of the TD if only one copy is available and immediately establish for control purposes a Technical Document Folder for each barangay; (d) to forward survey plans to the field for use by the sketching teams during the measurement phase (or if no survey plans are available, to forward to the BDGT a copy of the document containing a narrative description which can be used in land identification and measurement); (e) to gather agricultural production data on rice and corn at the District and Regional Office or from other government agencies, for submission to BCLP to establish the LV Form No. 1 (Appendix Q); and (f) when possible, to assist the OFMT in preparing Documentation Folders and assigning document control numbers.

Barrio Data Gathering Team (BDGT)

This team is composed of MARFT members (usually two ARTs) who are usually familiar to the barrio people, having been involved in previous

operations. The BDGT performs the following activities: (a) personal contact with the barrio people and all documentation related to the tenant; (b) establish the Barrio Committee on Land Production (BCLP) in which one member of the BDGT acts as Secretary (the BCLP is responsible for establishing the Average Gross Production (AGP)); (c) interview the tenant in order to accomplish PS Form No. 1 (Rev. 1976)¹² and its resulting control activities; (d) prepare OLT Form No. 4 (List of non-SN Members); ¹³ (e) complete OLT Form No. 2 and resulting tenant review documentation relating to the land; (f) maintain the various folders during the field activities and transmit completed documentation to the OFMT; (g) distribute output (e.g., CLT or Farmer's Undertaking (FU)) forwarded from the MAR Central Office (MARCO) to the affected tenant;¹⁴ and (h) any future adjustment activities related to information on the tenant.

¹²This form is used as: (1) one method of data input to BCLP for their consideration in establishing the AGP; and (2) the input for issuance of CLT and initiation of leasehold contracts. It is one of the primary documents utilized for the MIS and the source of information related to the tenant.

¹³One member of the BDGT is responsible for assisting the BCOD Barrio Development Worker (BDW) in establishing SN and preparing tenant applications for SN membership.

¹⁴This involves: (1) obtaining tenant's signature on the CLT receipt and FU and (2) completion of leasehold contracts or assisting OFMT to accomplish the same.

Barrio Identification Team (BIT)

This team consists of a MARFT member who has the technical capability for land identification, and one sketching team of the BL.¹⁵ Among others, the team is responsible for the following: (a) indicating the reference information on previously-approved PMS overlays; (b) preparation of the PMS Working Sheets (PMSWS); (c) preparation of OLT Form No. 3 (OLT Measurement Profile)¹⁶ (d) initiation of OLT Form No. 2;¹⁷ (e) preparation of Field II of OLT Form No. 7(R);¹⁸ (f) preparation of the final PMS overlay; (g) preparation of the PMS Addendum Index Log Sheet;¹⁹ and (h) any adjustment activities related to plot identification or measurement.

Conceptualization, Operationalization and Measurement

The present section briefly outlines the features of the new system's measurement processes. Measurement processes refer to the Identification and Land Valuation Phases.

¹⁵A BL Sketching Team is normally composed of one Transit man, one Rodman and one Cartographer. This complement of personnel in the team enables the team to execute and complete parcellary mapping returns for signature by the COSP. However, if the team lacks a cartographer (because the cartographers are in the offices), the preparation of the final PMS becomes the responsibility of the COSP (see Calimlim, 1978, p. 9).

¹⁶This form is used: (1) to construct the BL Land Use Data Base; and (2) to verify landholdings for compensation claim processing.

¹⁷This form is utilized: (1) to provide all information related to the land; and (2) as one of the bases for the issuance of CLT and initiation of leasehold contracts.

¹⁸This form, labeled "retention Worksheet", is prepared for each landholding of a landowner who applies for retention, by barangay/barrio.

¹⁹An Addendum Index Log Sheet is prepared for every Parcellary Map Overlay so as not to clutter the parcellary map sheets with too many details and to avoid changing or amending the parcellary map sheets proper in cases of erroneous entry with regard to the name of tenant, land status, land category, land use and area in hectares or square meters and any other related information (PPSPC, 1977).

Preliminary Activities

As described in the OLT Procedures Manual (PPSPC/OLT, 1977), there is a conscious attempt under the new procedures to correct or improve upon implementation weaknesses experienced under the old system. Particularly, high value has been placed on the preparation of a meaningful work schedule based on accurate benchmarks and on an effective system of controlling and monitoring all program-related activities.

The MAR and the BL agreed that before they again undertake mapping operations, a realistic work schedule should be jointly prepared and strictly followed by both agencies in order to maximize the results from their limited manpower and resources. Hence, there was a need to take stock of existing programs and operations to determine more definitely where they stand at any one time. Toward this end, it was deemed necessary to undertake the following preliminary activities: (1) to provide important information for management as a basis for sound policies and decisions; and (2) to gather and generate baseline statistics vital for planning and projections of manpower and material requirements, and time frames for OLT activities (PPSPC, 1977, p. I-1). In this regard, the BL shall prepare a Municipal Index Control Map (MICM) and with the aid of the rough barangay sketch made by the MAR, shall also prepare a Barangay Index Control Map (BICM). The MAR and BL shall then jointly prepare the Data Review and Evaluation and the related work schedules.

Before beginning the field activities following the new procedure, the existing documents in the Team and District Office files are reviewed. These documents are utilized to provide the linkage between the old and new system so that the previous data gathered are not wasted. All data generated for the OLT program are entered on specific forms

which are assigned unique control numbers to facilitate monitoring, reporting and evaluation and reduce the amount of redundant data while providing multiple-use data. All prepared documents contain the control number of any interface document. This provides a method of historical documentation which can be utilized for MIS and other reporting needs.

The MAR and BL District Offices, assisted by the Coordinators, prepare a Barangay Priority List (BPL) indicating the sequential order that the field activities will be carried out. The BPL is reviewed by the MAR and BL Regional Directors for their approval and concurrence. The MAR and BL Coordinators, at all levels, are to monitor field activities to make certain that the schedules are being followed and copies given to: MARCO, BLCO, MARRO, BLRO, MARDO, BLCOSP, OFMT, BDGT, BIT and TDT.

Identification Phase

It can be said that one distinguishing feature of the new procedure is the importance given to barangay orientation meetings (e.g., on BCLP activities and on SN) and notification of tenants, landowners and other parties on the work schedule prior to the actual data-gathering operations (PPSPC, 1977). This ensures better synchronization of activities and the participation of the parties from whom data would be sought.

The Identification Phase breaks down into: (1) identification of tenants, landowners and the land covered; and (2) sketching and parcel-lary mapping. Under the new procedure, the specialized teams more directly involved in doing these activities are the BDGT and the BIT who, at certain stages of their work, have to do things simultaneously (Figure 24).

The main data obtained are about the tenant (i.e., tenant personal data, family members, tenure status, number of years cultivating the land, his landlord, whether or not he has farmholdings in other barangays, interest in landownership or leasehold, and membership in SN). The rest of the data are about the land insofar as they relate to the tenant, i.e., the number of farmlots cultivated by the tenant under each landlord; the area of his rice and corn farmholding according to predetermined land categories (irrigated, unirrigated, upland and cornland) as of October 21, 1972; the production of rice and/or corn obtained by the tenant from these landholdings for each of three normal crop years prior to October 21, 1972; and the lease rentals paid by the tenant since 1973.

All the data-gathering forms under the new system are designed also by the Systems and Procedures Committee (or the MIS Team). The same team at the Central Office is expected to make future revisions in these forms and/or preparation of new ones, should the need arise, although representative membership in the team might be modified and/or expanded to include other government agencies (PPSPC/OLT, 1977). It can thus be said that as far as the new data system is concerned, the Conceptualization and Operationalization processes are the team's responsibility.

Land Valuation

The land valuation scheme broadly stated in PD 27 raised specific issues, such as: (1) what is the average harvest; (2) what is a normal crop year; and (3) whether or not to include auxiliary crops in the valuation (Santiago, 1978). To resolve these issues and to guide all those concerned, MAR formulated the BCLP method of determining production data,

as contained in MAR's Memorandum Circular No. 26, Series of 1973, issued on November 5, 1973 (Santiago, 1978).

The BCLP is organized for every OLT-covered barangay by the Agrarian Reform Team (or by the BDGT under the new system). It is composed of eleven members, one of whom is a MAR representative (an Agrarian Reform Technologist designated by the Team Leader) who acts as the non-voting (and cannot be voted upon) member and Secretary. Besides the Barangay Captain and the SN President, or the SN-designated representative, the other members are four tenant-farmer representatives elected from among the tenant-farmers, and two representatives from each of the landlord and owner-cultivator groups, who are either elected or designated from among the respective groups.²⁰

The BCLP performs the following functions, among others: (1) to determine the three normal crop years in the barangay immediately preceding October 21, 1972; (2) to determine the average gross production (AGP) of each of the land categories (i.e., lowland rice irrigated, lowland rice unirrigated or rainfed, upland rice, and corn land) in the barangay for said three normal crop years and to post said production;²¹ and (3) to accept any protest against the production data posted, and

²⁰Unless otherwise stated, the description presented here of the BCLP organization and of average gross production (AGP) determination are based on an in-depth interview with an agrarian reform fieldman of Region 8 (Leyte) and on Santiago (1978).

²¹The DAR Memorandum Circular No. 26 requires that "The production data as determined by the BCLP shall be posted in the most conspicuous place in the barrio and in the municipal hall of the municipality concerned for a period of fifteen (15) days . . ."

after due deliberation thereon, to submit to the MAR Central Office the AGP finally determined by it for each of the land categories.²²

The Chairman asks each of the tenants, landlords and owner-cultivators in the Committee how much production per hectare for each land category each is getting from his farm in each of the three crop years which the Committee considers as "normal". The Committee sets certain normal yield levels below which any reported yield is rejected as "too low". Also, yield comparison is made with an adjacent barangay and a certain rule-of-thumb as to variation is adopted such as: "Usually, there should be the same production or they may vary by five cavans". A yield difference of five to ten cavans between those reported by the tenants and the landlords (or those between tenants before October 21, 1972, and tenants after October 21, 1972) is still considered small by the MAR representative and does not deter the Committee from going ahead with its deliberation and final group decision through voting. Where there are two harvestings (i.e., wet and dry seasons) in one crop year, the total yield for both seasons is the figure reflected under that crop year in the OLT Valuation Form 1 (Appendix Q). For each land category, the AGP is obtained by summing the yield over the three normal crop years and dividing the total by three.

Some ten months after the initiation of the BCLP land valuation scheme, it was becoming clear to implementors that it "could hardly get

²²The procedures adopted by the MAR for production-data determination (i.e., BCLP and LTPA) can be described as democratic (see also Overholt, 1976). Indications of this may be seen in the election process (for the selection of tenant and landlord representatives and of the Chairman) and in the provision allowing "any interested party who does not agree with the production data as determined and posted by the BCLP . . ." to protest in writing with the BCLP or, if necessary, to file appeals to the Regional Directors or, finally, to the MAR Secretary whose decision is final.

off the ground" primarily because of landowners' lack of cooperation (e.g., their conspicuous absence in BCLP meetings despite repeated notices and invitations sent by the Agrarian Reform Teams) and disapproval (e.g., filing of protest) (Santiago, 1978, pp. 17-18).

Realization of the futility in making landowners and tenants agree on what the past harvests were prompted the MAR to introduce a scheme called Landowner-Tenant Production Agreement (LTPA) whereby:

MAR allowed the landowners and the tenants to negotiate and agree on the price of the land in money terms and after having agreed, convert the value into palay using the government support price of ₱35.00 as a peso conversion factor (Santiago, 1978, pp. 22-23).

In case landowners and tenant-farmers cannot agree on the average gross production of the land, the matter shall be referred to the Barrio Committee on Land Production created under Department Memorandum Circular No. 26, dated November 5, 1973.

In 1977, the following adjustment to the rules became an integral part of the LTPA:

the application of rentals paid for crops planted after October 21, 1972 to personal loans and rentals in arrears prior to PD 27 instead of crediting the same as part payment of land amortization and deducting it from the land compensation payment to the landowner (Santiago, 1978, p. 26).

Data Outputs and How They Are Supplied to Users

Data are outputs produced through the Conceptualization, Operationalization and Measurement processes in the Data System. For each of the variables measured by the data-collectors (e.g., BDGT and BIT), data are produced. Some data are meaningfully related to each other in a document such as the CLT, which the MAR considers to be an OLT output. If any of the data contained in a CLT is erroneous, the MAR is prompted to make the necessary correction(s).

It must be recognized that the data contained in a CLT are so specific that any attempt to reveal them to the public would probably raise the issue of disclosure. The same is true of the Land Bank's data on compensation payments to the individual landlords.

The OLT data system, however, has not encountered problems of disclosure because the data made available to the public are already in the form of aggregations of the original micro-data (e.g., total number of tenants issued CLTs).

It is the COLT which handles the data system's outputs. As envisioned, these data outputs will form part of the Integrated Data Bases involving several agencies each having their own MIS at various stages of development (see Figure 23). For instance, the MAR/BL System or Data Base is intended to be developed in four phases over the long run, but recent output being generated represents only the first phase. "The BL automated system produces information reports²³ and the initial reports in the future Management Information System (MIS) . . .". On the other hand, "the MAR automated system produces three (3) Action Reports,²⁴ five (5) Information Reports, three (3) Statistical Reports,²⁶ an

²³Measurement Profile of Lots arranged by Land Use (Rice and corn with Barangay, Municipal, Provincial and Regional Totals); by Land Status (Lease Contract Desired; Lease Contract Written; Leasehold in Retention Areas; Leasehold for Excess Land, etc.); and by Source Document (Aerial Photo (Rectified), Aerial Photo (Unrectified), Aerial Photo Map Sheet, Cadastral Map, etc.).

²⁴So called because they "require response from the MAR field offices". These include: CLT Action Report; Leasehold Action Report; Leasehold Registration Report and Samahang Nayon Report.

²⁵For example, Plots Under Investigation; Plots Under Protest; Plots of Ownership Refused and Homelots.

²⁶That is, Reject and Error Statistics; Summary Statistics; and Samahang Nayon Statistics.

Automated Register, Original, Transfer and Adjusted Certificate of Land Transfer (CLT) and Reject and Error Reports" (Ryan, 1978, p. 49).

The outputs flow from the NCC to the COLT where reviews and necessary adjustments and/or corrections of errors are made. From there, the COLT distributes the outputs to the Regional Coordinators who, in turn, effect the distribution of the same to the field offices responsible for the report action and/or filing. "Statistical reports are to be retained by the Coordinator in order to determine field evaluation and assess the reports produced therein and those reported in field statistics" (Ryan, 1978, p. 51). "The MARRO and BLRO Coordinators will retain one copy each of all BL Information Reports" as well as BL Statistical Reports (Ryan, 1978, p. 53-54).

Action reports are a means for following up pending activities and monitoring actions completed (e.g., by the BDGT or by the CRU).²⁷ The field response to action reports "will be reflected in MIS Statistics generated by the computer . . . to maintain a constant update of information to the automated data base" (Ryan, 1978, p. 63). "The automated system will generate follow-up reports for the purpose of updating the data base and they will continue to be produced within 120 days of the last action until such time as final information has been received as to: (1) CLT distributed; (2) leasehold contract written and registered; (3) SN ID Number known; (4) investigation completed; and (5) plots under protest cases resolved" (Ryan, 1978, p. 63).

Regularly updated statistics on OLT accomplishments that are made available to the public under the new system are tabulated in summary

²⁷There is a Conflicts and Resolution Unit (CRU) which is "responsible for the processing of investigation reports and determining action to resolve reported problems" (Ryan, 1978, p. 64).

form (for the entire country) as well as in breakdowns by region and province.²⁸ Noticeably, they are no longer presented according to land size categories, unlike in the old system and particularly during the pilot stage.

All other features of the new system, which supplies data to the general public, are essentially the same as the old system: those who need the data must obtain them from the MAR in the form of updated summaries or annual reports.

Summary

This chapter has traced the process of implementing a broad martial law policy on agrarian reform (i.e., PD 27) and noted that such a policy had to be translated into operational policies (i.e., LOIs, rules and regulations, or memoranda-circulars) before it could be implemented in the field.

Moreover, an analysis has been made of OLT under a feedback-control-system framework and the structures and processes within each of the system's components described from the Planning and Implementing System to the Data System. An attempt was made to establish the input/output linkages among the system's components, particularly stressing the

²⁸Examples of updated statistics on OLT accomplishments are: (1) Number of Land Transfer Certificates Issued (broken down into Number of Tenant-Recipients; Number of Certificates; Hectarage Involved and Number of Provinces Involved); (2) Land Valuation and Landowners' Compensation (i.e., Received by the COLT; Valuation Transmitted to Land Bank; and Compensation Paid by Land Bank); (3) Issuance of Emancipation Patents (i.e., Number of Tenants; Number of Patents; Area and Number of Provinces Involved) and (4) Organization of BCLPs (i.e., Number of BCLPs Organized; Number of BCLPs with OLT Val. Form 1 Received; Number of OLT Val. Form 1 Held Pending (incomplete data and AGP for further verification and protest) and Number of Approved OLT Val. Form 1).

relationship between the Management Component (information user) and the Information Component (information supplier).

In reality, the whole feedback-control-system is a dynamic process, although a sense of the dynamics may not have been conveyed well in this chapter. Only after the present picture of the system is viewed in conjunction with the discussion in the next chapter of the information system problems will the whole dynamics of the cyclical feedback control process become apparent: That is, as policies are implemented and information is fed back to management, the need to revise previous policies or issue new ones is created. Meanwhile, as implementation is undertaken, reality changes (in the target sector or the system being controlled), calling for new or modified actions.

CHAPTER 7

PROBLEMS WITH THE OLT INFORMATION SYSTEM

It is important to bear in mind that the OLT information system, particularly the data subsystem, has features which make it distinctively different from the regular public statistical system such as the one operated by the BAEcon. First, the data produced are by-products of the administration of agrarian reform. This involves the administrative records of several agencies, rather than results of a statistical collection function. Second, the data subsystem is fused with the implementing system; one cannot be separated from the other. In other words, the data-generation is incidental to the OLT-implementation process. Thus, some implementation problems encountered can also be viewed as data-system problems.

No Available Current Data¹

1960 Data for 1972 Use

The original scope of OLT was based on data from the 1960 Census of Agriculture. Compared with other sources of data at that time (e.g., BAEcon), the 1960 census was considered by the planners as the most reliable and appropriate for their purposes, that is, to provide a basis for

¹This section is based partly on interviews with two high officials of the MAR.

planning and budgeting. The census figures on the number of tenants and area of rice and corn lands to be affected by OLT were considered by the planners to be a rough approximation which could be revised later on as implementation proceeded and data were fed back from the field.

Since the census data were gathered some twelve years earlier, they were unlikely to represent the "reality" in 1972. The underlying reasons are the possible growth in area planted to rice and corn resulting from land clearing and development activities, and an increase in the number of rice and corn tenants due to natural population growth. As the Bureau of Lands' implementation experience indicates, there was actually more land area falling under the OLT coverage than the original target based on census data. For instance, as of August 1978, the BL had accomplished the parcellary sketching of 1,485,934 hectares of rice and corn lands. This represented more than 100 percent of the original benchmark of 1.3 million hectares (Casanova, 1978).²

Effects of Stale Data

The consequence of setting a planning target which substantially underestimated reality is the delay in program implementation. In the BL's case, the deployment of its Land Reform Survey Parties was based on the land-area target set by the MAR. Since this target turned out to be an underestimate, the BL's allocation of personnel for the sketching and

²Aside from the failure of the census to track the changes in reality, another problem is found in the difference between the census and BL data arising from different methods of measurement. In the former, land area is measured by interview (based on the knowledge or memory of the respondent), whereas in the latter it is measured with the use of land surveying instruments (e.g., transit and stadia with plane table and scale). The results are not comparable.

parcellary mapping was also inadequate. This caused a delay in the completion on this phase of OLT.

Since 1972, MAR has made several adjustments in the OLT targets as updated data were obtained on which to base new estimates. In other words, MAR maintains a moving target. As of June 30, 1978, MAR set a new land target of 1,511,044 hectares. While this represents an increase of 167,827 hectares over the 1972 figure, the tenant estimate is down by 59,093 to 1,019,724 over the same period (see Calimlim, 1978).

Conceptualization, Operationalization and Measurement Problems

Identification of Tenants, Landlords and Tenanted Lands

The starting point for generating the OLT data on number of tenants and landlords as well as the land area is the Identification Phase (see Chapter 6). Many of the problems encountered during the measurement process have their roots in the conceptualization and operationalization processes. For instance, a MAR technician who was out to identify the "tenant" stumbled on a situation where the tenant was actually sub-leasing the landholding which he was supposedly operating. Who then will the technician consider as "the tenant" under the terms of PD 27? Until management is able to operationalize their intent clearly, this kind of problem would cause confusion and delay in field operations, besides creating errors in the data. Problems of this sort are fed back from the field offices to the central office where definite policy guidelines are then issued. In the above case, policymakers have decided that the actual tiller is the one entitled to own the land but only to the extent of the area he is actually tilling. A similar operationalization

problem was where the tenant had subdivided his landholding among his sons. The policy ruling on this is to honor such subdivision if this occurred prior to October 21, 1972. Otherwise, only the original tenant, the father, is entitled to own the land in accordance with PD 27.

Operationalization problems were also encountered in the field in connection with the identification of landlords and tenanted lands. When the decision was made by policymakers to allow certain landlords to retain seven hectares of their rice and/or corn land in accordance with PD 27 "under certain conditions", these conditions contained an unoperationalized concept, "adequate income". Only after this concept was made operational in terms of a specific annual income in pesos were the data-gathering personnel able to decide whether a landlord should be categorized under OLT because he had no retention right, or under Operation Leasehold (OLH) because he qualified under the conditions for retention (see LOI 474 and DAR Memorandum Circular No. 11, Series of 1978, dated April 21, 1978 in PID-DAR, n.d.).

On tenanted land identification, one problem faced was how to decide whether the tenanted land is principally devoted to rice and/or corn when several crops are grown in the same area at various parts of the year. Other measurement problems are not traceable to either conceptualization or operationalization inadequacies. For example, the tenant may simply refuse to be identified as a tenant. Sometimes, this can be attributed to a tenant's fear of reprisal from his landlord, although at times other reasons may also be present. Among these may be a tenant's not wanting to break an otherwise harmonious relationship between him and his landlord, particularly if the latter is his relative; and a tenant's preference to remain under share tenancy which he may perceive to offer more

economic security than amortizing ownership. Another example is where the landlord denies the existence of a tenancy relationship or claims that he does not recognize the tenant.

Sometimes landlord identification is made difficult because the landlord refuses to be identified as such. While the recourse of the interviewer is to ask for data about the landlord from the tenant, at times the tenant does not know his landlord, especially if the latter never, or seldom, visits his land.

Among the various factors which cause the generation of erroneous data during the identification as well as parcellary mapping operations, one has to do with the peculiarities in the behavior of OLT management. Periodically unrealistic demands are placed on the data system in terms of numbers of CLTs field staff are expected to produce during the two months prior to October 21st, the anniversary of the Tenant Emancipation Decree (PD No. 27). This behavior, which is understandable considering the significance of the event,³ puts increased pressure on the field personnel, who already face constraints of logistics and manpower. The staff doubles up their efforts in terms of quantity, at the expense of quality, of the output. Thus, for years the resulting pattern of the monthly CLT output is characterized by a peak around September and October (Madronio, 1978), although such an annual feat may be illusory if the output is plagued with erroneous data which then takes time to correct.

³Others interpret this behavior as the bureaucratic response to the political environment.

Sketching and Parcellary Mapping

The sketching and parcellary mapping of the tenanted rice and corn lands constitute the initial process for generating data on land area affected by OLT. Moreover, the land area measurements as indicated on the Parcellary Map Sheet (PMS) form the basis for the LBP's verification of the landowner compensation claim. Whenever there is a significant error in the land area measurements or if inconsistencies show up between the PMS's data and data of a reference document (e.g., a land title), the LBP holds the processing of the landowner's claim in abeyance pending the correction/clarification of the questionable data. Ultimately, this delays compensation payment to the landowner as well as a closely linked process, LBP's collection of amortization payments from the tenants.⁴

The following are illustrative of the problem areas in sketching and parcellary mapping: (1) unavailability of the technical survey plan which normally must be provided by the landowner prior to the actual mapping operation (wherein this document serves as a reference); (2) non-appearance of the tenants during the mapping operations or even if they are present, their refusal to have their tenanted landholding measured or mapped; (3) boundary disputes; (4) inaccuracy in mapping or land measurement; and (5) unsystematic implementation as a result of policy improvement/changes (e.g., inclusion of homelots under land transfer coverage later in the OLT process necessitating a return of BL survey parties to supposedly completed areas), or shifts in operational strategy

⁴Based on interviews with two officials of the LBP.

(e.g., shifting from carpet approach, initially in pilot areas, to one based on land-size priorities resulting in leapfrogging operations).

Land Valuation

Land valuation problems stem primarily from the unavailability of appropriate production data. Moreover, these problems can also be attributed to the measurement process adopted by the MAR (i.e., LTPA and BCLP) and to policy-making inadequacies where policies are not operationalized to the point that they can be implemented in the field without hesitancy and confusion (e.g., the policy to include "auxiliary crops" in land valuation). The controversies and protests (from both the tenant and landlord) delay land compensation payment and collection of amortizations. All have serious implications for the equity impact of the reform.

Unlike its counterpart in Taiwan (Shen, 1966) or elsewhere, the Philippines embarked on a land transfer program without the necessary documents/records to support the implementation process (e.g., landownership and tenancy files, land classification maps, production records, etc.). This is the basic reason why the OLT data and implementation systems had to be fused.

For the MAR, it is unfortunate that both the Filipino tenants and landlords of rice and corn farms do not usually keep production records, since production is the PD 27's basis for land valuation. The choices opened to the MAR were either to use appropriate data available elsewhere or to generate the data itself. As it turned out, MAR had to take the latter course of action because the data available from other sources were inappropriate. BAEcon's survey data are based on random samples and the lowest administrative subdivision for which it can be reported

accurately is the province. This was useless because MAR needed data at the farm level. On the other hand, while the BAExt had farm-level data, these were confined only to those farms which cooperated in the BAExt's agricultural productivity program. Through interviews, BAExt technicians elicit the data from program cooperators. The technician's productivity orientation as well as involvement in the outcome of the program plus the likelihood that only the better farms are represented cause data users to suspect BAExt data as biased upwards. Using such data for land valuation would unduly raise the land cost to be paid by the tenant, making the reform less equitable than intended.

The MAR has chosen three methods to generate its own data for land valuation purposes, namely: (1) through complete enumeration interviews using OLT Form 1 (Revised 1973) which was later changed to OLT PS Form No. 1 (Revised 1976); (2) through the Landowner-Tenant Production Agreement (LTPA); and (3) through the Barrio Committee on Land Production (BCLP).

As far as can be determined, data obtained through the first method are not directly used in the calculation of land values. They are instead used merely as one of the references in determining the land value through BCLP (method 3).

Under the LTPA valuation method, the tenant and his landlord are left to arrive at a mutual agreement on the average gross production (AGP) for the last three "normal" crop years prior to October 21, 1972, as provided in PD 27. What this procedure amounts to, in fact, is a bargaining process where the tenant and the landlord, each having a vested interest in the resulting AGP, exert their influence on each other.

Some observers believe that in such a situation the tenant is likely to end up on the weaker side of the bargain because of the still prevailing landlord influence reinforced by the Filipino value system (i.e., values such as utang na loob (debt of gratitude) and pakikisama (getting along well) are presumed to be ingrained among the tenants). On the other hand, many landlords protested that the PD 27-based pricing is confiscatory.⁵ Thus, while practically all compensation claims received by the LBP have been based so far on the LTPA valuation method, many negotiations still ended up in disagreement and were therefore referred to the BCLP. Generally, however, the landlords prefer the LTPA over the BCLP method, possibly because the LTPA provides them a way somehow to get even, whenever they can.

Many of the LTPA valuation problems are discovered when the tenants refuse to sign the FUs (Farmer's Undertaking) presented to them by the LBP field representatives. The reasons for such refusal can be traced to the following, among others: (1) the LTPA method allows for divergence from the PD 27-prescribed valuation, often resulting in what the tenants view as "overpricing" of the land. For instance, rather than start with the AGP to arrive at the land value/price, the bargaining parties are permitted to take the reverse process, i.e., start with the land value/price and then convert this land value back to AGP (the conversion being done usually by the MAR field technician). In being able to start with the land price, the landlord has found an opportunity to

⁵ Any program of agrarian reform that is intended to be wealth-redistributing involves a confiscatory land valuation formula. The Philippine case is no exception in that the formula is not based on the capitalized value of the land. However, the compensation payment scheme as devised under PD 251 reduces the confiscatory impact, at least on the small landlords, by means of Land Bank subsidy (see Harkin, 1976).

include in such price the tenant's payment for previous unpaid debts and/or rentals or to base the land price on prices of adjoining real estate; (2) Many tenants, when they enter into LTPA negotiations, are not well informed about the PD 27-based land valuation procedure, particularly the 6 percent per annum interest charge which is included in the final land cost. Hence, they refuse to sign the FUs and protest upon discovering that the land costs indicated on the FUs are higher than what they have agreed to in the LTPA; and (3) The policy to deduct the value of rentals paid after October 21, 1972 from the computed land cost is frequently overlooked during the LTPA negotiations.

Unlike the LTPA, where the object is the derivation of the farm-level AGP, the BCLP is designed for deriving a barangay-wide AGP for each of four land categories, namely: (1) lowland rice, irrigated; (2) lowland rice, unirrigated; (3) upland rice; and (4) cornland. Every OLT-covered farm in the barangay concerned is then valued on the basis of the AGP so derived.

Much of the reported problems and controversies surrounding this valuation procedure can be attributed to two basic causes: (1) lack of accurate production data; and (2) vested interests of both the landlords and the tenants in the valuation outcome (the AGP) because this outcome affects their welfare. Among the symptoms of the latter cause are: (1) the landlords' refusal to attend the BCLP meeting during which land valuation is done, coupled with (2) their protest that landlords are unequally represented in the BCLP; (3) the landlords' claim that tenants fail to declare the actual production figures on which land valuation is based; and (4) disagreement between the landlords and the tenants on the compensation price (Berte, 1976).

It may not be farfetched to hypothesize that, in some instances, the tenants or the landlords do withhold the accurate data they possess (e.g., by memory) from being used in the BCLP calculation if they feel that it is to their advantage to do so. If this hypothesis is correct, it could be said then that vested interest in the AGP (No. 2 cause above) is one of the reasons for lack of accurate production data (No. 1 cause).

Quite apart from the basic causes of the BCLP problems, one would argue that the measurement process itself, the BCLP method of determining AGP, is the inherent cause of the BCLP valuation problems and that regardless of what MAR does to increase the accuracy of the data going into the AGP calculation, MAR is likely to face protests from both the tenants and the landlords.

The use of barangay-wide AGP as the basis for valuing a parcel within a farm or a farm within a barangay is bound to be controversial statistically. Agronomists or anyone familiar with the conduct of field experiments appreciate the fact that yield (or production per hectare) of a given crop (whether rice, corn, or any of the "auxiliary crops") can vary: (1) from parcel to parcel within a farm; (2) from farm to farm within a barangay; and (3) from barangay to barangay within a municipality, and so on, depending on the relative influence of the various agronomic and environmental factors that affect yield (see Oñate, 1976; and Gomez, 1972).

The land categorization used under BCLP is an attempt roughly to group together lands with the same crop (i.e., whether rice or corn),⁶

⁶Note that one is not even talking about different varieties of a given crop, say rice.

and hopefully, the same soil and the same water regime in that soil (i.e., lowland, irrigated or lowland, unirrigated and upland). The theory behind this categorization is that lands which are uniform according to the dimensions considered are expected to have more or less the same yield. But such categorization can never fully account for the many other sources of variation in yield.

This, however, should be enough to demonstrate that even in lands which belong to the same land-crop-irrigation category within a barangay one would expect a parcel-to-parcel or farm-to-farm variation in yield. This is a fact of life, where one does not have full control over many other sources of variation in yield. Thus, if in this land category and barangay one could gather accurate data of the farm-to-farm yield, one would get not just one yield figure but several figures ranging from a low say, or 40 cavans/ha to a high say, of 80 cavans/ha. One or more recorded yields may be the same, while others may be close enough or far apart. Now, in statistical theory, one can conceive of a yield distribution, such as that shown in Figure 25 where the yield is indicated on the X-axis and the proportion of the farms observed (or proportion of total observations) on the Y-axis.⁷ There, $\bar{X}$ is the average yield for the whole barangay and for the given "land" category, which in this case is 60 cavans/ha.

⁷Data from experiments and farmers' paddy fields collected by Oñate in 1962 to 1966 indicated that the symmetry of the distribution function is affected by the level of nitrogen and the season. At zero or low level of nitrogen, the distribution is positively skewed or a relatively long tail to the right. The mode is less than the mean. At moderate levels of nitrogen, the distribution becomes more symmetrical and the mode equals the mean. But at relatively higher levels of nitrogen, the distribution assumes a negative skewness or a long tail to the left and the mean is now below the mode. As the level of nitrogen increases, the yield potential also increases and the distribution shifts to the right. Higher productivity is also associated with larger variability. See Oñate, 1978, pp. 34a and 34b and Chart 1.3, p. 34d.

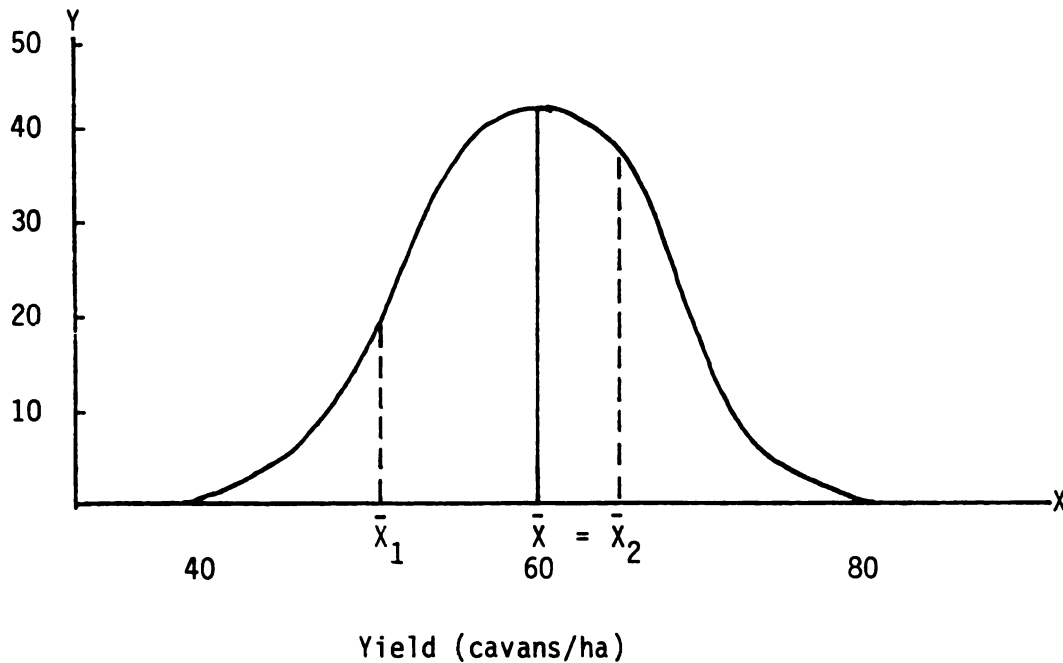


Figure 25. A Hypothetical Yield Distribution for the Same Barangay and the Same Soil-Crop-Irrigation Category

Going back to the BCLP procedure, one should note that the determination of AGP is an attempt to obtain a barangay-wide average similar to $\bar{X}$ in the above figure. Because of inaccuracies in the data, what the BCLP might obtain is not $\bar{X}$ but possibly $\bar{X}_1$ or $\bar{X}_2$. The point of the argument here, however, is that even if the BCLP is able to strike exactly at the accurate average, $\bar{X}$ (i.e., AGP = $\bar{X}$ = 60 cavs/ha), the use of such an average in valuing the individual farms or parcels in the barangay would still generate protests and controversies. In fact, no matter where the AGP lies along the yield range (or X-axis) somebody (tenant or landlord) is bound to benefit and somebody is bound to be hurt by the

valuation method. The reason for this is that there are farms whose average yield falls below the AGP or above the AGP. Where a farm is situated along the whole yield range determines the equity impact of the reform on the tenant(s) and landlord(s) of such farm. In those farms whose yields fall below the AGP, the tenants will be hurt and the landlords will benefit from the valuation. That is to say, the land cost will be higher than what PD 27 allows. On the other hand, in those farms whose actual yields fall above the AGP, the opposite is true, i.e., tenants will benefit but the landlords will be hurt by the valuation. Therefore, wherever the AGP lies (i.e., regardless of how accurate the measure of AGP is) the MAR will likely be swamped with protests over the result of the BCLP-based land valuation by both the tenants and the landlords. The root cause of such a problem is the measurement process itself, the BCLP method of land valuation.

When the BCLP method was already in use, the issuance of the policy to include "auxiliary crops" in the land price determination further compounded the problem of delays in land valuation. The OLT management has remained saddled with the question of how to operationalize the policy in the face of the wide variations in "reality" not only in the kinds of auxiliary crops grown from region to region but also in the units of measurement as well as prices. Another area of concern among analysts is the impact on equity if such a policy were implemented. It is expected that the policy will effectively raise the land cost to those tenants who are engaged in the growing of auxiliary crops. It would not be surprising if the affected tenants consequently filed protests with the government relative to this land valuation issue.

Some System Performance Variables Not Monitored

Some of the program performance variables which have been identified in Chapter 4 are actually outputs emanating from OLT implementation. Ideally, therefore, these variables must be measured (by the OLT data system) to provide the data needed for policy analysis and program evaluation. However, it has been noted that a number of these performance variables are not being measured at all. Two illustrative examples are: (1) amount and proportion of land compensation (to former landlords) invested in industries, rural/urban, by region (pesos or percent/year) (i.e., desired output No. A(7a) in Appendix I); and (2) rate of eviction of tenants (percent/municipality/year) (undesired output No. B(1b) in Appendix I).

The first relates to the program objective of diverting landlord capital tied up in the land to industrial development. Both analysts and implementors alike felt the need to have information on how the former landlords are utilizing the land compensation payment paid to them by the Land Bank. During the country review on the agrarian reform program implementation (MAR, 1978), for example, one of the questions which implementors wanted answered was: "What percentage of landowners covered by OLT have invested their capital for industrial development through the guidance of the Land Bank?"

The second unmonitored performance variable is an undesired and unintended consequence of OLT implementation. As OLT implementation progresses, it is important to monitor this variable so that management can have a concrete basis for taking corrective action before the conflicts and social tensions in the countryside erupt into widespread violence and

hostilities. With so many tenant eviction cases reported already, it is not known: (1) with what frequency this is occurring; (2) in what localities eviction are prevalent; and (3) whether or not those who have been evicted have been reinstated.

Apparently, the tenants' first refuge is either the MAR's field offices (Team, District, or Regional Offices) or the peasant organization such as the FFF or FAITH. Eventually, the informal feedback information reaches the central office where corrective policies and instructions are issued.

Noticeably, however, such negative program impacts do not get reported to the public in the statistics or reports put out by MAR. If the public is to be informed about the attendant social costs of the program so that public opinion and support can be rallied to minimize such costs, there are presently no adequate, consistent and continuing data series to fall back on.

Personnel and Information-Usage Problems Accompanying Data-System Changes

The change from the old to the new OLT procedures brought with it changes in: (1) the number of data forms; (2) the data format; and (3) the number of reports intended to inform management. This created difficulties among field personnel who are involved in completing the forms which are eventually forwarded to the COLT. In the process of breaking the old but simple routine and replacing it with the new and complicated one, confusion and errors often resulted. Accentuating the problem is the fact that the field personnel who collect data have not really been thoroughly trained to understand the principles and mechanics of the new system.

However, the problem is not only in the production of the data but also in the management's utilization of the information derived from these data for monitoring and control. There have been indications that while a lot of work is involved in completing the forms by the field personnel, the management is not using the reporting system as a management tool. In fact, management has moved to cut back the LTI reporting system drastically. While some systems analysts see this as an indication of the need to educate management on the use of the reporting system as a management tool, it may as well be indicative of a fundamental weakness in the analytical component of the OLT information system. Other observations reinforce this suspicion.

Problems in the Analytical Sub-Component

Lack of Trained Manpower

The management's inability to operationalize the policy on auxiliary crops is one of the causes of delays in land valuation process. This operationalization problem is viewed in some quarters as technical or procedural rather than a policy-making problem: the policy is there, but the problem is how to implement it. Accordingly, those who hold this view believe that the policymakers ought not to be saddled with the job of operationalizing the policy but should relegate this task to technical people. In the MAR, however, it appears that besides the Policy Formulation Office (PFO), no other body has been given the responsibility and authority to perform this task. On top of this, the MAR-based analytical unit generally lacks trained manpower, i.e., personnel who have command of theories, knowledge and data for deriving the prescriptive information which the PFO does not now have (e.g., How are "auxiliary

crops" to be defined to take account of regional variations and what unit of measurement and prices to use in valuation?).

The limited capability of the MAR-based analytical unit is also reflected in the way Section IV (Crop Production) of the OLT Form No. 1 (Revised 1976) is structured.⁸ This form, which serves as an interview schedule, provides spaces for entering the area harvested (hectares) and production (cavans) of rice, corn and auxiliary crop under each crop year.⁹ A major shortcoming of this form is its failure to breakdown production by croppings per year (i.e., 1st crop, 2nd crop, or 3rd crop) or by seasons (i.e., wet or dry season). With such a breakdown omitted, the interviewer will be forced to obtain the data as the form dictates--per crop year. If in "reality" farmers do have more than one cropping of say, rice in one year, as in Leyte, the form produces an erroneous conceptualization and operationalization of that reality.¹⁰

Moreover, during the interview situation, the effect of this interview schedule defect will be to impose on the respondent the task of adding his production over several croppings or seasons in order to figure out his total production for the whole crop year. Ordinarily it is the interviewer who should do this to minimize arithmetic errors and to provide consistency checks (especially when the respondent, probably a tenant, may be poor in "mental" addition).

⁸This form is entitled: "Rice and Corn Land Tenure Survey".

⁹Note that "crop year" as used in the form is synonymous with a calendar year of 365 days, not necessarily starting in January.

¹⁰See 1971 Census of Agriculture for Leyte in NCSO, 1974.

Thus, poor design of the interview schedule, which is indicative of weak analytical capability, leads not only to conceptual and operational errors but also to measurement errors or what statisticians specifically group under non-sampling errors (see Murthy, 1967; Sukhatme, 1954).

Weak Linkages Among Analytical Units

There are several analytical units which lend support to the agrarian reform program. However, only three have so far demonstrated that by undertaking joint projects gains can be made in the quality and breadth of the research output. These are the Institute of Philippine Culture (IPC), the Institute of Economic Development and Research (IEDR), and BAEcon (primarily in providing the data). Their research output (see Mangahas, et al., 1976) is a landmark analysis of agrarian reform. Otherwise, the various analytical units generally tend "to do their own thing".

Research coordinating bodies, like the Center for Policy and Development Studies (CPDS) provide the mechanism for establishing inter-unit linkages. Yet, the flourishing of cooperative research endeavors in response to the increased demands for information remains to be seen.

Unavailability of Relevant Information

This research study's interviews of OLT policymakers, administrators/implementors, analysts and peasant leaders as well as the country review show that a host of information¹¹ needed by the OLT management is unavailable. Information is needed by management seemingly for the following purposes: (1) to unravel bottlenecks in current policy

¹¹Note that information is the output emanating from the analytical component of the information system (see Chapter 2).

implementation; (2) to evaluate the impacts (economic, social, etc.) of the implemented policies on the target sector as well as the public as a basis for issuing corrective decisions that would improve upon earlier policies; (3) to resolve new issues that have emerged during the course of policy implementation; and (4) to design new policies to avoid anticipated problems within the subject-matter area under consideration.

To illustrate these points, one can cite the exceedingly slow compensation payment as a leading bottleneck in OLT implementation which affects government credibility. Administrators in the MAR and especially in the LBP, are plagued by the problem of how to eliminate this bottleneck. Some people are blaming the LBP for its stringent requirements in terms of document submission/fulfillment and authentication. On the other hand, the LBP could also blame the MAR for delays and errors in land valuation. Both MAR and LBP could blame the landlords for boycotting the BCLP or failing to submit or delaying the submission of the documents as required from them. Administrators are puzzled and want to know the fundamental reasons why landlords are behaving this way when, ironically, they are quick to demand or complain about delays in their compensation payment. Are the landlords not well-informed about these LBP requirements despite massive information drives at the local level (e.g., information caravan)? Thus, information woven around these and related themes is definitely needed by OLT decision-makers in dealing with the above problems.

Policymakers, administrators and even peasant organization leaders also want to know the impact of the land transfer policy. The following are illustrative of the kinds of questions which they are raising: (1) Economically, are the OLT beneficiaries better off now than before the

land transfer considering that they have to meet new obligations besides the land amortization, such as irrigation fees, land taxes, and SN contributions, as well as absorb increases in costs of inputs such as fertilizer? (2) Why have other CLT recipients returned their CLTs or are not willing to join the SN? Is this an indication that the land transfer package is more of a liability than a benefit to them? (3) Could it be that uniform application of the land valuation based on "normal" production has disproportionately overburdened the beneficiaries in high-risk (e.g., typhoon or flood prone) areas relative to low-risk areas? Could this help explain high amortization defaults in high-risk areas?

During the course of OLT implementation, some CLT recipients died. So now policymakers are faced with "second generation problems" and issues. Information is needed for designing specific policies on hereditary succession which prevent further land fragmentation amidst a wide range of foreseen situational differences (e.g., whether or not the beneficiary has a child/children or close relatives, number and sex of children, etc.).

Future anticipated problems can be dealt with by policy if the relevant information is available. Answers to questions such as the following are needed by policymakers. Given the facts: (1) that only a fraction of the original OLT target tenants can actually be covered by the land transfer because the rest, whose landlords have retention rights, have to remain under leasehold; (2) that landless farm workers are outside the scope of the land transfer program; and (3) that farm fragmentation is occurring de facto, though not de jure, because of population growth (Ledesma, 1978), what lies ahead some five, ten or twenty years

from now in terms of the man-land relationship? Would there be enough land resource to absorb increments to the farm labor force in productive employment opportunities? What would be the effect of the population pressure on the effective farm operating unit, production efficiency and rural income distribution?

The lack of information on the foregoing problems could be due to any one or a combination of the following: (1) unavailability or inadequacy of data even if the analytical capacity is there; (2) data may be available, but for some reasons no analysis is being done; or (3) both data collection and analysis are being done marginally, if at all.

Summary

This chapter has identified the problems confronting the OLT Information System in the dynamic sense that these problems occur as the system moves through time. Before the OLT information system was set up, lack of updated data as a basis for OLT planning and budgeting was a problem. However, even when the system was already in place, there were problems of conceptualization, operationalization and measurement in the data system. Some system performance variables are not being measured at all. Moreover, there are dysfunctions in the analytical system which, given the state of the data system, render it incapable of coping with the present and projected demands for relevant and timely information. The theoretical and policy implications of these and earlier empirical observations will be discussed in the next chapter.

Part IV

SUMMARY, IMPLICATIONS, RECOMMENDATIONS AND CONCLUSIONS

CHAPTER 8

SUMMARY OF EMPIRICAL FINDINGS AND THEIR IMPLICATIONS

The primary task of this research is to discover and describe the formal and informal processes by which agrarian reform policy is formulated and implemented. As policymakers and analysts realize, a decision process must be understood accurately before it can either be improved or modeled. The first part of this chapter very briefly summarizes the primary descriptive characteristics of agrarian reform decision-making which were treated in detail in Chapters 4 through 7. The final and more extensive part of the chapter summarizes the organizational and informational weaknesses discovered, and identifies actions which might improve agrarian reform policy and implementation processes. The following chapter will address the same and other questions with a view towards improving the existing agrarian reform information system.

Empirical Findings

Policy-making Under Martial Law

The declaration of Martial Law abolished, among others, the Philippine legislature. The President, who has been the Commander in Chief of the Armed Forces, has also become the lawgiver of the country. The laws are issued as Presidential Decrees.

Land Reform for the Whole Country

Five days after the declaration of martial law, Presidential Decree No. 2 was issued. It declared land reform as a primary national policy which covers all types of croplands throughout the country. Its objectives are: (1) To achieve political stability by making all farmers of the land they till owners; (2) To promote social justice by bringing about an equitable land distribution; and (3) To increase agricultural productivity.

Rice and Corn Tenants Emancipated

About three weeks after the promulgation of PD No. 2, PD No. 27 was issued. It declared the immediate emancipation of all rice and corn sharecroppers from the bondage of tenancy. It specified the size of farm which the former tenants could own. It also allowed former landlords to retain a limited amount of land if they farmed it themselves. It directed payment for the lands of the landlords at a price equivalent to two and one-half ($2\frac{1}{2}$) times the annual value of crops harvested from the land. The former tenants were to become amortizing owners.

Incremental Succeeding Policies

Further policies for the implementation of PD No. 27 were issued by the President as Letters of Instructions. These were issued piecemeal. In practice, the planning agency would make a draft of its recommendation to the President. If he approves it, he issues it as a Letter of Instruction to the implementing agency.

Planning Agencies of Agrarian Reform

Even though the immediate scope of the agrarian reform program was narrowed to rice and corn tenants, it was a very sizeable operation. An

agency, the Ministry of Agrarian Reform, was created and made responsible for its implementation.

The Ministry of Agrarian Reform

This Ministry has a central office staff and regional offices throughout the country. It has the power to co-opt, or request, the services of bureaus of other ministries in implementing the agrarian reform program. However, it has to provide plans which the President could issue as Letters of Instructions, before it could turn its regional offices into implementing machinery.

The Agrarian Reform Coordinating Council

This coordinating body is composed of the Ministers of the ministries which are involved in the agrarian reform program. Its Chairman is the Minister of Agrarian Reform. Its function is to plan the implementation of the program; once its plans are approved by the President, they coordinate the implementing activities of their ministries.

The Arms of the Agrarian Reform Program

The compensation of the former landlords for their lands is handled by the Land Bank of the Philippines. Enabling the former tenants to become productive and successful amortizing owners is a function of the Agricultural Credit Administration. These two agencies are dubbed "the arms of the agrarian reform program". To insure alignment of their policies with the program, the ministers who are members of the Agrarian Reform Coordinating Council are also members of the Board of Directors of the Land Bank and the Agricultural Credit Administration.

Implementation: Operation Land Transfer

"Pilot" Municipalities

The planning agencies are also implementing agencies. As planners they foresaw the complexities in the implementation of the program. Therefore, they decided to limit the implementation to the transfer of landownership "in fact and in law" from landlord to tenant. Further, they decided initially to undertake this in a few "pilot" municipalities--hoping to learn from experience.

Inter-Agency Cooperation

Operation Land Transfer involved the activities of many bureaus of different ministries. The Agrarian Reform Coordinating Council drew up a Memorandum of Agreement which assigned specific jobs to specific bureaus. Specific time-tables for each job were also agreed upon. Job assignments and time-tables were calculated to promote a smooth sequential flow of activities in the different phases of Operation Land Transfer.

Involvement of Target Groups

The implementation of each phase of the operation requires data as the basis for its execution. To insure acceptability, and also accuracy, barrio leaders, tenants and landlords were constituted as committees to develop and agree upon necessary data on farm productivity, size, and location.

The Bottleneck of Operation Land Transfer

As of October 21, 1972, all rice and corn tenants, as directed by PD 27, had become amortizing owners. Former landlords should have

received, or should have been receiving, compensation for their lands. Tenants scheduled to become amortizing owners and to start amortization payments should have been issued Certificates of Land Transfer. These things have occurred but at a very, very slow pace.

Certificate of Land Transfer cannot be issued if there is no reliable data on the size, location, and owner of the land. Amortization payments and compensation of former landowners require a decision on the value of the land, and land valuation has to be based on agreed upon or acceptable data on the land's average annual crop production. These pieces of data are not readily available. Lack of relevant data is clearly one of the bottlenecks of Operation Land Transfer.

Implications of the Findings

Expeditious Decision-Making

Policy-making under Martial Law is expeditious. It is not delayed by debates in the legislature or by public hearings conducted by committees of the legislature. It is less influenced by the lobbying activities of vested interest groups.

Of course, the President uses the expertise available to him. In the cases of PD Nos. 2 and 27, he availed of the advice of his staff and a "Think Tank" group composed of experts in government service and in private firms. The urgency and speed which characterized their work are reflected in the ability of the President to issue PD No. 2 just five days after the declaration of Martial Law; PD No. 27, just three weeks after PD No. 2.

Speed in decision-making had been achieved by foregoing the possible benefit of the opinions of other sectors of the country. The target

groups had very minimum input; the same has been true with many non-target groups, like the press, the churches, and other civic groups. Opposition did not have an opportunity to express its views; the President, his planners and implementors, assumed that the agrarian reform program is supported by a "silent majority" of the country's population.

The output of such a policy decision-making process is a broad policy issuance which then had to be translated into operational policies and procedures before it could actually be executed in the field.

The inadequacy of information, particularly regarding the small landlords' policy preferences on such issues as retention and land valuation, led to a faulty design of some operational policies. Evidently, small landlords resisted the reform by resorting to various dilatory tactics.

The Importance of Political Analysis in Agrarian Reform Policy Decision-Making

The zero retention limit prescribed by the Think Tank was disapproved by the President probably because its equity consequences for small landlords was considered politically infeasible. The President recognized this as a result of the political analysis provided by the Presidential Economic Staff (PES). No general social system with major political outputs can be managed without political analysis for decision.

As a wealth redistributing program, agrarian reform confers benefits to a segment of the population (usually the poor and the disenfranchised) but assigns more of the costs to another segment (usually the wealthy and the elite) often heightening class conflict. To avoid widespread social turmoil, the government carefully balances the interests of the

contending parties in the policies that it adopts, often to the extent of subsidizing the costs incurred (e.g., Land Bank subsidy to small land-owners implied in the compensation payment scheme).

Iterative Nature of the Decision-Making Process

This study has identified two levels of policy decision-making: the strategic level and the operational level. At the strategic level, there was the formulation of PD 27 itself, and at the operational level, there was the translation of this broad policy into operational policies. These higher and lower levels of decision-making may be viewed as parts of an iterative decision-making process where learning takes place at every iteration (e.g., amending of previously issued decrees) (see Johnson and Rossmiller, 1978).

There is a continuous shifting back-and-forth of policy decision-making from the strategic level to the operational level and vice-versa. For example, from PD 27 formulation (strategic level) decision-making moves on to lower level issuance of LOIs, Rules and Regulations or Memorandum-Circulars for implementing PD 27 (operational level). But the latter, in turn, trigger the need to amend, support, or build upon the previously-issued strategic policies (embodied in PD 27). So the decision process goes back to the strategic level and down again to the operational level. Iteration takes place and the need for strategic policies or their modification are discovered (learned) at the operational level.

Information needs at the strategic level appear to be considerably smaller and more general than the information needs at the operational level (which were more specific, detailed and numerous). If the

information needed for strategic policy-making differs in essentials from that for operational policy-making, as the findings here seem to indicate, then this implies that for each decision-making level a separate information system must be designed. Alternatively, and preferrably, an integrated system could be built to serve both purposes.

Also it would seem that political, economic and social analyses are needed at both levels to make sure that policy intentions at the strategic level are consistently carried through to the operational level. If, for lack of analysis coordination, an operational policy runs counter to the strategic policy (as is felt by some people, for example, that inclusion of auxiliary crops in land valuation seems to be inconsistent with the intention of PD 27), the strategic objective (e.g., of income and wealth redistribution) may not be attained.

This implies that there is as much a need for analysts, say, in the MAR (operational level), as there are in the PES or NEDA (strategic level), or that the same set of analysts who passed judgment on the economic, social and political impacts of the strategic policy must analyze the operational policies to make the latter consistent with the former. The step-by-step issuance of LOIs (implementing PD 27) by the President appears to have made such policy coordination possible. MAR consultation with Malacañang to ascertain that MAR-initiated policies are "along the thinking of the President" also suggests a Presidential role in coordination.

The congressional policy-making process which yielded R.A. 3844 in 1963 and an amendment some eight years later (i.e., R.A. 6389 in 1971) can also be viewed as an iterative and learning process, but the iterations over time appear to be agonizingly slower than under martial law.

Thus, corrective policy measures to deal with problems affecting system performance are frequently applied too late. It can probably be said that the utility of an information system to decisionmakers appears to be greater under martial law where the system performance is frequently evaluated (thus, learning takes place) as a basis for applying corrective policy measures.

Weak System Controllability

Under the integrated approach to agrarian reform, the policy-making structure is such that the authority, jurisdiction and responsibility to manipulate various critical program policy inputs are dispersed among several agencies. This makes system controllability an issue not only in assigning agency accountability for the success/failure of the program but also in the design of the information system for the whole program. To a certain extent, agency accountability can be pinpointed with respect to specific program component(s), but this should not hide the fact that there always remain areas of interdependence in inter-agency control of policy inputs, if not in the impacts of separately-controlled policy inputs.

In terms of designing the information system for the program, such interdependence implies that information inputs to policy-making must be provided not just to one agency, but to all those involved in the decentralized policy-making process in a meaningful and integrated fashion.

To assure success the government must coordinate policies affecting the performance of the agrarian reform system. However, with the control of program policy inputs dispersed among various agencies, the coordination task assigned to the NEDA appears, in a sense, to be illusive.

Reduced Scope of Agrarian Reform Program

From all croplands (PD No. 2) to tenanted rice and corn farms (PD No. 27) is a very big scaling down of the program. Implementing it initially in few "pilot" areas, instead of throughout the country, is a further significant reduction of the magnitude of the program.

The reductions in the scope of the program was dictated by the lack of available logistic support. Among these logistics are: funds to pay the salaries of a greatly expanded number of employees to implement the program, funds with which to compensate the landlords for lands transferred to tenants, and funds for other infrastructures needed to make the amortizing owners become productive farmers.

Another important logistic is skilled manpower in the different phases of the program. Even if funds were available to hire employees, it takes time to train them. Equally important has been the absence of experience as a guide. The experiences in the "pilot" operation will undoubtedly help to avoid errors and maximize success in future expansion of the program.

Incremental Implementation

The pilot implementation of OLT prior to its nationwide expansion was a means devised by administrators to acquire by experience the knowledge or information necessary for formulating effective operational policies. Under the martial law environment, where problems called for swift action, this means of gathering information served as a substitute for research and public hearings.

Initial scaling down of program implementation to pilot areas and to tenanted rice and corn farms has meant incremental implementation

of the program. This method enables the President to "feel the pulse of the public" concerning the agrarian reform program. It will give him opportunities to take into account the people's reactions and to make modifications in order to win and to sustain public support for the program.

Incremental implementation, however, has not been able to build up that sense of urgency and climate of revolution with which agrarian reform was expected to endow the "New Society" under Martial Law. Thus, very important psychological leverage for the success of a program as radical as land redistribution was lost.

This loss of momentum afforded landlords of tenanted rice and corn farms who were not included in the "pilot" areas and landlords of tenanted farms planted with other crops time to escape the coverage of the agrarian reform. There have been rumors that some landlords subdivided their farms into lots in the name of their sons and daughters. The size of each lot was too small to be included in land reform. There seems to have been many schemes to circumvent the agrarian reform.

Evaluations

The use of "pilot" areas in the implementation of Operation Land Transfer implies a strategy of "de-bugging" the program of defective parts before it is implemented in an expanded coverage. This strategy may be carried out in the form of an evaluation. The evaluation may be undertaken by an analytical unit in the implementing agencies or by independent agencies contracting to undertake such evaluation. Findings from evaluation are the stuff with which to construct a "feedback control system."

The processes in transferring land ownership from landlords to tenants should be one focus of the evaluation. A comparison has to be made of the actual processes with those which were planned out and expected. It is not enough to identify divergencies of the two; it is necessary if remedial measures are to be taken, that the causes of the divergencies be pinpointed and analyzed.

The other focus of the evaluation should be the outcomes of the transfer of land ownership. These expected outcomes are specified in PD No. 2: political stability, social justice, and increased agricultural productivity. Where transfer of land ownership has been in effect for at least a year, are the actual outcomes closer to what was expected? It appears that information of this type is not yet available to the policymakers and planners.

Need for an Improved Information System

PD No. 27 is a very broad policy; the tasks of planning and implementing would have been less difficult if the policy has been more definite. Inability to make the policy more specific appears due to a lack of relevant information.

The flow of work through the different sequential phases of Operation Land Transfer has been much slower than anticipated. This is at least partly the result of the paucity of data without which a task cannot be done. For example, a Certificate of Land Transfer cannot be made without data on size, location, and to whom the land is to be transferred. This was often difficult to establish. There are many other cases of lack of data in compensating the landlords for their lands and in collecting amortization payments from the new farm owners.

What are the outcomes of former sharecroppers having become amortizing owners? What are the effects of this change in farming status on the community, on the agricultural credit cooperative, on the productivity of farms, etc. Answers to these questions are important to policymakers, planners, and implementors. Of course, these are also important to the public.

All of the above point to the need for improving the existing information system. Without such improvements, not much benefit can be gained from the "pilot" operation. The expansion of the coverage of PD No. 27 in the rest of the country could mean going through the same difficulties experienced in the "pilot" areas.

CHAPTER 9

SYSTEM DESIGN CONSIDERATIONS AND RECOMMENDATIONS

Introduction

The findings and implications discussed in the preceding chapter contribute to the information which could in turn provide alternative ways of improving the existing OLT information system. This information is by no means complete, however. There are other design considerations that have yet to be taken into account before any meaningful recommendation could be made. These considerations are examined immediately below. Alternative ways of improving the present OLT information system are then presented in the following section. Since OLT covers only the Land Tenure Improvement component of the integrated agrarian reform program, it becomes necessary to view the OLT information system's relationship with other information systems within the agrarian reform program. The last section explores ways to improve the information system for the entire agrarian reform program.

Some Design Considerations in the Development of the Present System

Information Needs of the Entire Agrarian Reform Program

In the integrated approach to agrarian reform, the other components of the program are interrelated with each other as well as with the Land Tenure Improvement component which has been the focus of this study. This interdependence among system components suggests the possible

existence of inter-component complementarities and substitutabilities in both information demand and supply. By having a display of the information needs of the entire program, therefore, one may be able to take advantage of these complementarities and/or substitutabilities in designing improvements not only to the OLT information system, but also to the rest of the program's information systems. The results presented here, which are derived mainly from six of the core PD 27 policy-making participants, must be regarded as exploratory, and would have to be verified by more in-depth studies.

Appendix R lists the kinds of information respondents believe necessary to solve the primary problems and issues confronting the agrarian reform program at present and in the foreseeable future. The primary problems and issues were similarly identified by the respondents. Of the presently needed information on OLT (i.e., numbers (1)-(4)), the ones most often cited concern land valuation/land compensation (numbers (1)-(3)), indicating the seriousness of the land valuation/compensation problem/issue.

Respondents foresee as issues of the future, the viability of presently-distributed farms (1) and the channeling of landlord capital from agriculture to industry (2). The growing scarcity of lands relative to demand (3) and the ecologically-destructive, and hence, socially-disturbing, practices of logging concessionsaires (4) are similarly seen as future issues. Other information needed relate to a re-assessment of the planning orientation, whether towards what the farmer wants or what the government wants for the farmer (5).

During the fifth anniversary of the declaration of the emancipation of tenants (October 21, 1977), the President announced a new government policy that tenanted plantation lands devoted to sugar, coconut, banana and the like, with areas exceeding twenty-five (25) hectares, are to be covered by the agrarian reform program. Under this new policy, "tenants shall immediately become co-owners of these particular lands through a corporation, and they shall immediately be given participation in the form of equity and participation on profits on the basis of such sharing in the ownership of such lands" (PID-DAR, 1978).

No decree, rules or regulations have yet been issued to give substance to this policy pronouncement, apparently owing to a lack of information from which policymakers could design an effective policy (see No. 6, Appendix R). Meantime, the plantation owners have gained time to marshall an effective lobby for the protection of their interests.

The authority to grant permission to landowners for the conversion of agricultural land to residential, commercial or industrial uses resides with the agrarian reform Minister. However, it is recognized that certain information is needed (See No. 7, Appendix R) to guide the MAR in the exercise of this function.

Some of the information needs for the other components of the program can be gleaned from Appendix R. For instance, credit-related information (No. (6), Appendix R) has to do with the program's Institutional Development component. Concern about silting rates, reflecting the ecologically-disastrous effect of deforestation (No. (4), Appendix R),

relates to the Agricultural Development¹ component of the program. Resettlement (No. (10), Appendix R) is another aspect of the Land Tenure Improvement component (cf. PID-DAR, 1978).

Besides (1) facilitating decisions for on-going program components (or projects), information is also needed (2) for evaluating these projects;² (3) for formulating new policies; and (4) for an effective execution of a regulatory function (See No. (6) and (7), Appendix R).

Organizational Behavior

Almost all information systems are sustained by an organization or a configuration of organizations. Many information systems have failed because they have concentrated on technical aspects and overlooked organization behavior problems and users (Lucas, 1975, p. 2). In view of this, it is important to include as part of the analysis a couple of insights into organizational behavior problems gained from the in-depth interviews. Again, these are presented as hypotheses subject to verification.

Technical Staff Creation and Its Relation to the Planning Service

In a government ministry, it may be desirable to form a Technical Staff of hand-picked, analytically-skilled personnel to strengthen decision making at the ministerial level. The resulting benefit of such an organizational change to the ministry in terms of a more effective decision at the top, however, cannot simply be viewed in isolation of the

¹Yield and Income Improvement component appears to be a better term.

²See, for instance, system performance variables in Chapter 4 that are not being monitored at present.

change's negative impact on the other units of the organization, such as the Planning Service.

The Technical Staff, because of its superior analytical capability, may really be able to "deliver" an impressive job and the Minister may find himself becoming increasingly dependent on it, rather than on the Planning Service, for analytical as well as planning assistance. It may come to a point where the Planning Service becomes gradually disenfranchised of its planning function de facto though not de jure.

Data System: Organizational Basis and Management Problems

A Ministry public data system may be created not by law but by administrative action (i.e., order or memo-circular) born out of necessity. This office, being a temporary unit, may be managed by an Acting Manager with contract personnel. In an authority- and jurisdiction-conscious bureaucracy, this situation can weaken the data system management and development.

The shaky legal status of the data system manager relative to the rest of his management colleagues may render him an ineffective spokesman for data system concerns in the operational policymaking process because his peers may have a tendency to look down on him. While he may be the more knowledgeable person to articulate how best to deal with problems besetting the data system, the other managers in the agency may treat his suggestions less authoritatively. This suggests that a data system should have a solid legal foundation if it is to be managed and developed effectively.

Alternative Ways of Improving the OLT Information System

Mindful of the program's information demand and supply configuration, alternative ways of improving the OLT information system are suggested below. While based on the three relevant information system components, the discussion will focus only on the following: (1) improving the data system; and (2) improving the analytical system.

Improving the Data System

Land-Crop Categories

Information on landholdings and production are often most usefully presented by land categories. As discussed in Chapter 7, however, the land categorization used in OLT data forms appears to be less than adequate in that it does not reflect the number of croppings or harvestings, which vary from region to region.

Hence, the land-crop categories could be revised to include the number of croppings (or alternatively, harvestings) by crop and by category of water utilization, as shown below:

(1) Lowland (with dikes to hold water), Rice

1.1 Irrigated

1.1.1 1st crop/harvest

1.1.2 2nd crop/harvest

1.1.3 3rd crop/harvest

1.2 Unirrigated or Rainfed

1.2.1 1st crop/harvest

1.2.2 2nd crop/harvest

1.2.3 3rd crop/harvest

(2) Upland (also Rainfed but without dikes to hold water),
Rice or Corn

Revising the categories this way would make the production data generated by the OLT data system comparable to some extent with the statistics produced by the Bureau of Agricultural Economics (BAEcon) and the National Census and Statistics Office (NCSO). In this format, the data would facilitate analyses dealing with such program implementation problems as land valuation.³ Moreover, in this format, the data would be useful for planning and analysis, particularly with respect to land use. For example, in the allocation of "upland" land resources there could be competition among such crops as rice, corn, sugarcane and tobacco.

Data Forms

Data on tenants, landholdings, production, etc., are obtained by the Barrio Data Gathering Team (BDGT) through personal interviews with the farm operators (tenants). There is therefore no essential difference between this interview process of data collection and those used in other socio-economic surveys. If there is any difference, it would be in the design of the interview schedule used. Apparently, the OLT data forms, which serve as the interview schedules, are designed to facilitate computerized data processing, but there are problems connected with their use as a data-gathering instrument (see also Reinoso and Ganacias, 1978). An example is the case of PS Form No. 1 (Revised 1976) which, as pointed out in Chapter 7, needs improvement with respect to the land categorization if nonsampling error is to be minimized.

³See, for example, page 243ff of this chapter.

Training of Interviewers

Interviewing is a measurement process which requires special skills, knowledge and attitudes. It is imperative that interviewers precisely understand the concepts and definitions used in the interview schedules so that they know how to ask the right questions of respondents. Intensive training is needed to clarify these concepts and definitions and to provide prospective interviewers with actual practice in correct interviewing techniques before they are sent into the field.

The need for regular training of interviewers in OLT is crucial in view of the fact that: (a) the land transfer program departs radically from the previous approach to land-tenure change so that data-gathering personnel can no longer rely on past experience to cope with new procedures; (b) new (operational) policies are regularly introduced in the implementing system, while at the same time changes or revisions of previous policies are taking place, all of which eventually affect changes in the data-collection procedures and forms; and (c) the production of erroneous data, which leads to delays in implementation, has already raised serious management concern. Moreover, such training would also be supportive of the continuous effort to redesign the data system to prevent it from becoming obsolete in the face of changing realities and policy issues/problems, as pointed out in Chapter 8.

Land Valuation Procedures

Lack of reliable farm-level production records, compounded by conflicting vested interests in the data, has made land valuation a major obstacle to a speedy land-transfer implementation.

As pointed out in Chapters 7 and 8, both the LTPA and the BCLP methods have their respective underlying merits and demerits. While LTPA appears to be a "workable" approach, the main objection to its continued use is the alleged inequitable "overpricing" of land that often results, especially where the tenant is uninformed about the basis and mechanics of the land valuation. On the other hand, while the BCLP seems to be able to safeguard the tenants' interest in the AGP, the landlords frequently evade this process, sensing probably that "the cards are stacked against them". Consequently, without the landlords' presence, the BCLP becomes nonfunctional. Choosing between the two methods is like choosing between two "bads": either way generates controversies/protests causing implementation delay.

The relevant question then seems to be, "Is there a way out of this impasse?" It is with the view of breaking this impasse that the alternatives below are suggested.

One alternative is to continue with the LTPA provided that steps are taken to minimize "overpricing". Such steps must include information dissemination to both parties in the LTPA, particularly the tenants, to ensure that before they enter into the negotiation they fully understand the basis and mechanics of the land valuation under PD 27. As an added safeguard for attaining this understanding, it may be necessary for a MAR technologist to be a witness in the agreement as well as an information provider who would declare the negotiation open only after the LTPA parties have been briefed by him about the basis and mechanics of the procedure, and who would be present in the course of the negotiation to answer procedural questions that may be raised.

Another way to prevent "overpricing" would be to set a Ceiling AGP for each land-irrigation-crop category in each barangay and to declare unacceptable to MAR any LTPA-negotiated price exceeding this government-determined upper limit. This upper limit would be based on objectively-derived average production data for the barangay, as explained below.

Since production data at the barangay level, which are available from the Bureau of Agricultural Extension (BAExt), are suspected of being biased upwards, these can be adjusted downwards using a correction factor. This correction factor may be derived by regressing the provincial data of the BAExt with the provincial data of the Bureau of Agricultural Economics (BAEcon), obtaining a "best fit" equation which can be mathematically expressed as

$$BAExt_p = f(BAEcon_p) \dots\dots\dots (1)$$

In the presence of the bias, it is expected that the first derivative of equation (1) is greater than one, i.e.,

$$f' > 1 \dots\dots\dots (2)$$

The correction factor, k , may now be obtained as follows:

Since

$$BAExt_p = f' \times BAEcon_p \dots\dots\dots (3)$$

$$BAEcon_p = (1/f') BAExt_p \dots\dots\dots (4)$$

If $BAExt_p$ and $BAExt_b$ (where "b" is for barangay data) are highly correlated,⁴ then it could be safely assumed that

$$BAEcon_b = (1/f') BAExt_b \dots\dots\dots (5)$$

⁴A plausible assumption since provincial data are simply aggregations of barangay data.

and the term $k = 1/f'$ can be used as a correction factor to correct for the bias in the BAExt data at the barangay level. The corrected BAExt data (actually an average) will then constitute the Ceiling AGP.

In terms of the yield distribution function in Figure 31 (Chapter 7), the Ceiling AGP is set at the arithmetic mean of the yield distribution function for each land-water-crop category in the barangay.

Another alternative is to base the land value on production data obtained through a personal interview of the farm operator (i.e., the tenant) with the use of a revised PS Form No. 1 (Revised 1976). The revision must take account of the suggestions made earlier (see Land-Crop Categories and Data Forms).

Instead of using PS Form No. 1, however, a separate interview schedule may be designed to obtain production data via a short-cut method which may be described briefly as follows:

- Step 1 - Determine the sharing ratio from an interview with the tenant;
- Step 2 - Determine the rental paid from interviews with the tenant and the landlord designed to cross-check each other's land-rent data based on memory or records, if there are any;
- Step 3 - Once the land-rent figures of both parties coincide or cross-check with each other, convert the rent data to production data using the sharing ratio (see Step 1);
and
- Step 4 - Derive the AGP from the production data obtained above.

Data Coverage

In Chapters 7 and 8, mention was made of the fact that even in OLT-covered areas a certain degree of sub-tenancy and landlessness is found (Ledesma, 1978). Yet, in spite of the relevance of this phenomenon to policy-making and planning, it remains partly outside the coverage of the data base for the land tenure improvement component of the program. The data gathered through case studies such as those conducted by the International Rice Research Institute (IRRI) should be part of this data base, but the limited scope of these case studies does not allow analysts to determine the extent to which this phenomenon exists in the various regions of the country. Hence, it is suggested that variables covering sub-tenancy and landlessness be incorporated in an expanded and integrated data base on land tenure.

Related to this data-base development is the statistically-unaccounted tenure change taking place in the resettlement projects of the MAR. In these projects, people of varied occupational status and origin (e.g., landless agricultural worker, urban laborer) as well as in diverse circumstances (e.g., displaced evacuees and surrendered dissidents) are allocated family-size farms and homelots (see Estrella, 1978, Chapter 5). In effect, the land tenure status of these people is changed to that of owner-operator. It is therefore suggested that such tenure changes be quantified by including them in the data base on land tenure improvement. The following are illustrative examples of tenure changes that may be measured:⁵

⁵Based on the list of settlement applicants. "The basic qualification is that the applicant must be landless and will personally cultivate the land" (Estrella, 1978, p. 29; see also Estrella, 1974, pp. 36, 40-41).

Land Tenure Change

From	To
1. Landless share tenant	Owner-operator
2. Landless tiller of uneconomic family-size farm	Owner-operator
3. Landless farm laborer	Owner-operator
4. Landless occupant but personally cultivating	Owner-operator
5. Landless deserving farmer in the province where the project is located	Owner-operator
6. Landless surrendered dissident	Owner-operator
(a) Former tiller	
(b) Former non-tiller	
7. Landless evacuee (especially Muslim)	Owner-operator
(a) Former tiller	
(b) Former non-tiller	
8. Landless displaced urban dweller	Owner-operator
9. Landless urban laborer	Owner-operator
10. Landless graduate of agricultural school/college	Owner-operator
11. Landless veteran or member of guerilla organization	Owner-operator

Statistics on these tenure changes would measure, among others, the extent to which the settlement projects absorb unemployed urban laborers, who may be urban-rural migrants or returnees (i.e., former rural-urban migrants who failed to find remunerative jobs in the cities).

Monitoring these tenure changes is part of the BLTI's function, but it overlaps the jurisdiction of the BURE. So, certain internal arrangements between these bureaus have to be made to integrate their tenurial-improvement statistics in settlements.

As discussed in Chapter 7, some system performance variables under OLT are not being formally monitored to provide adequate, consistent and continuing data series (e.g., rate of eviction of tenants). They must be included in the data coverage if management desires to achieve better "control" of system performance, especially the minimization of attendant program social costs.

Data and Analytical System Linkage

Where the data and analytical systems are organizationally and personally separate, it is crucial that their interdependence be recognized: analysts depend on data producers to satisfy their demand for data, but data producers, in turn, depend on analysts for the identification of variables that are relevant to policy analysis. In other words, in an efficient and well-integrated information system, analysts serve as a bridge between data producers and decision makers. Analysts are in the best positions to assist in the selection or development of concepts and the operationalization of variables to be measured by the data system since they are the ones who know how these data must later on be analyzed in the context of the problems faced by the decision makers.

With this perspective, it is suggested that the MAR-based OLT data system establish linkages with such analytical systems as the Bureau of Agricultural Economics (BAEcon), International Rice Research Institute (IRRI), Institute of Philippine Culture (IPC), and the U.P.'s Institute of Economic Development and Research (IEDR), Law Center and Council on Asian Manpower Studies (CAMS). Existing linkages with the U.P. Agrarian Reform Institute (ARI) and the Center for Policy and Development Studies (CPDS) may also need to be strengthened.

Improving the Analytical System

In view of the analytical-system problems and their implications as discussed in Chapters 7 and 8, suggestions are proposed below with respect to: (1) building the human resource's analytical capability; (2) gearing analytical units for a concerted effort at OLT-related policy

analysis; and (3) strengthening analytical and decision-making system linkages/interactions.

Building the Human Resource's Analytical Capability

The analytical capability of the human resource for OLT-related policy analysis can be improved basically in three ways: (1) by fully utilizing existing analysts; (2) by further training of existing analysts; and (3) by hiring capable analysts/consultants to boost the combined analytical strength of the system.

Since 1976, the U.P. Agrarian Reform Institute (ARI) has been turning out holders of masters degrees in agrarian studies among MAR's employees who were sent on graduate scholarships to the University of the Philippines at Los Banos (UPLB). It is now time to tap the analytical talents of these people by involving them in policy-oriented analysis, not only at the central office level but also at the regional level. They may be given assignments in analytical staffs or intra-agency/inter-agency committees.

Despite this mobilization of analytical resources within the MAR structure, there may be policy problems/issues which necessitate the key contribution of experts/consultants from the other analytical units of the system (e.g., IPC, IRRI, BAEcon, ARI). Sometimes pockets of specialization on certain policy aspects (e.g., credit and cooperatives; tenure problems such as sub-tenancy or landlessness) exist in several analytical units and, depending on the priorities of the policymakers, these analytical resources may be employed singly or in combination to allocate the desired information mix as input to the policy-making process.

Such employment of consultants by policymakers, in effect, amounts to establishing a linkage between the decision-making and the analytical components of a system.

Gearing Analytical Units for a Concerted Effort at OLT-Related Policy Analysis

The still-unfilled demand for information, especially at the operational level of OLT policy-making or problem-solving (See Chapter 7, pp. 219-222, and this chapter, p. 252), partly indicates the scarcity of attention given by analysts/analytical units to this policy area. If unavailability of OLT information results in tremendous social costs, the government may be obliged to allocate resources to public or private institution(s) to generate the needed information.

Greater efficiency in the generation of information may be achieved if research institutions' analytical resources are harnessed in combination (or as a mix) rather than separately. In other words, research on wide-ranging policy issues even within the OLT policy area may be more efficiently done as joint or cooperative projects of several institutions rather than as exclusive interest of one unit whose area of expertise may be limited.

Therefore, such research-coordinating bodies as PCARR and CPDS have a key role to play in tapping analytical as well as data complementarities in information production where these exist.

The following are illustrative examples and descriptions of OLT-relevant analyses or research that might be undertaken:

A. Strategic Policy Area

1. On the problem of sub-tenancy and landlessness and, in general, the scarcity of land in the face of population

growth--projection of the extent to which the land resource is capable of supporting, in terms of employment and income, the additional entrants to the agricultural labor force under various assumptions of industry labor-absorption rates. This should be able to indicate: (a) how fast industrialization must proceed side-by-side with agricultural development to siphon off redundant labor in agriculture; and (b) when land reform reaches a "dead end", and other programs (e.g., rural works program) become a better way out of poverty, unemployment and inequitable income distribution in the rural areas.

2. On the issue of what constitutes an economic family-size farm in the face of regional variability in land, in climatic and other resources, and in the size of the farm family.

B. Operational Policy Area

1. If the various "auxiliary crops" covered by OLT are to be valued, what units of measurement and prices should be used?
2. Are there communication problems associated with the delay in the Land Bank's compensation of landlords? If so, what are these specifically and how could they be overcome?
3. Geographically delineate the OLT-covered areas which the MAR Minister could approve for conversion from

agricultural to other uses (residential/commercial/industrial).

Strengthening the Analytical and Decision-Making System Linkages/Interactions

The linkage/interaction between the analysis and decision-making is just as crucial as that between data collection and analysis, particularly where these information system components are organizationally or personally separated. Continuous interaction and two-way communication between analysts and decision makers are essential because they are mutually interdependent: decision makers need information from analysts and the analytical system in order to formulate policies or act on problems; but to ensure that the information communicated (supplied) by analysts to decision makers is relevant to the latter's information needs (demand), decision makers must provide analysts with the decision-making and political contexts within which interpretations and analyses will be made.

The suggested linkage can be achieved at two levels: (1) institutional; and (2) personal. At the institutional level, the functional relationship between two organizations (e.g., a ministry and an academic institution), whether in the area of research or consultancy, is formalized or institutionalized on a continuing basis. This would assure sustained organizational commitment, support, cooperation and responsibility with respect to agreed-upon areas of collaboration.

The personal level of linkage emanates from the institutional and has to do with the working relationship between analysts (consultants) and decision makers (policymakers). An ideal situation can be visualized as one in which consultants are being exposed to the decision-making environment of the policymakers, or perhaps being drawn in as members of

analytical staff supporting policy-making bodies. Continuous involvement of analysts on the frontlines of the policy-making process would enable them to gauge what policy questions need priority attention. On the other hand, analysts endeavor to communicate their models, analyses and findings to policymakers in clear and simple language for the latter to appreciate the reliability and practical significance of what analysts are doing. It is this level and kind of interaction that enlarges the decision-making pool of normative (e.g., values of the policymakers), positive, prescriptive and pragmatic information. The process places the information system in a learning mode, and it builds credibility into the prescriptions of analysts/consultants (see also Johnson and Rossmiller, 1978).

Ways of Improving the Program's Information System

The principles and ideas behind the suggestions made to improve the OLT data and analytical systems equally apply to the rest of the program's data and analytical systems, be these for the Institutional Development component, the Agricultural Development component, etc. Therefore, they will not be repeated here. Instead, the concentration will be on broader information system design issues and on overall development needs of the program's information system. Suggestions will be offered with respect to the following: (1) prioritizing information system development; (2) relevance and integrity of statistics/information and the choice of information supplier; (3) the information system's intra- and inter-component linkages; and (4) analysis needs and the potential contribution of the general system simulation approach.

Prioritizing Information System Development

As indicated earlier, policymakers need wide-ranging kinds of information in order to act on policy problems/issues in various areas of the program besides OLT. Also, these public decision makers are usually able to arrange their information needs according to what they consider as the social priorities, taking into account roughly the social value and social cost of each information set. This suggests that information system development can be placed in a project analysis context, wherein certain choice criteria (e.g., B/C ratio) are used to decide on such questions as: (1) Which program component must be given top priority?; (2) What particular information within the program component must be generated first?; (3) Which component of the information system needs immediate improvement?; and (4) What is the best way to improve this information system component?

Relevance and Integrity of Statistics/Information and the Choice of Information Supplier

The urgency with which information is needed by policymakers often contrasts with the slow response of data and information producers tied to an exacting and time-consuming data collection and analysis or research process. The relevance and integrity of statistics thus become an issue which, in turn, has to do with the choice of information supplier.

The new policy pronouncement made by the President on October 21, 1977, with respect to "tenanted plantation lands devoted to sugar, coconut, bananas and the like with areas exceeding twenty-five (25) hectares . . ." is a case in point. In the IBP, the Agrarian Reform Committee headed by the MAR Minister feels the pressure to provide

concrete strategic as well as operational policies in the form of a Parliamentary Bill so as to give substance to the President's speech. Unfortunately, the information available is so far inadequate for designing such policies. The aroused expectations of the tenants are beginning to transform into frustrations because until now there are no signs that the Presidential pronouncement will be implemented.

The policymakers want the information to be made available in "the shortest possible time". Timeliness of the information is therefore one dimension of relevance. On the other hand, it is imperative that policies be based on accurate/reliable knowledge of those aspects of the real world in which policymakers hope to bring about changes via the executed policies. However, lack of the relevant data could hamper not only policy-making, but also implementation--a profound lesson learned from OLT. In terms of the new policy area, what the OLT lesson suggests is that collection of data on (or documentation of) landownership (or land tenure in general, which includes how the produce is shared), area of landholdings, size of operating units, production, yield and so on, should precede policy issuance and all-out implementation.

In the MAR, the Regional Directors were asked to gather data on land area and number of tenants under each crop in their respective regions that will probably be covered by the contemplated new policy.⁶ Therefore, down at the team level, what one team did was to prepare its own data formats and obtain "rough" estimates of the data required by interviewing the Barangay Captains. This team reasoned that data

⁶Based on the MAR Regional Director's Conference (September 1-15, 1978) and interviews with MAR fieldmen in Region 8. Presumably, more data are required than just land area and number of tenants.

collection had to be done that way because the Central Office wanted only "rough" estimates and anyway the team was not given enough time to take a census or a head count.

While the team claims that its estimates are not far from the true value, the integrity of the statistics is at stake. It was, however, in the interest of relevance that such a methodology was adopted. There was, therefore, a trade-off: to have adequate and reliable statistics, the team ought to have been given more time for data collection; however, information must be made available to policymakers on short notice if they are to be relevant (See also Bonnen, et al., 1980).

Related to the issue of integrity of the information is the choice of the information supplier. Theoretically, the demand for data is derived from the demand for analysis. Yet, of what good would the data gathered by MAR be if its analytical capacity is weak? To ensure that the right kinds of data are generated and analyzed, might it not be better if both data collection and analysis were contracted to reputable research institutions outside of MAR?

Actually, the MAR Minister has reiterated the same information need to the Agrarian Reform Institute (ARI). While ARI indicated its capability to handle the data collection and analysis, again, there was doubt whether a really comprehensive and reliable research could be accomplished in so short a time. Meanwhile, strong data and analytical capacity (or research capacity) existing elsewhere in such areas as landless agricultural workers⁷ have gone untapped for policy design purposes.

⁷e.g., the Institute of Philippine Culture (IPC), reputed for its survey research tradition, has already made inroads into landless agricultural workers; see Lynch, 1970a & 1970b; Makil and Fermin, 1978.

What seems to be needed, therefore, is to harness a proper blending of the research resources to take advantage of complementarities and economies of scale in joint and cooperative research undertaking, mindful at the same time that the drive for the integrity of the data/information is not overly pushed at the expense of societal relevance. It behooves data and analytical systems to operate in a "learning mode" where analysts and policymakers work together and presumably learn from each other. This would lead to the improved knowledge of where on the trade-off frontier the appropriate combination between integrity and relevance of information is located.

Insofar as data collection is concerned, it might improve the suitability and reliability of MAR's production and related data for land valuation if the MAR were to tap NCSO's expertise in, and well-established machinery for, data collection. The two agencies could undertake a joint data-collection project, similar to the collaboration between the Bureau of Animal Industry (BAI) and the NCSO to improve the animal industry statistics.⁸ The data format can be specified by the MAR jointly not only with NCSO but also with other analytical units and technical consultants, based on the information needs of the decision makers. The NCSO will then be able to translate this into a rigorous statistical sampling and survey design. Personnel of both agencies could be tapped to speed up the data collection process.

The Information System's Intra- and Inter-Component Linkages

Emphasis was given above on the establishment/strengthening of linkages between the data and analytical systems on the one hand, and

⁸Based on an interview with an NCSO official in Region 8.

the analytical and decision-making systems on the other, in the development of the OLT information system. While the same recommendations are reiterated here from the standpoint of the entire agrarian reform program's information system, other concerns must come into play as the system in focus is now more complicated and in fact, encompasses more than the OLT information system (Figure 34). Whereas, at the program-component level (e.g., OLT) the smallest information-system elements under consideration are persons (e.g., individual consultants) or organizations (e.g., a research unit of a university), now, at the program level, one must deal with aggregations of these elements for each of several program components. In a truly integrated program information system, appropriate linkages must be strong not only at the intra- and inter-element level but also at the intra- and inter-component level (as indicated by the criss-crossing two-way linkage arrows in Figure 34). In other words, the data system, say on OLT, must be linked, where necessary and appropriate, with the data system on, say, the agricultural development component, as well as with the analytical system, say, of the physical development component.

It may be recalled from the findings in Chapter 4 that the controllability of the entire program is at issue because the policy-making authority is dispersed among several policy entry points. What the findings imply in terms of Figure 34 is that, while DMS_1 is essentially MAR-based, DMS_2 to DMS_5 are composed of decision-making bodies which are based in agencies other than the MAR. Thus, if policy-making for the whole program is to be coordinated, it is imperative that each of the program component's analytical systems (i.e., AS_1 to AS_5) be strongly

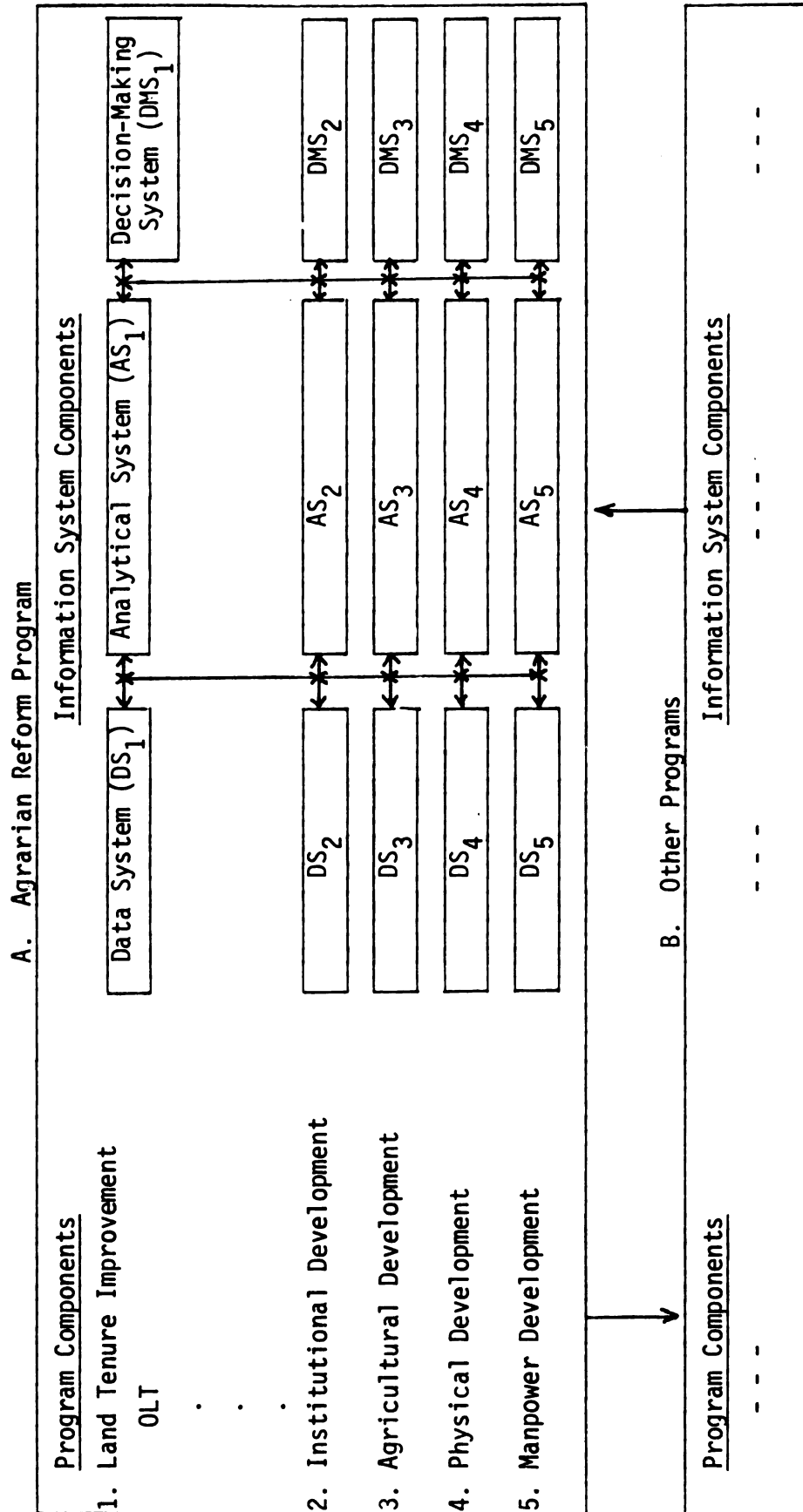


Figure 26. Intra- and Inter-Component Linkages among Information Systems of the Agrarian Reform Program and Their Relation to Information Systems of Other Programs

linked with each other and with each of the program component's decision-making systems (i.e., DMS_1 to DMS_5) (Figure 34). This linkage of analysis can drive the data systems linkages and synthesize the policy information needs--if done right. Analysis is the glue that holds any information system together (Bonnen, et al., 1980).

Analysis Needs and the Potential Contribution of the General System Simulation Approach

The earlier indicated demand for information by decision makers translates into a derived demand for (a) analysis and/or (b) data collection. The potential contribution of the General System Simulation Approach (GSSA) is in strengthening the analytical system's capability to perform the analyses demanded of the program's information system. In doing so, it also specifies in a clearer fashion the data requirements and interlinkage necessary to a system performance.

This approach, as described in Chapter 2, has promising usefulness in the generation of information needed by public decision makers on agrarian reform, especially in the formulation of new policies. For example, policymakers are contemplating formulating a new policy to cover plantation crops other than rice and corn in excess of 25 hectares but are constrained by the lack of information to design the appropriate strategic and operational policies. While lack of data is part of the problem accounting for the unavailability of the relevant information, such need for data is dictated more fundamentally by the lack of analytical models required to (a) represent the reality and (b) address the policy questions with which policymakers are confronted. The GSSA provides the framework within which such models (having sufficient credibility among analysts and decision makers) are developed. Credibility

of the GSSA and its models derives from the inherent features of the approach: (1) it facilitates and depends on strong and continuous interaction among administrators/implementors, investigators/analysts and affected parties/target groups as participants in the decision-making process; and (2) it is eclectic with respect to philosophies, data and information sources and types, model types, the use and nonuse of various maximizing techniques, assumptions, and dimensions (Johnson and Rossmiller, 1978, p. 42).

As shown in Figure 7, the approach is both interactive and inter-active. The strengthening of interactions among data collectors, analysts and policymakers that was proposed earlier is consistent with this approach; the process, involving the participation of affected parties, brings to the surface, for instance, normative knowledge underlying program goals and objectives (e.g., values or "goods" and "bads" about the impact of certain policy instruments on the target sectors). The values held by society form part of the basis of this approach in specifying the relevant policies, performance criteria and constraints, etc. (Figure 7). Illustrative of the process of sifting out these values in order to determine the relevant performance variables and policy inputs are the interactions among policymakers carried out in this study on a limited scale (see Chapter 4).

Given the outputs (desired and undesired), performance variables and the relevant policy inputs contemplated by policymakers with respect to the policy area mentioned above, the role of the analysts, then, is to design an interactive and inter-active model which represents that aspect of reality encompassing the domain of the subject matter under

consideration. This model would project (or simulate) the outputs and performance variables for each of alternative policy inputs (or set(s) of policy inputs). What, for example, would be the effect of changing the tenure and production structure of plantations on farm productivity and income distribution? The other (OLT-related) strategic and operational policy questions are given on pages 251 to 253.

It is appropriate at this point to visualize more precisely how a system simulation model with the above-stated features would be used for agrarian reform decision-making in the Philippines. It must be clear at the outset that the system simulation model envisioned here is (a) a national and/or regional model and that (b) it is one with components (or modules) permitting analysis of the consequences of agrarian reform policy(ies) on the target sectors in terms of the performance variables identified earlier.

An interesting policy question on which to focus is the limits of the present agrarian reform. Among analysts, implementors, policy-makers and affected parties interviewed, many are skeptical of the degree to which the present program can be expected to alleviate poverty and income disparities in the rural sector. For one thing, the land transfer covers only tenanted rice and/or corn land; it excludes the large rice plantations without tenants. For another, tenant-operated rice/corn lands held in amounts of seven hectares or less, under specified circumstances, are exempted from land transfer, further reducing the potential number of beneficiaries of such transfer. At the same time, suspicions are expressed that privately-held but idle arable land still exists in scattered parts of the country, especially in Mindanao.

These lands, which are in the hands of speculators, could help provide employment opportunities to the tenants and especially landless agricultural workers if put under the umbrella of the agrarian reform program.

There are others who believe that potential resettlement areas still exist in the public domain. While establishing new settlements is a costly government project with long gestation periods, it is one avenue for creating employment opportunities not only among the landless agricultural workers and tenants of uneconomic size farms but also among the settlement seekers in the urban sector (including prospective urban-rural returnees, i.e., rural-urban migrants who were unsuccessful in their quest for decent jobs in the cities).

The unemployment and poverty problems in the agricultural sector, which create the pressures for agrarian reform, cannot be viewed in isolation of the industrial sector. These sectors are closely interlinked in both product and resource markets. For example, if there are enough remunerative jobs in the cities, the pressure to migrate back to the farms would not exist. Also, the initial rural-urban migration might have been partly mitigated if there had been sufficient nonagricultural jobs in the rural areas to absorb excess rural labor. Thus, the rate at which the nonagricultural sector can absorb excess agricultural labor partly determines the need for land (as a job-creating resource) and, therefore, the pressures for agrarian reform.

Analytically, the policy question can be rephrased as follows:

1. Given the country's resource base (particularly land and capital) as well as socio-political constraints, what are the limits of the land reform program in terms of the

benefits (desired outputs such as employment and income distribution) that it can generate relative to the costs (undesired outputs) that will be involved?

2. How soon might this limit be reached?
3. What better alternatives can be pursued either before or after this limit is reached? This third question is relevant in light of the fact that other countries are embarking on such projects as rural works programs to supplement, if not substitute for, their agrarian reform program.

A system simulation model developed through the General System Simulation Approach should be able to provide decision makers some basis for addressing these policy questions. For example, on the question of property-rights redistribution, given the land area available for redistribution, the policy-determined operating size, and the rate of the property-rights redistribution, a system simulation model can be developed that would project the number of beneficiaries and the year when the redistribution could be completed. Given other data such as yield and prices of the product, costs of production, population, and the like, a relatively detailed model such as those developed by Hoque for Bangladesh (Hoque, 1977) should be able to make projections of performance variables such as employment, income and income distribution.

Despite the government's land-reform efforts, apparent shortage of land relative to demand has manifested itself in the growing number of various forms of subtenancy. The influence of the various interacting forces which bring about this phenomenon, such as labor absorption rates of the nonagricultural sector, population growth, land development, and technological change can all be brought together in a consistent

framework of a simulation model. Analysts would then be able to simulate into the future the likely scenarios of the problem in the context of the policies which are designed.

With a simulation model such as is contemplated here, which links the nonagricultural to the agricultural sector, it is also possible to determine, for example, the income distribution impact of a rice price policy with an urban bias (Mangahas, 1975). In other words, the model is expected to be useful in decision-making areas other than agrarian reform.

While it appears that the GSSA offers a substantial potential for improving agrarian reform policy analysis and decision-making in the Philippines, the requirements for the successful application and institutionalization of this approach are quite demanding of the country's economic and political resources. It is important, first of all, how such simulation models should be developed, maintained and used in the Philippine context and by whom and in what institutions; secondly, what are the implications of GSSA implementation for the structure of the agrarian reform analytical system and decision-making system? The following discussion outlines tentative answers to these questions.

One should not lose sight of the fact that the development, maintenance and use of system simulation models are processes undertaken within the broad framework of the General System Simulation Approach (GSSA). As explained in Chapter 2, this approach views the total capacity of a country for solving agrarian problems as a circle divided into two integral parts: (1) the investigative capacity, which is the capacity to acquire, analyze, and synthesize information; and (2) the administrative capacity, or the capacity to make and execute decisions

(including all bases of power) and bear responsibility for consequences of action taken. Thus, when one speaks of an agrarian reform decision-making structure, one is referring to a structure which includes elements of both the investigative capacity (e.g., investigators/researchers/analysts, including the simulation models) and the administrative capacity (e.g., administrators/executives/decision makers).

Under this framework, while a system simulation model is viewed as part of the investigative capacity, its development, maintenance and use ultimately involve the administrative capacity, too. Recall (from Chapter 2) that these processes are iterative and interactive among investigators/analysts, decision makers/administrators, and affected parties. Such iteration and interaction can successfully take place only if appropriate organization of and linkages among these elements of the system have been established or institutionalized.

Figure 35 depicts such a prerequisite organization, with linkages and interactions, based on the view of those who have actually experienced the institutionalization of an investigative capacity in a developing country like the Philippines (see Jones and Rossmiller, 1978, p. 339). The Investigative Unit, composed of a multidisciplinary core of professionals and their simulation models, must be linked to Decision Makers on one side and, on the other, to Support and Service Agencies, including data and information acquisition systems, computer services, technical agricultural research units, universities, and other research institutions.

The Decision Makers are found in the functional units or agencies being served by the Analytical Unit (upper part of Figure 35); they are,

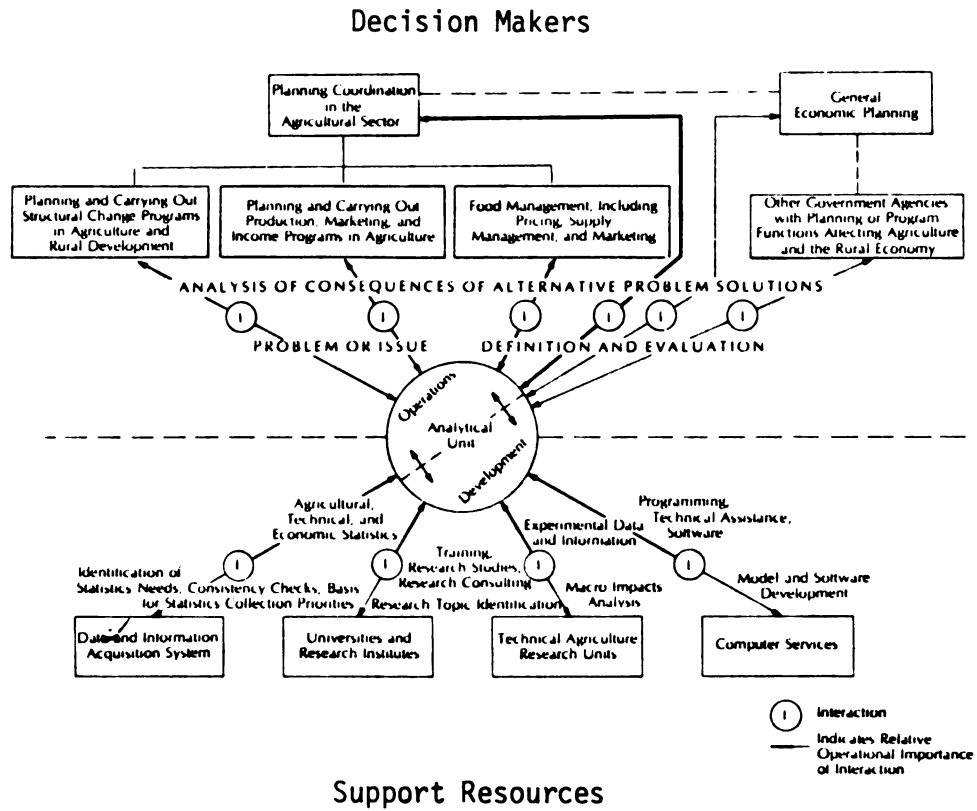


Figure 27. The Analytical Unit in the Decision Structure
 (Source: Johnson and Rossmiller, 1978, p. 339)

therefore, really part of the economy's administrative capacity to which the investigative capacity must be linked.

The Analytical/Investigative Unit is composed of two subunits which are respectively concerned with:

1. The further development, adaptation, and testing of the models, techniques, and methodologies used by the unit; and
2. The operational use of the investigative tools in analysis of problems defined in interaction with the decision makers.

Placed in the Philippine context, the above desired linkages in the agrarian reform decision structure would appear as in Figure 36. The general economic planning is being done by the National Economic and Development Authority (NEDA), whereas planning coordination in the agricultural sector resides with such agencies as the Ministry of Agriculture and Ministry of Agrarian Reform. The Support Resources are likewise indicated in the lower portion of Figure 36. These, then, are the institutions that would be involved, directly or indirectly, in the development, maintenance and use of simulation models relevant to agrarian reform decision-making.

In terms of the availability of the human resources necessary to form the core of the multidisciplinary system simulation team, specific professionals in various segments of the decision structure may be mentioned. In the UPLB Department of Agricultural Economics, at least, one agricultural economist has had training in agricultural economics and systems science at the doctoral level. A Senior Statistician at the International Rice Research Institute (IRRI) has also had post-doctoral

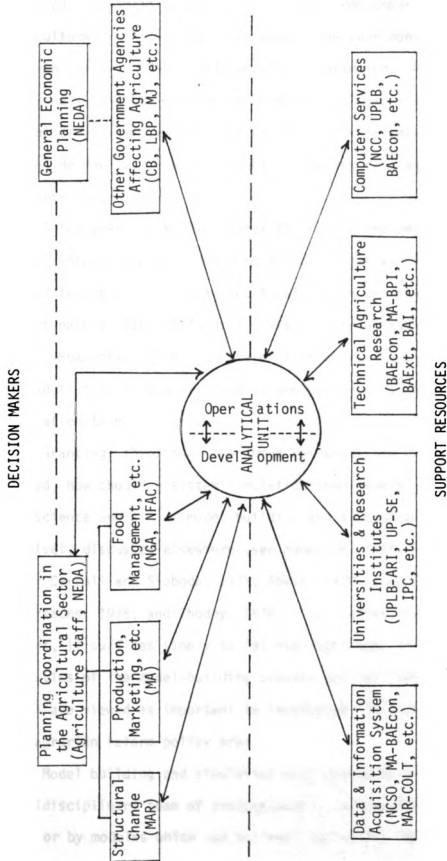


Figure 28. The Analytical Unit of the Decision Structure in the Philippine Context

training in systems science. A computer programmer at the Bureau of Agricultural Economics has undergone a one-year non-degree training program in systems science and computer programming. Apart from these professionals, various experts in both the biological and social sciences may be drawn from the UPLB, UP Diliman, private universities such as the Ateneo de Manila, as well as public agencies such as the Technology Resource Center (TRC).

A few years back, the Center for Policy and Development Studies (CPDS) showed interest in having an investigative capacity institutionalized in the Philippine agricultural sector decision-making structure. Unfortunately, lack of funds frustrated initial attempts in that direction. Meanwhile, more and more professionals are receiving training abroad that could qualify them as members of a multidisciplinary system simulation team.

Granting, then, that the human resources are there waiting to be tapped, how should a system simulation team develop the simulation model? The science and art of model building and simulation are more comprehensively discussed elsewhere (see Manetsch, 1978; Carroll and Rossmiller, 1978; Carroll and Sloboda, 1978; Abkin, 1978; Lee, 1978; de Haen and Bauersachs, 1978; and Thodey, 1978). So, rather than duplicate that effort, it suffices simply to (a) highlight some of the salient characteristics of the model-building process and (b) indicate the features which are viewed as important to incorporate in a model to address the new agrarian reform policy area.

Model building and simulation must generally be undertaken by a multidisciplinary team of professionals. A huge model is built part-by-part or by modules which can be "run" and tested separately or as an

integrated whole. Throughout all the stages in the model-building process, there should be continuous iteration and interaction among the model builders (analysts), decision makers, and affected parties.

The subject-matter area of agrarian reform in the Philippine setting involves income-distribution issues both within the farm and nonfarm sectors and between farm and nonfarm sectors, as well as between regions (of which there are presently 12). This may be gleaned from the performance variables identified earlier (see Chapter 4) and from the current Five-Year Development Plan (Philippines, 1977). Thus, while analysts in other countries may be less concerned with the (within-farm sector) income distribution objective in modeling (e.g., Korea, see Carroll and Rossmiller, 1978, p. 101), it is relevant to incorporate such an objective under the Philippine condition. This implies that it is desirable to incorporate such variables as tenure and size of operating unit in the model to be built.

If need be, a separate module representing the property-rights redistribution may be developed. This module should reflect income-distribution impacts of agrarian reform, or else, where this is not possible, it should link up with another module where income-distribution impacts can be accounted for.

Incorporation of a property-rights redistribution module creates the need for more disaggregated data to run the models. For example, instead of having an aggregate national (a) farm household and (b) nonfarm household as the primary population groups (cf. Rossmiller, p. 105), the former may have to be subcategorized into size of operating units according to tenure.

The strategic policy area specified on page 251 also necessitates incorporation of the off-farm migration process, as was done in Korea (see Rossmiller, 1978, p. 107, 109, 118 and 119), but it is important to recognize the converse of this process, the urban-to-rural migration inherent in the MAR's resettlement program.

It is anticipated that with the passage of time, there would be changes in the "reality" being modeled, partly because of the impact of the program implementation itself, or simply due to the inertia of the dynamic forces in the economy and society. These changes would render the model "obsolete" (and hence, "irrelevant" to decision makers) unless it is "maintained". Maintenance of the model involves:

1. Revision of the model structure to make it a better representation of the changes that have occurred in reality, i.e., the components, linkages and parameters of the model may have to be altered; and
2. Updating of the data, i.e., new data may be added to the time series or existing estimates may have to be revised or formats modified as data estimation procedures improve and as the data requirements of the model change.

As mentioned earlier, these responsibilities reside with the Analytical Unit. As in model development, maintenance of the model must proceed iteratively and interactively among analysts, decision makers and affected parties.

A simulation model which is continually maintained as reality changes is said to be in a learning or development mode. Use of the model in policy decision-making should, likewise, be iterative and interactive (Figure 7). As the experience in Korea indicates (see Abkin and Mangum,

1978), the close interaction between analysts and policymakers made possible the generation of information relevant to the policy questions at hand. Moreover, it facilitated the building of credibility into the policy prescriptions adopted for implementation. It is the continuous interaction and iteration which place the use of the model in the learning mode.

From the foregoing, the implication of the implementation of GSSA for the structure of the agrarian reform analytical system and decision-making system becomes quite clear. Where these two information system components used to be disjointed, they must now have a strong and continuous linkage. Such a linkage must be established both at (a) the institutional (formal) level and (b) the personal (informal) level, as suggested earlier. Making such a linkage a working reality implies that the usual way of going about analysis and decision-making on agrarian reform may have to be changed. For instance, decision-making will become less an exclusive province of the administrators, as more inputs from analysts are continually sought. A "closed-system" decision-making (i.e., where decisions are made solely by executives exclusive of inputs from analysts/consultants) would have to give way to an "open-system" or inter-system decision-making (i.e., where iteration and interaction among analysts, decision makers and affected parties are encouraged). The latter process implies a yielding of some degree of political control on the part of the executives/administrators. Hence, for the GSSA idea to be realized requires no less than a political commitment or willingness among those who hold decision-making authority vis-a-vis the agrarian reform program to make that decision-making process more open and a

commitment of the supporting analytical groups to provide that broader, more relevant information base which would more than offset the costs of changing the decision process.

CHAPTER 10

CONCLUSIONS

Given the objectives in Chapter 1, and the study findings and implications that were discussed in Chapters 4 through 8, this chapter draws general conclusions on the study's findings with respect to each of the four objectives. Then it concludes on the extent to which these objectives were attained. This overall assessment of the findings of the study should be of particular interest to policymakers and analysts of the Philippine agrarian reform program.

The last part of the chapter should also merit equal interest, particularly among the program analysts. This portion not only suggests further research that would push the frontiers of knowledge in the general area of public information system and agrarian reform, but it also clearly suggests research/studies that will support strategic and operational policy-making on agrarian reform in the Philippines.

Conclusions

The analytical framework of this study which guided the gathering of data and information in the Philippines is a synthesis of the inter-related theories of feedback control, information systems, rational decision-making processes and the General System Simulation Approach (GSSA). Under this framework, the Agrarian Reform Program, viewed as a feedback control system, is divided into three components: (1) management,

(2) information and (3) plant. This study was limited to the first two components.

The actual field procedures for data gathering were slightly modified from that originally planned as discussed in Chapter 3. This modification, however, was for the purpose of making the data responsive to the information needed by the study. It was not possible to undertake random sampling; rather, purposive sampling of the key elements in the population was used.

First Objective

In line with the first objective of the study, which is to provide a description of (a) the structure and dynamics of the agrarian reform policy-making process in the Philippines, as well as of (b) the associated information system, showing the relationships among data, analysis and interpretations, and decision-making, the findings lead to the following conclusions:

(1) The management component of the Philippine Agrarian Reform Program is composed of two sub-components, namely: policy-making and implementation. The information component divides into two sub-components also: data and analysis. The policy-making sub-component is highly centralized. The other three sub-components operate in the administrative regions of the country which have agrarian reform programs in operation. Region 8, which was selected to be the OLT case study in this research, is implementing the agrarian reform program. In carrying out the first objective of the study, the above-mentioned components of the program were analyzed and described;

(2) In both the policy-making and implementation processes, a three-way interaction is discernible among the three main program actors: (a) policymakers and implementors, (b) landlords and (c) tenants. In cases where this interaction has been one of cooperation, the implementation proceeded at a faster pace. Otherwise, implementation bogged down in conflict. This finding was not explicitly anticipated in the analytical framework described in Chapter 2;

(3) The policy-making process in practice iterates between two levels: strategic and operational. This makes the former responsive to the realities and "givens" of the operational environment. In the analytical model outlined in Chapter 2, however, only the strategic level was conceptualized; and

(4) The OLT information system is designed only to support operational policy-making or implementation, and it is not fully adequate for that purpose. On the other hand, the analytical model conceptualized the information system as supportive mainly of policy-making at the strategic level.

Second Objective

The detailed analysis of the OLT's management and information components became the basis for the attainment of the study's second objective, the identification of the problems and dysfunctions that exist in the OLT information system. The conclusions are as follows:

(1) The OLT data system processes are consistent with the analytical model based on Bonnen's information system paradigm. The OLT data system, however, is weak, primarily because it lacks sufficient

sophistication in the operationalization of concepts. This is discussed extensively in Chapter 7; and

(2) The implementation of OLT has been delayed by the lack of up-to-date data for planning and decision-making. A built-in evaluation process of the OLT is handicapped by the absence of a system for monitoring a number of significant performance variables.

Third Objective

This study identified not only the relevant program performance variables (objective No. 3), but also the program outputs and policy inputs or instruments. From a feedback control system standpoint, the controllability of the agrarian reform system is weak. This is so because the authority to manipulate the broad range of short-run and long-run policy instruments is widely dispersed among several authorities/agencies. This is borne out by the findings presented in Chapter 4.

Fourth Objective

Concerning the use of the General System Simulation Approach (GSSA) as described in Chapter 9, there is a good possibility that its application can strengthen agrarian reform policy analysis and decision-making. The required human resources and support services are to a substantial extent available.

All four study objectives were therefore sufficiently and successfully attained. As a matter of fact, insofar as the third objective is concerned, the study accomplished far more than the task set forth initially.

Suggestions for Further Research

As stated in Chapter 3, this research is basically exploratory, descriptive and diagnostic. Using existing theories, it is more a basis for problem identification, theory verification and theory building, rather than a means to test new hypotheses concerning public policy decision-making and information systems. On the basis of the study findings and research experience, three broad areas for further research can be suggested.

Further Theory Verification

The fact that OLT data system processes and implementation processes are merged (or are one and the same thing) is a situation that attracts more than an academic curiosity in that it appears to result in operationalization errors or weaknesses. Research in other governmental areas of concern is needed to verify whether such operationalization weaknesses inevitably arise whenever statistics are generated as a by-product of program administration rather than as a separate output of a purely statistical agency. Program data bases are often weak since the design of the data system and its operation are often handled by professionals who do not have strong quantitative skills. Or could these operationalization weaknesses be a result of weaknesses in the analytical capability of the program-administering agency? Such research would provide insights as to how operationalization can be improved or operationalization errors might be minimized if not entirely eliminated.

Theory Building and Testing of New Hypotheses

Other needed research can be considered disciplinary, involving the disciplines of management/public administration and economics. If

pursued, the following research areas are expected to expand the theory base of these disciplines.

System Controllability and the Design of a Public Information System

It was concluded earlier that the controllability of the agrarian reform system is weak. But no imputation has been made, nor was there an intention to do so, as to how such situation affects system performance. Conceivably, however, a system's performance can largely depend on the structure of the management system, or the policy-making subsystem in particular. Some analysts believe that system performance is better where there is a "devolvement" of policy-making and implementation, that is, where these processes are highly decentralized with greater involvement of the tenants and other actors at the local level (Montgomery, 1972). However, from the top decisionmaker's standpoint, the relevant question is how best to structure or organize the "controller", which will result in improved system performance, without resulting, at the same time, in the decisionmaker's losing control of the plant (or the controlled system). Management theory or organization theory can possibly shed some light on this question. Research can be done on alternative configurations of control or "metacontrol" (Kickert and van Gigch, 1979) and what these imply in terms of improving system performance. Moreover, the restructuring of a management system (or a policy-making subsystem) has significant bearing on, or may require a redesign of, the associated information system.

The Value and Cost of Publicly-Provided Information

In Chapter 9, it was suggested that information system development could be prioritized if it were possible to place this undertaking in

the framework of benefit/cost analysis. This analysis depends, in turn, on the analyst's being able to estimate the value of information and the cost of producing that information. However, information is such a unique type of public good that determination of its value has still eluded economists because of a scanty theoretical base and the difficulties associated with operationalizing existing theories (Bullock, 1981; Miller, 1981). Likewise, the question of how to determine empirically the cost of producing information still confronts economists. Further disciplinary research along these lines is definitely needed.

Subject-Matter/Problem-Solving Research

The remaining areas of needed research deal with substantive policy issues and are, therefore, supportive of policy-making on OLT or the whole agrarian reform program. Listed in Chapter 9 are the suggested research topics to support policy analysis on OLT. Also listed in Appendix R are information items needed by policymakers to deal with general agrarian reform issues both at present and in the foreseeable future.

Strategic Policy Area

Strategically important is research that would (1) project the "limits" of agrarian reform (in terms, for example, of employment and income), (2) determine when this limit will be reached, and (3) explore alternative supplementary/substitute programs or policies. Application of the GSSA is tremendously important for this purpose. This approach involves system simulation modeling and policy experimentation. One area for further research, therefore, is how to incorporate the deliberate income distribution objective of agrarian reform in a simulation model

of the agricultural sector. Hoque (1977) has tried this for Bangladesh. And so has Cohen (1981) for India and Chile. Their models differ conceptually and it remains to be seen which one is a better representation of reality. There is also a question of whether these models are capable of addressing the policy issues outlined above.

Operational Policy Area

Research needs for the operational policy area are also indicated in Chapter 9 and Appendix R. This includes such high-priority topics as communication problems associated with the delay in the Land Bank's compensation of landlords.

APPENDICES

APPENDIX A

COMPOSITION AND SIZE OF THE FOUR SETS OF PURPOSESIVE SAMPLES

Appendix Table A.1. Purposive Sample of Core Decision-Making Participants in the Formulation of PD 27

Sector	Agency Affiliation	Number of Participants	Interview Sample	
			Number Interviewed	Percent
<u>Public</u>		<u>20</u>	<u>8</u>	<u>40</u>
	Office of the President			
	Executive Office	4	1	
	Legal Office	2	1	
	Presidential Economic Staff (PES)	1	1	
	Development Management Staff (DMS)	1		
	Department of Agrarian Reform (DAR)	8	5	
	Department of Justice	1		
	Department of Finance	1		
	Department of Agriculture	2		
<u>Private</u>		<u>2</u>	<u>2</u>	<u>100</u>
	Individual Citizen	1	1	
	Consulting Firm	1	1	
TOTAL		22	10	45

Note: Four out of seven (or 57%) members of the Malacañang Think Tank were interviewed.

Appendix Table A.2. Purposive Sample of OLT Planners and Implementors in Region 8 (Leyte)^a

Branch of Government	Agency	Bureau/Office	Office Location	Title or Position	Purposive Sample No. Interviewed
<u>Executive</u>					
	National Economic & Development Authority (NEDA)		Central Office	Economic Planning & Research Staff Agricultural Staff	21 2 1
	Ministry of Agrarian Reform (MAR) ^b	Land Tenure Improvement (BLTI)	Central Office Regional Office	Director	1
				Assistant Regional Director	1
				Deputy Chief, Operations Division	1
				Regional Rural Youth Technologist, Automated OLT Special Project Coordinator	1
				Agrarian Reform Team Leader I	1
	Ministry of Local Government & Community Development (MLGCD)	Cooperatives Development (BCOD)	Central Office Regional Office	Senior Agrarian Reform Technologist (SART)	1
				Agrarian Reform Technologist (ART)	1
				Director	1
				Municipal Development Officer (MDO)	1
					1
	Ministry of Natural Resources (MNR)	Lands (BL)	Central Office	Director	1
				Chief, Planning & Management Staff	1
				Head, Planning & Monitoring Division	1
				Chief of Survey Party (COSP)	1
				Chief, Division of Registered Lands	1
Ministry of Justice	Land Registration Commission	Central Office	Vice President, Agrarian Sector Manager, Land Transfer Operations Dept.	1	
			Assistant Manager, Field Operations Dept.	1	
			In-charge, Agrarian Reform Batch Work	1	
				1	
				1	
	Land Bank of the Philippines (LBP)	Central Office		1	
				1	
			1		
	Ministry of National Defense (MND)	National Computer Center (NCC)		1	
				1	
			1		
<u>Judicial</u>					
	Court of Agrarian Relations (CAR)	Angeles, Pampanga	Former CAR Judge	1	
				1	
			1		
TOTAL					22

^aAll belong to the public sector.^bFormerly Department of Agrarian Reform (DAR).

Appendix Table A.3. Purposive Sample of Persons Involved with the Data and Analytical Systems on PD 27 Formulation and OLT

Branch of Government	Agency	Specific Office	Office Location	Title or Position	Purposive Sample Number Interviewed
<u>Executive</u>					
		<u>Public Sector</u>			10
	National Economic & Development Authority (NEDA)	Statistical Programs & Standards Staff	Central only	Staff member	1
		National Census & Statistics Office (NCSO)	Central only	Head, Agriculture & Fisheries Branch	1
	Ministry of Agrarian Reform (MAR)		Regional Office	Regional Census Officer	1
	Ministry of Agriculture (MA)		Regional Office	Junior Statistician	1
	University of the Philippines (U.P.) System ^a	Bureau of Agricultural Economics (BAEcon)	Central Office	Chief Planning Officer	1
	U.P. at Diliman		Regional Office	Regional Coordinator	1
	U.P. at Los Baños	Law Center	Central only	Director	1
		College of Law		Professor of Law	1
		Center for Policy & Development Studies (CPDS)	Central only	Director	1
		<u>Foreign Sector</u> ^b			
	U.S. Agency for International Development (USAID)	Based in COLT, MAR	Central only	Land Reform Advisor (Systems Analyst)	1
TOTAL					11

^aUnder the public sector but not in any of the branches of government; it is an independent institution funded by the State.

^bThis neither falls under the public nor private sector but operates through the public implementing system.

Appendix Table A.4. Purposive Sample of Target Groups^a

Group	Kind of Organization	Name of Organization	Office Location	Title or Position	Purposive Sample (Number Interviewed)
<u>Target Groups</u>					
Tenants	Peasant Organizations	Federation of Free Farmers (FFF)	National Office Regional Office Region 3 Region 8	National President Regional President Regional President	1 1 1
		Federation of Land Reform Farmers (FLRF)	National Office	National President	1
		Foundation of Agrarian & Industrial Toiling Hands (FAITH)	National Office	National President	1
	Farmers' Cooperative	Samahang Nayon (SN) of Sta. Fe	Region 8	SN President	1
TOTAL					6

^aAll belong to the private sector.

APPENDIX B

INTERVIEW SCHEDULES

NOTE: The interview schedules given here were used merely as a guide in conducting the in-depth interviews which were also fully tape-recorded. The interviews were conducted in a conversational style using open-ended questions. By pursuing leads and confining the queries only to relevant themes that emerged in the course of the interview, the actual tape-recorded questions may be similar, though not necessarily the same, as those on the schedules. Also, where the researcher-interviewer judged that better data can be obtained by going through official documents/forms rather than through an unduly lengthened interview, the former route was followed.

APPENDIX B.1. Interview Schedule for Implementors/Administrators

Department of Agricultural Economics, Michigan State University
and
Department of Agrarian Institutions, Agrarian Reform Institute
University of the Philippines at Los Baños

AGRARIAN REFORM POLICY INFORMATION SYSTEM STUDY Interview Schedule for A. Administrators

To the interviewer:

- * Show flip chart of information-system components and explain:
 - a) the objectives of the study (Make reference to the letter of introduction by the ARI Dean) and b) the analytical framework (stressing the implementing/administrative system and the role of implementors/administrators)
- * Inform the respondent of the necessity to tape record the in-depth interview (The reasons are: 1) the interview will be conversational in nature and the questions will be open ended; and 2) it will be too time-consuming to note down responses to questions which will not be strictly confined to the interview schedule).
- * Assure the respondent that: a) the interview will be kept confidential b) No names will be mentioned in the results; and c) the respondent will be asked later to evaluate the report on the results of the study.

Schedule No. A- Date
 Time started Time finished
 Place of interview
 Interview situation

A. IDENTIFICATION*

1. Name
2. Present Official Civil Service Designation/Position/Title
3. Office Location
 - 0 Central
 - 1 Regional Office No.
 - 2 District Office No.
 - 3 Team Office No.
4. Branch of government
 - 0 Executive
 - 1 Legislative
 - 2 Judicial
5. Complete Office Address:

Section/Unit

Division

Bureau

Ministry

Others (specify)

Location/Address
6. Have you participated in, or were you ever consulted regarding the formulation of P. D. 27?
 - 0 No
 - 1 Yes. Official title/position at the time of participation/consultation

B. RESPONDENT'S ROLES

B.1 In Public

(To the interviewer: Show flip chart and explain the different roles of an individual in the information system)

7. Other than being an administrator/implementation, what other roles do you play in your agency relative to our agrarian reform program? (Probe and fill up/check appropriate boxes in the table below)

Agency/Position or Assignment	Respondent's Roles in the Information System							
	Administrator		Policy maker		Analyst		Statistician	
	For- mal	Infor- mal	F	I	F	I	F	I

* To the interviewer: Administer Personal Data Sheet separately after the interview. Tell the respondent that this will be collected later to give him/her sufficient time to fill it up completely.

E.2 As a private citizen

8. As a private citizen before or during the formulation of P. D. 27, did you belong to, or represent the interests and views of any of the following categories? (Encircle appropriate code)

A. Target Group (affected parties)

○ Landowner

○ Big landowner (> 24 has.)

1 Small landowner (≤ 24 has.)

○ Non-retaining

1 Retaining

1 Tenant

○ Amortizing

1 Leasehold

2 Share

2 Landless Agricultural Worker

B. Non-Target Group (other interest groups)

a) Mass Media

○ Press

1 Radio

2 TV

b) Agribusiness

○ Finance

○ Rural Bank

1 Others (specify)

1 Input Dealer

○ Fertilizers & Chemicals

1 Tools and Equipments

2 Processor

3 Farm Output Wholesaler/Retailer

4 Wholesaler/retailer of industrial consumer goods

c) Church/Religious group

○ National Council of Churches

1 Others (specify)

d) Private Schools/Universities

○ Teaching

1 Research

2 Training/Extension

e) Civic/Social Action Groups

○

1

f) Private Research Organization

○

1

g) Political Party

Before Martial Law

○ Nacionalista

1 Liberal

2 Independent

3 Others (specify)

C. INPUTS

(To the interviewer: Show flip chart categorizing the various channels of information)

9. Could you tell me, as far as you know or can remember, what are the different policies in the form of laws, decrees, general orders, letters of instructions, Rules and Regulations or Memoranda Circular on agrarian reform that you and your office are empowered authorized, and has jurisdiction to implement. What were your sources of information about these policies and through what channel were you able to receive them? (Enter answers in the table below)

C.1 Quality Problems in Inputs

(To the interviewer: Show flip chart indicating in codes the various qualities of an information and explain briefly to the respondent the meaning of the qualities)

10. If we consider these policies as a form of information, have you had any problem with these information with respect to any of the qualities given on the flip chart?
- 0 No (proceed to 12)
1 Yes (continue to 11)
11. If so, please specify and explain what these problems are (Enter answers in the table below; Refer to the codes in the footnote)

D. PROCESSES

D.1 Intra - System

12. Could you describe to me, based on your own experience, how you and the other implementors of the agrarian reform program usually go about in implementing the agrarian reform policies which you have earlier enumerated. Do not limit your description on what you do formally based on standard operating procedures (SOP). Include the informal relationships and interactions you have had with the other implementors.

Description:

Policies	Source	Channel of Policies			Quality Problems ^{4/}
		Personal ^{1/}	Group ^{2/}	Mass ^{3/}	
1) Laws					
2) Presidential Decrees (P. D.)					
3) General Orders (G. O.)					
4) Letters of Instruction (L. O. I.)					
5) Rules & Regulations (or SOP)					
6) Memoranda Circular					

- ^{1/} Face to face conversation; home visits; office calls; telephone calls; personal notes
^{2/} Lecture; Lecture-discussion; Method demonstration; result demonstration; meetings; seminar-workshop; and exhibits
^{3/} Radio, newspaper, magazine, TV, movie, pamphlet; specialized publications and electronic equipment
^{4/} Accessibility
 1 Timeliness
 2 Comprehensiveness or completeness
 3 Accuracy
 4 Consistency-overtime, space, etc.
- 5 Relevance-to the policy maker's need (in solving policy-making problems)
 6 Clarity; Free from ambiguous terms
 7 Flexibility - to the decision and the decision maker
 8 Verifiability; Different persons looking at the information can arrive at the same conclusions

D.2 Inter - System

(To the interviewer: Show flip chart again and explain the individual's role attached to each component of the information system)

13. Could you describe to me the interactions that you or other administrators had with statisticians, analysts, and policy makers as you go about implementing the agrarian reform policies. Again, do not limit your description to the formal procedures, but include the informal interactions and relationships that you and other administrators in your ministry had with policy makers, analysts and statisticians.

Description:

D.3 Problems in the Implementation Process

14. In the implementation processes that you have just described, did you ever experience some problems?

0 No (proceed to 16)

1 Yes (continue to 15)

15. If so, what were these problems? Please state them according to their importance starting with the most important.

Problems arranged by importance

E. OUTPUTS**E.1 Executed Policies**

16. From your viewpoint as an administrator, which of the presently-existing agrarian reform policies in the form of laws, decrees, general orders, Rules and regulation or Memoranda-Circular do you believe have been executed/implemented? To what extent have they been executed/implemented, partially or completely? Could you tell me the reasons for their complete or partial execution? (Enter answers in the table below)

E.2 Non-executed Policies

17. Which of our agrarian reform policies do you believe have remained unexecuted/unimplemented? What are the reasons for the non-execution of these policies? (Enter answers in the next table below, p. 8)

F. MONITORING INFORMATION

18. How do you monitor the progress of implementation activities or operations in the field? For monitoring purposes, what information do you obtain/receive and what are your sources and channel of these information? (Enter answers in the next table below, p. 9)

G. FEEDBACK INFORMATION

19. Does your agency or office also gather feedback information from affected parties (e.g. landlords, tenants and landless agricultural workers) and other interest groups (e.g. mass media, agri-business sector, civic/social action groups, private research organizations, and political parties) as to how the program are affecting them and what their reactions to, or opinions and preferences with respect to the program are?

- 0 No (proceed to 21)
1 Yes (continue to 20)

20. If so, could you describe to me the specific information gathered, how they are gathered, and how the information gathered are provided to administrators/implementors like you. (Enter answers in the next table below, page 9)

Description (particularly how the feedback information are gathered):

H. INFORMATION ON PROGRAM IMPACT (EVALUATION)

21. Does your agency or any outside agency conduct an evaluation as to the impact of the program on the target and non-target sectors in society, be these impact economic, social or political?

0 Yes (proceed to 22)

1 No. Why?

(proceed to 23)

22. If so, could you tell me: a) the specific organization which conduct this evaluation; b) the specific information they are able to provide; and c) how you or your organization are able to avail of these information (i. e. through what channel)? (Enter answers in the table above)

I. QUALITY PROBLEMS OF MONITORING, FEEDBACK AND EVALUATION INFORMATION

23. (To the interviewer: Show flip chart indicating the coded qualities of information)

Did you have any problem about the monitoring, feedback and impact-evaluation information you've earlier stated with respect to the qualities described on this flip chart?

0 No (proceed to 25)

1 Yes (continue to 24)

24. If so, kindly specify and describe these problems. (Enter answers in the table above)

J. PRIMARY AGRARIAN REFORM PROBLEMS AND ISSUES

25. What do you consider as the primary problems and issues on agrarian reform at present and in the future? Please state them according to priority starting from those deserving highest priority (Fill answers in table below)

J.1 Data/Information Used in defining the problems and issues

26. Corresponding to each of these problems/issues, what were the data/information you used in defining these problems/issues? What were your sources and channels of these information? (Probe sources whether monitoring, feedback or evaluation and indicate code following the footnote; Enter answers in the table below)

J.2 Data/Information needed in solving the problems/issues

27. What data/information do you believe are needed in solving each of these problems/issues? From what source and through what channel do you prefer that these information must be provided? (Probe on preferred source of information; Refer to codes in footnote 1)

J.3 Present availability of needed information

28. Of the needed information that you have just enumerated, which ones are presently available and which ones are not presently available? (Fill answers in table below)

J.4 Quality problems of available information

29. Do you have problems with the presently available information in terms of their quality? (Fill in the table below by referring to quality codes in the footnote)

J.5 Estimates of social benefits and costs of providing the presently unavailable information

30. From the standpoint of the Philippine society, how valuably needed and how costly to provide are these presently unavailable information? (Enter answers in the next table below)

K. PROGRAM GOALS

31. What do you believe should be the goals of our agrarian reform program? Please state them by priority starting from the highest.

[illegible]

L. PROGRAM PERFORMANCE VARIABLES

32. If you are to evaluate the performance of our agrarian reform program what would you consider as its outputs or performance variables? (or criteria for evaluating its accomplishments, successes or failures)

[illegible]

M. POLICY INPUTS AND POLICY ENTRY POINTS**M.1 Policy Inputs**

33. There are specific policies which policy makers could introduce or change in order to influence the performance or output of a program. With respect to our agrarian reform program, what are these specific policy inputs? (Enter answers in table below)

M.2 Policy Entry Points

34. What agency and who in the administrative structure of the program have the authority, jurisdiction and responsibility to determine these specific inputs? (Enter answers in table below)

N. DECISION-MAKING CONSTRAINTS

35. In making policy decisions affecting the performance of the program, what constraints do policy makers in the Ministry of Agrarian Reform face? (Enter answers in the table below)

Policy Inputs	Policy Entry Points	Decision-Making Constraints
A. Land Tenure Improvement		
B. Institutional Development		
C. Physical Development		
D. Agricultural Development		
E. Manpower Training		

APPENDIX B.2. Interview Schedule for Policymakers

Department of Agricultural Economics, Michigan State University
and
Department of Agrarian Institutions, Agrarian Reform Institute
University of the Philippines at Los Baños

AGRARIAN REFORM POLICY INFORMATION SYSTEM STUDY
Interview Schedule for B. Policy Makers

To the interviewer:

Show flip chart of information-system components and explain:
a) the analytical framework/paradigm; and b) the purpose of the study
(Make reference to the letter of introduction by ARI Dean). Inform
the respondent of the necessity to tape record the in-depth interview
(The reasons are: 1) the interview will be conversational in nature
and the questions will be open ended; and 2) it will be too time-consuming
to note down responses to questions which will not be strictly confined
to the interview schedule). Assure the respondent that: a) the interview
will be kept confidential; b) No names will be mentioned in the results;
and c) the respondent will be asked later to evaluate the report on the
results of the study.

Schedule No. B- _____ Date _____
 Time started _____ Time finished _____
 Place of interview _____

A. IDENTIFICATION*

- | | |
|---|--|
| <p>1. Name _____</p> <p>2. Present Official Civil Service
Designation/Position/Title
_____</p> <p>3. Complete Office Address:
Section/Unit _____
Division _____
Bureau _____
Department _____
Others (specify) _____
Location/Place _____</p> | <p>4. 0 Central Office
1 Regional Office
2 District Office
3 Team Office</p> <p>5. Branch of Government
0 Executive
1 Legislative
2 Judicial</p> <p>6. Official Position/Title
of respondent when he/she
participated in the formulation
of P. D. 27
_____</p> |
|---|--|

B. RESPONDENT'S ROLES

B.1 In Public

7. (To the interviewer: Show flip chart and explain the different roles of an individual in the information system). Other than being a policy maker, what other roles do you play in your agency as well as in other government agencies?

Agency/Position Assignment	Respondent's Roles in the Information System							
	Administrator		Policy maker		Analyst		Statistician	
	For- mal (F)	Infor- mal (I)	F	I	F	I	F	I

* To the interviewer: Administer Personal Data Sheet separately after the interview. Tell the respondent that this will be collected later to give him/her sufficient time to fill it up completely.

B.2 As a private citizen

8. As a private citizen, did you play the role, or fall in any, of the following categories? (Encircle appropriate code)

A. Target Group

- ☐ Landowner
 - ☐ Big landowner (> 24 has.)
 - 1 Small landowner ($\leq$ 24 has.)
 - ☐ Non-retaining
 - 1 Retaining
 - 1 Tenant
 - ☐ Amortizing
 - 1 Leasehold
 - 2 Share

2 Landless Agricultural Worker**B. Non-Target Group****a) Mass Media**

- ☐ Press
- 1 Radio
- 2 TV

b) Agribusiness

- ☐ Finance
 - ☐ Rural bank
 - 1 PNB
 - 2 DBP
 - 3 Others (specify)
- 1 Input Dealer
 - ☐ Fertilizers & Chemicals
 - 1 Tools and Equipments

- 2 Processor
- 3 Farm Output Wholesaler/Retailer
- 4 Wholesaler/retailer of industrial consumer goods

c) Church/Religious group

- ☐ National Council of Churches
- 1 Others (specify)

d) Private Schools/Universities

- ☐ Teaching
- 1 Research
- 2 Training/Extension

e) Civic/Social Action Groups

- ☐
- 1

f) Private Research Organization

- ☐
- 1

g) Political Party

- ☐ Before Martial Law
 - ☐ Nacionalista
 - 1 Liberal
 - 2 Independent
 - 3 Others (specify)
- 1 After Martial Law (for IBP)
 - ☐ KBL
 - 1 Laban
 - 2 Pusyon Bisaya
 - 3

C. INPUTS

9. Could you describe to me the nature of your participation in the *formulation* of P. D. 27.
10. Were you able to contribute data/information which helped guide the policy-making body at that time in formulating P. D. 27?
- ☐ Yes (proceed to 11)
☐ No (proceed to 12)

C.1 Data/Information Used

11. If so, what were these data/information and what were your sources of these information? Through what channel did you obtain them?

Information	Source	Channel of information		
		Personal ^{1/}	Group ^{2/}	Mass ^{3/}

^{1/} Face-to-face conversation; home visits; office calls; telephone calls; personal notes

^{2/} Lecture; Lecture-discussion; Method demonstration; result demonstration; meetings; seminar-workshop; and exhibits

^{3/} Radio, newspaper, magazine, TV, movie, pamphlet; specialized publications and electronics equipment

C.2 Primary Agrarian Reform Problems and Issues

12. What do you consider as the primary problems and issues on agrarian reform at present and in the future? Please state them according to priority starting from those deserving highest priority (Fill answers in table below)

C.3 Data/Information Used in defining the problems and issues

13. Corresponding to each of these problems/issues, what were the data/information you used in defining these problems/issues? What were your sources and channels of these information? (Fill answers in table above)

C.4 Data/Information needed in solving the problems/issues

14. What data/information do you believe are needed in solving each of the these problems/issues? From what source and through what channel do you prefer that these information must be provided? (Fill answers in table below)

C.5 Present availability of needed information

15. Of the needed information that you have just enumerated, which ones are presently available and which ones are not presently available? (Fill answers in table below)

C.6 Quality problems of available information

16. Do you have problems with the presently available information in terms of their quality? (Fill in the table below by referring to quality codes in the footnote)

C.7 Estimates of social benefits and Costs of providing the presently unavailable information

17. From the standpoint of the Philippine society, how valuably needed and how costly to provide are these presently unavailable information? (Fill in answers in the next table below)

C.8 Feedback Information

18. In formulating P.D. 27, did the policy-formulating body consult or try to obtain information from would-be affected parties and interest groups?

0 yes (Proceed to 19)

1 No

Why?

Data / Information						
Needed to solve problems	Preferred Source		Preferred channel		Availability	Quality problems
	Public	Private	Personal	Group		
A. Present						
B. Future						

1/ A - available
U - unavailable

2/O Accessibility
1 Timeliness

2 Comprehensiveness or completeness

3 Accuracy

4 Consistency-over time, space, etc.

5 Relevance-to the policy maker's need (in solving policy-making problems)

6 Clarity: Free from ambiguous terms

7 Flexibility - to the decision and the decision maker

8 Verifiability: Different persons looking at the information can arrive at the same conclusions

19. If so, could you tell me who are these affected parties and interest groups. What information were obtained from each party/group and through what channels were these information obtained?

Affected parties/ Interest Groups	Information Obtained	Channel of information		
		Personal	Group	Mass
A. Affected Parties				
B. Interest Groups				

20. During the formulation of P. D. 27, did you feel that there were sufficient information gathered from these affected parties and interest groups as a basis for a sound policy?

☐ Yes (Proceed to 22)
☐ No (Proceed to 21)

21. If so, what were the additional information needed? From which group and through what channel were these information needed? (Fill answers in table below)

D. Processes**D.1 Intra-System**

22. Who were the persons involved in the formulation of P.D. 27?

Persons Involved	Position	Agency/Organisation Represented

23. Kindly describe and trace the steps involved in the formulation of P.D. 27. Do not limit your description to the formal procedures but include also the informal steps and interactions that took place between you and the other persons who actively participated in the policy formulation.

D.2 Inter-System

(To the interviewer: Show flip chart to the respondent and explain what constitute a) the statistical system, b) the analytical system, and and c) the implementing system, as follows: a) the statistical system - e.g. Bureau of Census and Statistics, Bureau of Agricultural Economics, Statistical Units of DAR, Bureau of Land, and Land Bank, b) the analytical system - e.g. public and private research institutions like the Agrarian Reform Institute of U. P. at Los Baños, Institute of Philippine Culture of Ateneo de Manila University, and Center for Policy and Development Studies of U. P. Los Baños, as well as independent researchers and individual consultants; and c) the implementing system - e.g. DAR, ACA, LBP, DLGCD, DA, etc. Explain that interactions can take place between these different components of the information system in the process of policy formulation)

24. During your involvement with P. D. 27 formulation, did you observe some kind of interrelationships or interactions taking place either between representatives of these various organizations and policy makers or among these representatives themselves?

☐ No (proceed to 25)

☐ Yes

Please describe these formal or informal interactions that took place then.

25. Were you aware of developments in either the statistical, analytical or administrative system at that time which influenced the decisions in formulating P. D. 27?

☐ Yes. If so, please explain such developments

☐ No

E. OUTPUTS

E.1 Nature of Policy

26. As a policy statement, do you consider P. D. 27 as broad/general or detailed/specific? Why?

☐ broad/general

☐ detail

Explanation:

E. 2 Channel of Policy Outputs

27. Once this policy was enunciated, how were the administrators at the central and regional offices informed about its essence or intentions?

Administrators at the	Channel		
	Personal	Group	Mass
A. Central Offices			
B. Regional offices			

Description of the process:

F. PERFORMANCE VARIABLES

28. If you are to evaluate the performance of our agrarian reform program what would you consider as its outputs or performance variables? (or criteria for evaluating its accomplishments, successes or failures)

Program Component	Performance Variables

G. POLICY INPUTS AND POLICY ENTRY POINTS

G.1 Policy Inputs

29. There are specific policies which policy makers could introduce or change in order to influence the performance or output of a program. With respect to our agrarian reform program, what are these specific policy inputs? (Fill answers in table below)

G.2 Policy Entry Points

30. What agency and who in the administrative structure of the program have the authority, jurisdiction and responsibility to determine these specific inputs? (Fill answers in table below)

Policy Inputs	Policy Entry Points
A. Land Tenure Improvement	
B. Institutional Development	
C. Physical Development	
D. Agricultural Development	
E. Manpower Training	

APPENDIX B.3. Interview Schedule for Analysts

Department of Agricultural Economics, Michigan State University
and
Department of Agrarian Institutions, Agrarian Reform Institute
University of the Philippines at Los Baños

AGRARIAN REFORM POLICY INFORMATION SYSTEM STUDY
Interview Schedule for C. Analysts

To the interviewer:

Show flip chart of information-system components and explain:
a) the analytical framework/paradigm; and b) the purpose of the study
(Make reference to the letter of introduction by ARI Dean). Inform
the respondent of the necessity to tape record the in-depth interview
(The reasons are: 1) the interview will be conversational in nature and
the questions will be open ended; and 2) it will be too time-consuming
to note down responses to questions which will not be strictly confined
to the interview schedule). Assure the respondent that: a) the interview
will kept confidential; b) No names will be mentioned in the results;
and c) the respondent will be asked later to evaluate the report on the
results of the study.

Schedule No. C- _____ Date _____
 Time started _____ Time finished _____
 Place of interview _____

A. IDENTIFICATION*

1. Name _____

2. Present job affiliations

Specify the following:	Public Sector	Private Sector
Official Position/ Designation/Title		
Section/Unit		
Division		
Bureau		
Department		
Others		
Location/address		

3. In what capacity were you involved in the formulation of P. D. 27?

4. What were your job affiliations then? (Enter response in the table below)

Specify the following:	Public Sector	Private Sector
Official Position/ Designation/Title		
Section/Unit		
Division		
Bureau		
Department		
Others		
Location/address		

*To the interviewer: Administer Personal Data Sheet separately after the interview. Tell the respondent that this will be collected later to give him/her sufficient time to fill it up completely.

B. RESPONDENT'S ROLES

5. How did you become involved in P. D. 27?

B.1 In Public

6. (To the interviewer: Show flip chart and explain the different roles of an individual in the information system). When you got involved (or made contribution to) the formulation of P. D. 27, what specific formal or informal role(s) did you play?

Agency/Position or Assignment	Respondent's Roles in the Information System							
	Administrator		Policy Maker		Analyst		Statistician	
	For- mal (F)	Informal (I)	F	I	F	I	F	I

B.2 As a private citizen

7. As a private citizen then, did you participate in the formulation of P. D. 27 as representing the interests sentiments or opinions of the following affected parties and interest groups? (Encircle appropriate Code)

A. Target Group (affected parties)

0 Landowner

0 Big landowner (> 24 has.)

1 Small landowner (≤ 24 has)

0 Non-retaining

1 Retaining

1 Tenant

0 Amortizing

1 Leasehold

2 Share

2 Landless Agricultural Worker

B. Non-Target Group (other interest groups)**a) Mass Media**

- ☐ Press
- 1 Radio
- 2 TV

b) Agribusiness

- ☐ Finance
 - ☐ Rural Bank
 - 1 Others (specify)
- 1 Input Dealer
 - ☐ Fertilizers & Chemicals
 - 1 Tools and Equipments
- 2 Processor
- 3 Farm Output Wholesaler/Retailer
- 4 Wholesaler/retailer or industrial consumer goods

c) Church/Religious group

- ☐ National Council of Churches
- 1 Others (specify)

d) Private Schools/Universities

- ☐ Teaching
- 1 Research
- 2 Training/Extension

e) Civic/Social Action Groups

- ☐
- 1

f) Private Research Organization

- ☐
- 1

g) Political Party

- ☐ Before Martial Law
 - ☐ Nacionalists
 - 1 Liberal
 - 2 Independent
 - 3 Others (specify)
- 1 After Martial Law (for IBP)
 - ☐ KBL
 - 1 Laban
 - 2 Pasyon Bisaya
 - 3 Kunsensiya ng Bayan

C. OUTPUTS

8. Could you describe to me the nature of your participation in the formulation of P.D. 27.

C.1 Data/Information Provided/Used

9. (To the interviewer: Show flip chart and point out the difference between data and information, as follows: Data are simply the results of measurement. Theory is needed to process data into information. There are intervening processes of specifying and empirical testing of analytical framework as well as analysis and interpretation to convert data into information. Information becomes useful only in a problem-solving context.)

As consultant on P. D. 27, what data and/or information have you provided? What were your sources of these data and/or information and through what channel did you obtain them? (Enter answers in table below)

Data/Information Provided	Source		Channel of Information		
	Public	Private	Personal ^{1/}	Group ^{2/}	Mass ^{3/}
a. Data					
b. Information (check the result of respondent's own analysis; Refer to 10)					

^{1/}Face-to face conversation; home visits; office calls; telephone calls; personal notes

^{2/}Lecture; Lecture-discussion; Method demonstration; result demonstration; meetings; seminar-workshop; and exhibits

^{3/}Radio, newspaper, magazine, TV, movie, pamphlet; specialized publications and electronics equipment

D. PROCESSES

D.1 Intra-System

D.1a Analysis and interpretation

10. Of the information that you've provided, which ones were the results of your own analysis and interpretations of primary data which you've availed of? (Check the corresponding information in the table above)

D.1e Interaction with other analysts

15. In the processes of either specifying and testing of analytical framework or in analyzing and interpreting, did you ever exchange notes and ideas, or interest, with other analysts or researchers?

☐ Yes (proceed to 16)

☐ No. Why? _____

16. If so, who were these other analysts? What were their affiliation and with respect to what specific information did you interact with them?

<u>Names of other analysts</u>	<u>Affiliation</u>	<u>Subject of interaction (i.e. specific information)</u>

D.2 Inter - System**D.2a As analyst**

17. Again, in the processes of either specifying and testing of analytical framework or in analyzing and interpreting, did you exchange notes and ideas, or interact, with statisticians, administrators, and policy makers?

☐ Yes (proceed to 18)

☐ No. Why? _____

(proceed to 19)

18. If so, who were these statisticians, administrators or policy makers with whom you interacted? What were their positions affiliations and with respect to what specific information did you interact with them?

Persons interacted	Positions and affiliations	Subject of interaction (specific information)
a. Statisticians		
b. Policy makers		
c. Administrators		

D.2b As policy making participant

18a. Who were the persons involved in the formulation of P. D. 27?

[illegible]

- 18b. Kindly describe and trace the steps involved in the formulation of P.D. 27. Do not limit your description to the formal procedures but include also the informal steps and interactions that took place between you and the other persons who actively participated in the policy formulation.

E. INPUTS

E.1 Data/Information Used to define the problems

19. In doing your research/investigation or analysis on agrarian reform, relative to P.D. 27, what were the data and /or information that you have made used of to define the problems? What were your sources of these data and/or information and through what channel did you obtain them? (Enter answers in the table below)
20. Did you have problems with these data and/or information as to its accuracy, timeliness, consistency, etc.

☐ yes (Refer to the codes in the footnote of the table below)

1 No

E.2 Data/Information Used to arrive at a prescription

21. What were the data and/or information you used to arrive at a prescription which you recommended to the policy makers for solving the problems at hand? What were your sources and channel of these information? (Enter answers in the next table)
22. Were there also quality problems with these data and/or information?

☐ Yes (Refer to the codes in the footnote of the previous table)

1 No

E.3 Feedback Information

23. In arriving at your prescription, did you try to obtain information or consult with representatives of would-be affected parties or target groups (e. g. tenants and landlords) and other interest groups (e.g. rural bankers and middlemen)?

☐ Yes (proceed to 24)

☐ No. Why _____

24. If so, could you tell me who are these affected parties and interest groups. What information did you obtain from each party/group and through what channels did you obtain these information?

Affected parties/ Interest Groups	Information Obtained	Channel of information		
		Personal	Group	Mass
A. Affected Parties				
B. Interest Groups				

25. Did you feel that you have sufficient information from these affected parties and interest groups as a basis for a sound policy?

☐ Yes (proceed to 27)

☐ No (proceed to 26)

26. If so, what were the additional information needed? From which group and through what channel were these information needed? Also specify the quality of the information needed. (Enter answers in the table below)

**F. PRIMARY AGRARIAN REFORM PROBLEMS
AND ISSUES**

27. What do you consider as the primary problems and issues on agrarian reform at present and in the future? Please state them according to priority starting from those deserving highest priority (Fill answers in table above)

**F.1 Data/information Used in defining the
problems and issues**

28. Corresponding to each of these problems/issues, what were the data/information you used in defining these problems/issues? What were your sources and channels of these information? (Fill answers in table above)

**F.2 Data/Information Needed in arriving
at prescriptions to solve the problems/
issues**

29. What data/information do you believe are needed in arriving at prescriptions to solve these problems/issues? From what source and through what channel do you prefer that these information must be provided (Enter answers in the table below)

**F.3 Present availability of needed data/
information**

30. Of the needed data/information that you have just enumerated, which ones are presently available and which ones are not presently available? (Enter answers in the table below)

**F.4 Quality problems of available data/
information**

31. Do you have problems with the presently available data/information in terms of their qualities? (Enter answers in the table below by referring to quality codes in the footnote)

**F.5 Estimates of social benefits and costs
of providing the presently unavailable
data/information**

32. From the standpoint of the Philippine society, how valuably needed and how costly to provide are these presently unavailable data/information? (Enter answers in the next table below)

Needed in arriving at prescriptions to solve the problems	Preferred Source		Preferred channel		Avail- ability	Quality problems
	Public	Private	Personal	Group		
A. Present						
B. Future						

1/A - available
0 - unavailable

2/O Accessibility

- 1 Timeliness
- 2 Comprehensiveness or completeness
- 3 Accuracy
- 4 Consistency-over time, space, etc.
- 5 Relevance-to the policy maker's need (in solving policy-making problems)
- 6 Clarity: Free from ambiguous terms
- 7 Flexibility - to the decision and the decision maker
- 8 Verifiability: Different persons looking at the information can arrive at the same conclusions

F.6 Theories needed to process data into information

33. What theories in what disciplines are needed to process the data into the needed information?

Relevant Disciplines	Theories needed	Adequacy/Availability ^{1/} of the Theories	Reasons for inadequacy/unavailability

^{1/}Codes:

Ad - adequate
 Av - available
 In - inadequate
 Un - unavailable

F.7 Adequacy/availability of needed theories

34. Are these needed theories presently adequate/available?

☐ Yes

☐ No. Why? (Enter reasons in the appropriate column of the table above)

G. NATURE OF POLICY

35. As a policy statement, do you consider P. D. 27 as broad/general or detailed/specific? Why?

☐ broad/general

☐ detailed/specific

Explanation:

H. PERFORMANCE VARIABLES

36. If you are to evaluate the performance of our agrarian reform program what would you consider as its outputs or performance variables? (or criteria for evaluating its accomplishments, successes or failures)

Program Component	Performance Variables

I. POLICY INPUTS AND POLICY ENTRY POINTS

I.1 Policy Inputs

37. There are specific policies which policy makers could introduce or change in order to influence the performance or output of a program. With respect to our agrarian reform program, what are these specific policy inputs? (Fill answers in table below)

I.2 Policy Entry Points

38. What agency and who in the administrative structure of the program have the authority, jurisdiction and responsibility to determine these specific inputs? (Fill answers in table below)

Policy Inputs	Policy Entry Points
A. Land Tenure Improvement	
B. Institutional Development	
C. Physical Development	
D. Agricultural Development	
E. Manpower Training	

APPENDIX B.4. Interview Schedule for Statisticians

Department of Agricultural Economics, Michigan State University
and
Department of Agrarian Institutions, Agrarian Reform Institute
University of the Philippines at Los Baños

AGRARIAN REFORM POLICY INFORMATION SYSTEM STUDY
Interview Schedule for D. Statisticians

To the interviewer:

- * Show flip chart of information-system components and explain:
 - a) the objectives of the study (Make reference to the letter of introduction by the ARI Dean) and b) the analytical framework (stressing the data/statistical system and the role of statisticians)
- * Inform the respondent of the necessity to tape record the in-depth interview (The reasons are: 1) the interview will be conversational in nature and the questions will be open ended; and 2) it will be too time-consuming to note down responses to questions which will not be strictly confined to the interview schedule).
- * Assure the respondent that: a) the interview will be kept confidential; b) No names will be mentioned in the results; and c) the respondent will be asked later to evaluate the report on the results of the study.

Schedule No. D- _____ Date _____
 Time started _____ Time finished _____
 Place of interview _____

A. IDENTIFICATION *

1. Name _____
2. Present Official Civil Service Designation/Position/Title _____
3. Office Location
☐ Central
☐ 1 Regional Office No. _____
☐ 2 District Office No. _____
☐ 3 Team Office No. _____
4. Branch of government
☐ Executive
☐ 1 Legislative
☐ 2 Judicial
5. Complete Office Address:
 Section/Unit _____
 Division _____
 Bureau _____
 Ministry _____
 Others (specify) _____
 Location/Address _____
6. Official position/title of respondent when consulted with respect to P. D. 27 formulation _____

B. RESPONDENT'S ROLES

B.1 In Public

(To the interviewer: Show flip chart and explain the different roles of an individual in the information system)

7. Other than being a statistician, what other roles do you play in your agency relative to our agrarian reform program? (Probe and fill up/check appropriate boxes in the table below)

Agency/Position or Assignment	Respondent's Roles in the Information System							
	Administrator		Policy maker		Analyst		Statistician	
	For- mal (F)	Infor- mal (I)	F	I	F	I	F	I

*To the interviewer: Administer Personal Data Sheet separately after the interview. Tell the respondent that this will be collected later to give him/her sufficient time to fill it up completely.

B.2 As a private citizen

8. As a private citizen before or during the formulation of P.D. 27, did you belong to, or represent the interests and views of any of the following categories? (Encircle appropriate code)

A. Target Group (affected parties)**○ Landowner****○ Big landowner (> 24 has.)****1 Small landowner (≤ 24 has.)****○ Non-retaining****1 Retaining****1 Tenant****○ Amortizing****1 Leasehold****2 Share****2 Landless Agricultural Worker****B. Non-Target Group (other interest groups)****a) Mass Media****○ Press****1 Radio****2 TV****b) Agribusiness****○ Finance****○ Rural Bank****1 Others (specify)****1 Input Dealer****○ Fertilizers & Chemicals****1 Tools and Equipments****2 Processor****3 Farm Output Wholesaler/Retailer****4 Wholesaler/retailer or industrial consumer goods****c) Church/Religious group****○ National Council of Churches****1 Others (specify)****d) Private Schools/Universities****○ Teaching****1 Research****2 Training/Extension****e) Civic/Social Action Groups****○****1****f) Private Research Organization****○****1**

- g) Political Party
 Before Martial Law
 0 Nacionalista
 1 Liberal
 2 Independent
 3 Others (specify)

C. OUTPUTS, INPUTS AND PROCESSES IN THE
 DATA/STATISTICAL SYSTEM

(To the interviewer: Show flip chart and explain that you want to understand the inputs, outputs and processes in the data/statistical system)

C.1 Measurement

C.1a Outputs (primary data)

9. What were the data generated by your agency which you have furnished to the body that was then formulating P.D. 27? Through what channel have you supplied them? (Show flip chart showing the channels of data or information)

Data Supplied	Channel of Data		
	Personal ^{1/}	Group ^{2/}	Mass ^{3/}

^{1/} Face to face conversation; home visits; office calls; telephone calls; personal notes

^{2/} Lecture; Lecture-discussion; Method demonstration; result demonstration; meetings; seminar-workshop; and exhibits

^{3/} Radio, newspaper, magazine, TV, movie, pamphlet; specialized publications and electronics equipment

C.1b Inputs

10. Data are the results of the measurement of certain measurable concepts or variables. What were these measurable concepts or variables which your agency tried to measure or quantify? (Enter answers in the table below)
11. Could you describe to me the nature and extent of the error(s) in these measurements or data, if there are any. (Enter answers in the table below)

C.1c Intra- and Inter-System Processes

12. Who in your agency are responsible for measuring these variables?
(Enter answers in the table above)
13. (To the interviewer: If possible, ask this question separately also to the person actually doing the measurement.)

Kindly describe to me the steps involved in the process of measurement. Do not limit your description to the formal procedures, but include also the informal interactions that usually take place among the statisticians.

Description:

14. (To the interviewer: Show flip chart to respondent and explain the various components of the information system and the various roles attached to each component)

During the measurement process, do these statisticians interact also formally or informally with analysts/researchers/investigators or policy-makers and implementors/administrators?

- 0 No (proceed to 16)
1 Yes (continue to 15)

15. If so, please describe these formal or informal interactions.

Description:

C.2 Conceptualization and Operationalization

C.2a Inputs and Outputs

16. Before data about a certain aspect of reality can be obtained, the human mind has to form certain concepts of this reality (e.g. farm, production, tenancy). This concept, in turn, has to be operationally defined before it can actually be measured. (Note: if possible, ask this question separately also to the person actually doing the conceptualization and operationalization.)

What aspects of reality does your agency try to conceptualize?
(Enter answers in the table above)

17. What are the bases of your agency's conceptualization work? (In other words, what are your agency's guide in deciding what concepts to form out of infinitesimal situations, conditions and things that exist in the real world? (Enter answers in the table above)
18. What concepts has your agency actually formed? (Enter answers in the table above)
19. Kindly describe to me the nature and extent of the error(s) in these concepts, if there are any. (Enter answers in the table above)
20. Out of the above concepts, what variables has your agency actually operationally defined (or operationalized)? (Enter answers in the table below)
21. What are the bases of your agency in this operationalization (or forming an operational definition of the concepts)? (Enter answers in the table below)
22. Kindly describe to me the nature and extent of the error(s) in these operational definitions (or measurable variables)

C.2b Intra- and Inter-System Processes

23. Who in your agency are in charge of the above functions of conceptualization and operationalization? (Enter answers in the next table)

Persons in charge	Designation	Office
1. Conceptualization		
2. Operationalization		

(If possible, ask this question separately to the person actually in-charge of the given process(es).

24. Kindly describe to me the steps involved in the processes of conceptualization and operationalization. Do not limit your description to the formal procedures, but include also the informal interactions that take place among the persons performing these functions (statisticians or otherwise)

Description:

25. (To the interviewer: Show flip chart and remind the respondent of the various roles attached to each component in the information system)

During the conceptualization and operationalization process, do the persons involved (statisticians or otherwise) interact also with analysts/researchers/investigators or policy-makers and implementors/administrators?

- 0 No (proceed to 27)**
1 Yes (continue to 26)

- 26. If so, please describe to me these formal or informal interactions.**

Description:

D. PROBE ON SOCIAL COSTS OF SUPPLYING DATA/INFORMATION

27. (To the interviewer: Show to the respondent the list of data/information (including feedback) needed by the analysts, policy-makers, administrators, affected parties and interest groups, but which are not presently available or are not being generated)

Based on your experience in statistical operations in your agency, what additional costs will be incurred if these unavailable data/information were to be generated by your agency? Please explain the details of your cost estimates. (Enter answers in the Table below)

E. PROGRAM GOALS

28. What do you believe should be the goals of our agrarian reform program? Please arrange them by priority starting from the highest.

Program goals arranged by priority (number each accordingly)

[illegible]

F. PROGRAM PERFORMANCE VARIABLES

29. If you are to evaluate the performance of our agrarian reform program what would you consider as its outputs or performance variables? (or criteria for evaluating its accomplishments, successes or failures)

Program Component	Performance Variables

G. POLICY INPUTS

30. There are specific policies which policy makers could introduce or change in order to influence the performance or output of a program. With respect to our agrarian reform program, what are these specific policy inputs? (Fill answers in table below)

H. POLICY ENTRY POINTS

31. What agency and who in the administrative structure of the program have the authority, jurisdiction and responsibility to determine these specific inputs? (Fill answers in table below)

I. PROGRAM CONSTRAINTS

32. What do you think are the constraints faced by policy makers in making decisions with respect to our agrarian reform program?

Policy Inputs	Policy Entry Points	Decision-making constraints
A. Land Tenure Improvement		
B. Institutional Development		
C. Physical Development		
D. Agricultural Development		
E. Manpower Training		

Appendix B.5. Interview Schedule for Affected Parties (Target Groups)

This schedule is divided into the following sections and subsections:

- A. Identification
 - B. Respondent's Roles
 - C. Inputs
 - C.1 Policies affecting respondent's group
 - C.2 Sources and channel of information about policies
 - C.3 Quality problems of information (on policies)
 - C.4 Other relevant information needed by the affected group
 - D. Processes
 - D.1 Intra-system
 - D.2 Inter-system
 - E. Outputs
 - F. Primary Agrarian Reform Problems and Issues
 - G. Program Goals
 - H. Program Performance Variables
-

Note: The first section is for identifying the respondent by his name, position, and the organization he was representing when consulted (if ever) about PD 27, and his organizational affiliations both in the public and the private sectors during the time of the interview and the time he was consulted about PD 27.

The next section identifies the respondent's roles in his organization but relative to the larger information system.

Section C deals with inputs to the affected parties in the form of policies and the quality problems associated with these. It also identifies other relevant information needed by the affected parties. On the other hand, Section D covers the intra- and inter-system processes by which the affected parties are able to articulate their preferences with respect to policy matters. Moreover, Section E identifies the data/information provided by the affected party to investigators/analysts, implementors and policymakers. Sections F through H are similar to those asked of policymakers, analysts and statisticians.

APPENDIX C

DAR SPECIAL ORDER NO. 109 (APRIL 1975) CREATING
THE POLICY FORMULATION OFFICE (PFO) AND THE CENTER
FOR OPERATION LAND TRANSFER (COLT)

Appendix C. DAR Special Order No. 109 (April 1975) Creating the Policy Formulation Office (PFO) and the Center for Operation Land Transfer (COLT)

Republika ng Pilipinas
KAGAWARAN NG REPORMANG PANSAKAHAN
(Department of Agrarian Reform)
Tanggapan ng Kalihim
Diliman, Lunsod ng Quezon
D-505

DEPARTMENT SPECIAL ORDER NO. 109
Series of 1975

Subject: ESTABLISHMENT OF A POLICY FORMULATION OFFICE AND
AN OPERATION LAND TRANSFER CENTER

To give more impetus to the operation land transfer program, a Policy Formulation Office and an Operation Land Transfer Center are hereby established directly under the Secretary of Agrarian Reform with the following functions:

1. POLICY FORMULATION OFFICE

- a. To formulate clear-cut policies and establish policy guidelines on operation land transfer matters;
- b. To clarify and interpret laws, policies, presidential decrees, letters of instruction and presidential pronouncements affecting the implementation of Operation Land Transfer.
- c. To study crucial issues, prepare position papers and policy proposals for presidential clearance geared towards the elimination of existing constraints in OLT implementation; and
- d. To perform other functions as may be required.

2. OPERATION LAND TRANSFER CENTER

- a. To streamline procedures in all aspects of Operation Land Transfer including land transfer payments;
- b. To provide over-all direction, supervision and control on OLT program implementation, identify and resolve problems in the field level, and evaluate performance of field units;
- c. To effect closer and more effective coordination among the participating agencies;
- d. To report to the Secretary on the status and progress of Operation Land Transfer; and
- e. To perform other functions as may be required.

Appendix C. (Continued)

The Policy Formulation Office and the Operation Land Transfer Center shall be located at the DAR Central Office, Diliman, Quezon City.

The Assistant Secretary for Field Services shall be responsible for the immediate organization and staffing, including the setting up of the appropriate office and facilities, of the Policy Formulation Office.

The Assistant Secretary for Administration shall be responsible for the immediate organization and staffing of the Operation Land Transfer Center, including the setting up of appropriate offices and facilities of its working sections and units.

This Department Special Order takes effect immediately.

March 20, 1975, Diliman, Quezon City.

(SGD) CONRADO F. ESTRELLA
Secretary

APPENDIX D

GOVERNMENT AGENCIES WHICH CONTRIBUTE DATA RELATED TO AGRARIAN REFORM

Appendix D. Government Agencies which Contribute Data Related to
Agrarian Reform^a

Office of the President

Commission on Population

Agencies Attached to NEDA

Development Bank of the Philippines

Philippine National Bank

Ministry of Agrarian Reform (MAR)

Planning Service

Bureau of Agrarian Legal Assistance

Bureau of Farm Management

Bureau of Land Acquisition, Distribution and Development

Bureau of Resettlement

Agencies Attached to MAR

Agricultural Credit Administration

Research, Statistics and Evaluation Division

Special Assets Division

Land Bank of the Philippines

Agrarian Department

Ministry of Agriculture (MA)

Bureau of Agricultural Extension

Agencies Under the Administrative Supervision of the MA

National Food and Agriculture Council

Philippine Sugar Institute

Office for Research

Office for Development

Plans and Evaluation Office

Ministry of Justice

Land Registration Commission

Ministry of Local Government and Community Development

Operations Control Center

Ministry of Natural Resources

Bureau of Lands

Ministry of Public Works, Transportation and Communications

Department of Loans and Credit, Central Bank of the Philippines

Department of Rural Banks and Savings and Loan Associations

^aThese agencies, all of which belong to the Executive Branch, produce statistics as by-products of their administrative and/or regulatory functions. Based on NEDA, 1975, pp. 75-152.

APPENDIX E

PRIMARY DATA BEING PRODUCED BY THE PUBLIC
DATA SYSTEM ON AGRARIAN REFORM

Appendix Table E.1. Primary Data Being Produced by MAR (formerly DAR) as of 1975

Producing Unit/Description of Statistics	Source, Frequency of Collection, and Year Initiated	Processing, Publication, and Intended Uses of Data	Limitations of Data
Planning Service Statistics on land transfer, settlements, landed estates, extension services and legal services.	Submitted weekly by field offices. Data on Operation Land Transfer (OLT) are collected weekly since 1972, while the rest of the data are collected monthly starting in 1971.	The data on OLT are processed and compiled weekly while monthly processing computation are done for the rest of the data. Published in the annual report of the agency.	
Bureau of Agrarian Legal Assistance (BALA) Statistics on number of cases filed in the Court of Agrarian Relations (CAR), Court of Appeals & the Supreme Court as well as a number of cases terminated, submitted for decision and decided.	Collected monthly and quarterly from the Regional Offices, from the Planning Service, as well as from other divisions of the MAR.	Data are processed and published for public use and for inclusion in the annual reports.	Late submission of reports.
Bureau of Farm Management (BFM) Home Management Rural Youth Division Statistics on agricultural development services.	Submitted monthly by the Rural Youth Project. Data collection was started in 1972.	Data are submitted to the National Computer Center (NCC) for tabulation and summarization. Published in the annual report.	
Agricultural Development Division Statistics on crop & animal production as well as on compact farms.	Obtained from 11 regional offices of MAR monthly, semi-annually and annually since 1972.	Processing is done monthly, semi-annually, and annually for internal use and for inclusion in the annual report.	Data are gathered from MAR team-assisted farmers or from tenant tillers only.
Statistics on project development.	From annual survey of government offices since 1973.	Processed annually for internal use & for inclusion in the annual report.	
Bureau of Land Acquisition, Distribution & Development (BLADD) Statistics on land acquisition, land distribution, land surveys & land capability and classification.	Most data are submitted by the Regional Offices to the Bureau on a monthly and quarterly basis. Initial collection of data was done in 1972.	The data are processed immediately upon submission but these are published only in annual report of the Ministry.	
Bureau of Resettlement (BURE) Agricultural information & demographic characteristics of households in proclaimed & unproclaimed settlements.	Data are gathered from survey of resettlement projects. Collection is done annually since 1961.	Processed for internal use and for inclusion in the annual report of the agency.	

Source: Statistical Coordination Office, NEDA, 1975, pp. 88 & 89.

Appendix Table E.2. Primary Data Being Produced by Agencies Attached to the MAR as of 1975

Producing Unit/Description of Statistics	Source, Frequency of Collection, and Year Initiated	Processing, Publication, and Intended Uses of Data	Limitations of Data
<u>Agricultural Credit Administration (ACA)</u>			
<u>Research, Statistics & Evaluation Division (RSED)</u>			
Data on loan releases, collection & number of farmers served by type of program, by province and by region.	From field reports received monthly by the Division. Data on loans released through farmers cooperatives were first compiled in 1952, while data released under the Land Reform and the Rice & Corn Production Coordinating Council were compiled beginning 1964. Under the Masagana 99 program of the NFAC initiated only in 1973, data on loans released & collection are compiled by RSED from field telegraphic reports received fortnightly & monthly from branch/agency offices.	Data on loans released, collection & farmers served are tabulated monthly, quarterly & annually by type of loans, by province & by region and summarized for specific purposes & for internal use. Data on loans released and farmers served in the land reform areas are tabulated & reported to MAR monthly; data on loans released directly to farmers under Masagana 99 program of NFAC are tabulated, summarized & reported monthly to NFAC.	The data on loans & farmers served are a measure of ACA's financial assistance to cooperatives & to farmers through their cooperatives in land reform areas & those served directly under the NFAC programs. The data, however, include only the amount & the total number of farmers served by cooperatives, province & region, but do not include the details such as the names of farmers served, etc.
Status of loans	Compilation of data on loans served to agrarian reform beneficiaries started in 1973 by RSED from monthly reports of branch offices. Data on loans under the different programs are compiled quarterly by type of loan, by crop year, by province & by region from field reports received quarterly. Compilation of status of loans through farmers' cooperatives are done quarterly since organization in 1952 while that for data under the land reform & NFAC programs was initiated in 1964.	The data are published yearly in the <u>Annual Report and Statistical Digest</u> . Crop year percentage of repayment is computed monthly to determine trends of collection for internal use. Status of loans to farmers in land reform areas & those covered by NFAC program are classified & tabulated by province for inclusion in the monthly report on Summary of ACA's operations, ACA's Annual Report & Statistical Digest.	
Data on compact farms	Compiled every cropping season from the progress reports on compact farms submitted by the branch offices showing number of compact farms organized membership & farmers financed. Started in 1973-74.	Tabulated & summarized for reports & distribution to higher authorities.	Data do not include individual farmers financed while most are still in the organizational stage.
Statistics on ACA-financed facilities	Compiled from annual reports from branch offices which are required to submit a list of all facilities granted to farmers' cooperatives plus additional information on the condition of the facility, status of ownership whether it is still in the possession of the cooperative or already repossessed by ACA. Compilation of data on ACA-financed facilities started since the organization of ACA (then ACCFA) but reporting of ACA-financed facilities with the required additional information as outlined above was started in 1962.	Data are summarized & tabulated at the end of fiscal year by type of facility, by province, by Farmers Cooperative (FCs), for ACA reference or for reports to higher authorities as required & for inclusion in ACA's Annual Report & Statistical Digest.	
Statistics on ACA-acquired facilities or properties	The branch/agency offices annually report on the facilities previously installed by ACA for Farmers Cooperatives (FCs) out of facility loans & properties w/c have been re-acquired by ACA either through foreclosure proceedings or by assignment by FC. Started in 1962.	The data are summarized & tabulated according to type of facility, by province, by cooperative for ACA's use & inclusion in ACA's Annual Report & Statistical Digest.	

Appendix Table E.2. (Continued)

Special Assets Division (SPAD)		
List of ACA-owned/ administered reality	From the inventory report of branches/agencies. Started in 1972.	Compiled & consolidated & sub- mitted to MAR for appropriate recommendation on their disposal or utilization.
Inventory statement of ACA-owned/acquired/ administered properties	- do -	
Appraisal summary of properties	Central/regional office annual report.	Compiled to determine the fair market value of acquired/mort- gaged properties & reasonable/ fair rental for the use of the same.
ACA (SPAD) Form No. 1 report on the disposal/ utilization of ACA-owned/ acquired/administered properties/facilities	Regional monthly report.	Consolidated & submitted to the Board of Governors.
SPAD Form 2 report of acquisition	Regional quarterly report.	Consolidated & submitted to the Board of Governors.
ACA (SPAD) Form 3 report on deployment of security guards for ACA-owned/ acquired/administered facilities	Regional quarterly report.	- do -
SPAD Form 4 report on insurance coverage of ACA-owned/acquired facilities	Regional office semi-annual report.	- do -
<u>Land Bank of the Philippines</u> (LBP)		
Agrarian Department		
Data on payments, area, value, number of tenants involved, location & land holdings.	Submitted irregularly by the MAR but at least three times a week. Initi- ated in 1974.	Data compiled everyday but these are not published.
Loans granted to farmer borrowers by participating rural banks & PNB branches & agencies.	Collected daily from the rural banks. For internal use. Started in 1973.	
Losses incurred by farmer borrowers on loans granted to them by rural banks, PNB branches & agencies.	Submitted daily since 1973 by rural banks.	- do -
Recoveries on claims paid/ remitted by the partici- pating rural banks, PNB branches and agencies.	Submitted daily by rural banks. Started in 1974.	- do -

Source: Statistical Coordination Office, NEDA, 1975, pp. 86-89.

Appendix Table E.3. Primary Data Being Produced by the Bureau of Lands (BL) as of 1975

Producing Unit/Description of Statistics	Source, Frequency of Collection, and Year Initiated	Processing, Publication, and Intended Uses of Data	Limitations of Data
Land survey data	Collected monthly from the Surveys Division & the field offices.	The data are compiled, evaluated, analyzed & published in the Progress on Planned Surveys.	Late arrival of reports due to lack of statisticians in the field offices.
Land titling data	Land Management Division, Records Division & field offices. Monthly collection of data.	The data are compiled, evaluated, analyzed & published in the <u>Basic Statistical Information of the Bureau of Lands.</u>	Lack of statistical personnel in the Planning & Management Staff to continuously undertake all phases of statistical operations results to a time lag in the data.
Land resources & classification data	Collected monthly from the Land Management Division, Records Division & field offices; annually from the Bureau of Forest Development & Land Registration Commission.	The data are compiled, evaluated, analyzed & published in the Land Resources of the Philippines. The data are also mapped & projected in provincial maps.	
Parcellary mapping data	Bureau of Land Reform Survey Parties & field offices.	Evaluation & analysis of data which were also projected in maps.	
Data on cultural minorities	Collected from field offices.	- do -	Confined only to provinces with cultural minorities & those covered by PD 410.

Source: Statistical Coordination Office, NEDA, 1975, pp. 125-126.

Appendix Table E.4. Primary Data Being Produced by the Land Registration Commission (LRC) as of 1975.

Producing Unit/Description of Statistics	Source, Frequency of Collection, and Year Initiated	Processing, Publication & Intended Uses of Data	Limitation of Data
Number of land titles issued & delivered; and number of documents registered.	Monthly reports of the registries on income & expenditures & on documents registered. Compilation started in 1954.	Tabulated & classified monthly for publication in the annual report.	-
Income & expenditure of the Registries of Deeds.	Monthly reports of accomplishments, manpower, income & obligations. Initiated in 1954.	Data compiled monthly & yearly are tabulated & compared with the total estimated income goal for the month & for the year, respectively. Published in the agency's annual report.	-
Number of cadastral lots adjudicated.	Compiled monthly from courts since 1954.	Compiled for publication in the annual report.	-
Information on decrees of registration issued; lots decreed; sub-division plans approved; lots subdivided; land titles & records reconstituted.	Data taken from office files. Collected monthly since 1954.	Compiled & classified for internal use & for publication in the annual report.	-

Source: Statistical Coordination Office, NEDA, 1975, p. 115.

Appendix Table E.5. Primary Data Being Produced by the NCSO as of 1975.

Producing Unit/Description of Statistics	Source, Frequency of Collection, and Year Initiated	Processing, Publication, and Intended Uses of Data	Limitation of Data
1970 Census of Population & Housing	The census of population is conducted every 10 years.	National summary results are presented by province & by municipality. Tabulated results are presented in the <u>Census of Population Publication</u> .	Under & over enumeration of data.
Agricultural statistics	Data obtained from the Census of Agriculture conducted in 1971. This is a decennial undertaking of NCSO.	Results are tabulated by province & by municipality & published in two volumes. The first volume consists of a separate report for each province, while the second volume consists of a national summary report.	Farms less than 5 hectares were interviewed on a sample basis. Sampling has been designed as to permit tabulations only down to the municipality level.
Statistics on family income & expenditures	Collected every 4 years through the Survey of Households. Initiated in 1957.	Results are processed, tabulated & published in the <u>NCSO Sample Survey of Households Bulletin</u> .	Subject to sampling & non-sampling errors.
Statistics on household rice & corn consumption & stocks	Gathered annually as a rider in the Survey of Households since 1967.	Survey results are processed & tabulated primarily for the Food and Agriculture Coordinating Council thru BAEcon.	- do -
Size, composition, & distribution of the labor force; number & distribution of the employed labor force classified by industry, class of worker, hours worked, & other socio-economic characteristics; number & distribution of the unemployed & their characteristics.	Data are obtained from the NCSO Survey of Households through personal interview, the first round of which was conducted in May, 1956.	Survey results are presented in statistical tables, graphs or charts, together with adequate explanatory notes & a substantial analysis & interpretation of the data in NCSO Special Releases, Journal of Philippine Statistics & the <u>NCSO Survey of Households Bulletin</u> .	- do -

Source: Statistical Coordination Office, NEDA, 1975, pp. 43, 45 & 47-48.

Appendix Table E.6. Primary Data Being Produced by the BAEcon as of 1975

Producing Unit/Description of Statistics	Source, Frequency of Collection, and Year Initiated	Processing, Publication, and Intended Uses of Data	Limitation of Data
Area & quantity of principal crops, particularly palay & corn.	Collected from farm operators through the Crop & Livestock Surveys from 1954 to 1969. Thereafter, data collection has been undertaken quarterly through the Integrated Agricultural Surveys & semi-annually through the field reports of provincial statisticians, which include the values of agricultural crops.	Processing is undertaken with the aid of IBM machines. Published both in mimeograph & book forms.	Estimates, including forecasts are available only on the national & regional levels.
Cost of production of selected crops, livestock & poultry.	Initiated in 1956, with data collected from farm households for that year only, & updated in 1959. Estimates on selected crops only were updated in 1972-1973.	Processing is undertaken with the aid of IBM machines. Published in mimeograph form from 1969 to 1973; compiled at present in a handbook.	Estimates are available only on the national & regional levels.
Livestock & poultry (No. & value of livestock & poultry as of a specified date; No. & dressed weight of livestock & poultry slaughtered).	Initiated in 1954 as a part of the annual Crop & Livestock Survey. It has been included in each January round of the Integrated Agricultural Surveys from 1969 to 1973.	Data are processed with the aid of IBM machines; tables are mimeographed & disseminated to the public. Also, occasionally published in the Philippine Agricultural Situation, a quarterly publication of the Bureau.	Estimates are available only on the national & regional levels.
Daily prices of selected agricultural commodities.	Initiated in 1968; collection undertaken daily from important trading centers in the country.	Data are compiled & summarized by hand at the central office & published in a daily report.	Information cover only specified trading centers.
Prices received & prices paid by farmers for selected commodities; farm wages by type of crop & type of labor.	Initiated in 1958; data collected until 1960 by price reporters from farm operators throughout the country; from 1961 to 1966, barrio captains collected the required information; from 1967 to the present conducted as a regular survey on sample farmers; collection undertaken monthly on prices, & quarterly on wages.	Processing is undertaken with the aid of IBM machines. Data disseminated in mimeographed form.	Data are available only on the national & regional levels.
Palay & corn stocks.	Initiated in 1958; collected quarterly from that year to the present; monthly surveys on a sub-sample basis were started in 1971 & continued until June 1974. Hereafter these monthly surveys shall be conducted every two months.	Data are compiled, computed & summarized by hand; information is available in Central Office.	Estimates are available only on the national & regional levels.
Prices of agricultural inputs.	Initiated in 1972; collection of data being undertaken monthly.	Data are compiled, computed & summarized by hand; information is available in Central Office.	For chemicals, only the important ones are covered.

Source: Statistical Coordination Office, NEDA, 1975, p. 49.

APPENDIX F

UNIVERSITY OF THE PHILIPPINES SYSTEM'S COLLEGES,
DEPARTMENTS, INSTITUTES AND CENTERS WHICH ARE ACTIVELY
ENGAGED IN SOCIAL SCIENCE RESEARCH ON AGRARIAN REFORM
AND THE GENERAL AREA OF RURAL DEVELOPMENT

Appendix F. University of the Philippines System's Colleges, Departments, Institutes and Centers which Are Actively Engaged in Social Science Research on Agrarian Reform and the General Area of Rural Development^a

University of the Philippines at Los Baños (UPLB)

College of Development Economics and Management (CODEM)
 Agrarian Reform Institute (ARI)
 Agricultural Credit and Cooperatives Institute (ACCI)
 Department of Agricultural Economics

College of Agriculture
 Department of Agricultural Education
 Department of Development Communication

College of Sciences and Humanities
 Department of Social Science

Center for Policy and Development Studies (CPDS)

University of the Philippines at Diliman

College of Arts and Sciences
 Department of Anthropology
 Department of Sociology

Institute of Economic Development and Research (IEDR)

Institute of Mass Communication

Institute of Environmental Planning

Institute of Social Work and Community Development

Philippine Center for Advanced Studies

College of Public Administration

Local Government Center

Law Center

Population Institute

^aBased partly on Castillo, 1974.

APPENDIX G

LIST OF PRIVATELY-SUPPORTED ACADEMIC INSTITUTIONS COMPRISING
PART OF THE PRIVATE DATA SYSTEM ON AGRARIAN REFORM

Appendix G. List of Privately-Supported Academic Institutions Comprising
Part of the Private Data System on Agrarian Reform^a

LUZON

Catholic

Ateneo de Manila University (Quezon City)
Institute of Philippine Culture (IPC)
Department of Sociology and Anthropology

Asian Social Institute (Manila)

Institute of Social Order (Manila)

Centro Escolar University (Manila)
Research and Development Center

Center for Research and Communication (Manila)
Graduate School of Arts and Sciences

Protestant

Philippine Christian University (Manila)
Research Center

VISAYAS

Catholic

University of San Carlos (Cebu City)
Department of Economics
Office for Social Research
Department of Anthropology

Protestant

Central Philippine University (Iloilo)
Social Science Research Unit

Silliman University (Dumaguete City)
Social Science Research
University Research Center

MINDANAO

Catholic

Immaculate Concepcion College (Ozamis City)
Research Center

Notre Dame University (Cotabato)
Socio-Economic Research Center

Ateneo de Davao (Davao)
Research Office

St. Paul College (Tuguegarao)
Office for Research

Notre Dame of Jolo College (Jolo)
Coordinated Investigation of Sulu Culture

Xavier University (Cagayan de Oro)
Research Institute for Mindanao Culture

^aBased on Castillo, 1974, pp. 144, 186-187.

APPENDIX H

CONCEPTUAL MATRIX DESIGNED TO ACCOUNT FOR THE EFFECT(S)
OF SPECIFIC (AGRARIAN) REFORM(S) ON PROGRAM OBJECTIVES

Appendix H. Conceptual Matrix Designed to Account for the Effect(s) of Specific (Agrarian) Reform(s) on Program Objectives

Change (or Reform) in	Separate or Combined Effect on							
	Economic Objectives				Social Objectives			
	Productivity (1)	Marketed Surplus & Savings (2)	Capital Formation (3)	Income & Wealth Distribution (4)	Effective Demand (5)	Employment (6)	Social Objectives (7)	Political Objectives (8)
(1) Land Tenure Structure	(1,1)*	(1,2)	(1,3)	(1,4)	(1,5)	(1,6)	(1,7)	(1,8)
(2) Production Structure	(2,1)	(2,2)	(2,3)	(2,4)	(2,5)	(2,6)	(2,7)	(2,8)
(3) Supporting Services Structure	(3,1)	(3,2)	(3,3)	(3,4)	(3,5)	(3,6)	(3,7)	(3,8)
(4) Combined (1) & (2)	(4,1)	(4,2)	(4,3)	(4,4)	(4,5)	(4,6)	(4,7)	(4,8)
(5) Combined (1) & (3)	(5,1)	(5,2)	(5,3)	(5,4)	(5,5)	(5,6)	(5,7)	(5,8)
(6) Combined (2) & (3)	(6,1)	(6,2)	(6,3)	(6,4)	(6,5)	(6,6)	(6,7)	(6,8)
(7) Combined (1), (2) & (3)	(7,1)	(7,2)	(7,3)	(7,4)	(7,5)	(7,6)	(7,7)	(7,8)

*Row-column matrix notation, to be interpreted as: "The effect of a change in the Land Tenure Structure (row 1) on Productivity (column 1)".

APPENDIX I

DESIRED AND UNDESIREO OUTPUTS OF THE PHILIPPINE
AGRARIAN REFORM PROGRAM

Appendix I. Desired and Undesired Outputs of the Philippine Agrarian Reform Program

Desired		Measurement Units	Undesired	Measurement Units
A. Relative to Economic Objectives				
1. Productivity				
a. Land productivity of rice & corn farms covered by the program	tons/ha/yr		a. Pollution of ponds, rivers, lakes & ocean due to increased use of polluting herbicides/insecticides/fertilizers	pollution index/yr
b. Total rice & corn produced in the program area	tons/yr			
2. Marketed surplus and savings				
a. Amount and proportion of rice & corn production that is marketed & consumed	tons or percent/yr			
b. Amount & proportion saved out of income from marketed rice & corn	pesos or percent/yr			
c. Volume of farm savings generated from marketed rice & corn	pesos/yr			
3. Capital formation				
a. Capital investments in rice & corn farms by form of investment	pesos/farm/yr			
4. Income and wealth distribution (equity in the economic sense)				
a. Increase in income of reform beneficiaries due to tenure change	pesos/beneficiary/yr		a. Loss in annual income of lessees due to land transfer	pesos/lessee/yr
b. Decrease in income of former landlords due to tenure change	pesos/landlord/yr		b. Further fragmentation of farm operating units due to land tenure laws	fragmentation index/yr
c. Size distribution of rice & corn landholdings and index of landownership inequality among landowners, tenants & beneficiaries	ha dist'n or inequality index/yr			
d. Size distribution of land-based (rice & corn) income and index of income inequality among landowners, tenants & beneficiaries	pesos dist'n or inequality index/yr			
e. Level of beneficiaries' income from agricultural activities relative to income of non-agricultural workers	income ratio/yr			
f. Number of beneficiaries who have obtained a homelot	number/yr			
g. Non-land production assets transferred to beneficiaries/cooperatives	pesos/beneficiary/yr			
5. Effective demand				
a. Amount & proportion of beneficiaries' income increase spent on wage goods	pesos or percent/beneficiary/yr			
b. Amount & proportion of landlords' income decrease unspent on consumer goods	pesos or percent/yr			
6. Employment				
a. Increase in employment in beneficiaries' rice & corn farms	man-days/yr		a. Resettlement-enhanced soil erosion	soil erosion index/yr
b. Employment created in land settlement projects	man-days/project/yr		b. Displacement of landless agricultural workers by family labor due to tenure change	man-days/yr
c. Employment increase in wage-goods industries due to increase in effective demand	man-days/yr		c. Unemployment created by mechanization	man-days/yr
			d. Unemployment created in consumer-goods industries due to decrease in effective demand	man-days/yr
7. Diversion of landlord capital in agricultural to industrial development				
a. Amount & proportion of landlord compensation invested in industries	pesos or percent/yr			
8. Availability of program-sponsored credit				
a. Amount & proportion of beneficiaries' credit obtained from program-sponsored sources	pesos or percent/beneficiary/yr			
b. Volume of program-sponsored credit obtained by beneficiaries	pesos/yr			
B. Relative to Social Objectives (equity in the social sense)				
1. Severance of exploitative patron-client relationship				
a. Number of former share tenants who have become full owners	number/yr		a. Loss of sense of economic security among beneficiaries after severance of landlord-tenant relationship	economic security index/yr
b. Permanency & inter-generational transfer of landownership	(to be operationalized)		b. Rate of eviction of tenants	percent/municipality/yr
2. Participation in community affairs				
a. Beneficiaries' participation in community affairs	participation index/yr			
C. Relative to Political Objectives				
1. Prevention of agrarian unrest, violent conflicts and social tension				
a. Index of agrarian unrest, violent conflicts and social tension	index/yr		a. Violent and/or legal conflicts between landlords & tenants, or among program participants, emanating from the process of implementing the agrarian reform laws	index/yr
2. Participation in political life				
a. Beneficiaries' active membership in Barangay Council and Samahang Nayon	percent of beneficiaries who are active members/yr		b. Resumption of uprisings in the countryside due to tenants' dissatisfaction (amidst very high expectations) over delays and the government's loss of credibility in implementing the promised reforms	index/yr
3. Political independence from landlord				
a. Index of beneficiaries' independence from former landlord on political affairs	index/yr			

*Also viewed as performance variables by the respondents.

APPENDIX J

OUTPUTS ARISING FROM ACTIVITIES UNDERTAKEN
UNDER THE LAND TENURE IMPROVEMENT COMPONENT OF THE
AGRARIAN REFORM PROGRAM

Appendix J. Outputs Arising from Activities Undertaken Under the Land Tenure Improvement Component of the Agrarian Reform Program

Activity	Output
1. Leasehold	Share tenancy abolished and the leasehold system instituted, with every lessee covered by a written, registered leasehold contract
2. Land Transfer	Tenant-farmers made owners by transferring to them the land they are tilling
3. Compact Farming	Adjacent landholdings are pooled, managed and financed as a single farm
4. Land Consolidation	Farm boundaries are restructured and infra-structures such as roads, irrigation and drainage provided
5. Cooperative Farming	Production resources are reallocated and production and marketing organized and systematized
6. Resettlement	Existing settlements upgraded and new ones opened and developed into viable agribusiness communities
7. Personnel Training & Clientele Development	Knowledge and skills of MAR personnel continuously upgraded and the various publics affected by agrarian reform made fully aware of the program

Source: Department of Agrarian Reform. 1977 Annual Report. Public Information Division, DAR, 1978.

APPENDIX K

TRADE-OFFS OR COMPLEMENTARITIES AMONG PROGRAM
OUTPUTS DEPENDING ON SPECIFIC POLICIES ADOPTED

Appendix K. Trade-Offs or Complementarities Among Program Outputs Depending on Specific Policies Adopted

Outputs Under Consideration	Kind of Relationship to Each Other	Depending On	
		Policy Adopted	Specific Measures Applied with Respect to
Productivity or yield (output/ha) vs. employment & income/wealth distribution	Trade-off/complement	GO 47	Contractual arrangements with tenants or landlords Mechanization
Unrest of peasants vs. unrest of small landowners (middle-class)	Trade-off	PD 27 (Land transfer)	Retention Limit Land valuation & landlord compensation
Productivity & employment vs. total income per beneficiary (output/man)	Trade-off	PD 27	Size of farm (or operating unit)
Equity vs. Productivity	Trade-off/complement	PD 27 (Land transfer or leasehold)	Credit services to replace landlord credit

APPENDIX L

POLICY INPUTS AND POLICY ENTRY POINTS WITH RESPECT TO THE PHILIPPINE AGRARIAN REFORM PROGRAM

Appendix L. Policy Inputs and Policy Entry Points with Respect to the Philippine Agrarian Reform Program

Policy Issuances	Specific Policy Variables or Instruments Contained in Policy Issuances	Type of Policy Instrument	Policy Entry Points	Programs and Operations for Executing Policies
A. PD 2 (R.A.s 3844, 6389 & 6390) ^a PD 27, PD 1038	1. Land tenure or property rights 2. Lease rental rate 3. Amortization payment rate 4. Minimum economic family-size farm 5. Size of farm/operating unit ^c 6. Landlord retention limit 7. Private landownership ceiling 8. Land valuation formula 9. Land compensation scheme 10. Budget allocation for the DAR, LB, BL & LRC	System design parameter - do - - do - - do - - do - - do - - do - - do - System design parameter Controllable input System design parameter	(Congress) ^b President, PES (now NEDA), DAR technocrats (private), others Congress Same as in 1 except congress Same as in 1 - do - Same as in 3 Same as in 2 Same as in 3 Same as in 3 Same as in 1; LB, BL & LRC DAR, LB, NEDA	Operation Land Transfer (OLT), leasehold, resettlement Leasehold OLT, resettlement OLT, leasehold & resettlement Leasehold, OLT & resettlement OLT Land registration/titling/licensing OLT OLT ---
B. PD 251, LOI 273	Modes of payment of the land compensation	System design parameter	MAR, DF, NEDA	OLT
C. PD 57	1. Capital gains tax on the proceeds of the land compensation 2. Income tax due on the interests paid in advance	- do - - do -	- do - MAR, LRC, NEDA	OLT - do - - do -
D. PD 266	Fee, premium, or tax charged or imposed in connection with the issuance & registration of documents and title	- do -	- do -	OLT & land registration
E. PD 231	Tax on the transfer of real property ownership	- do -	MAR, LB, CB, NEDA	OLT, leasehold
F. PD 717, PD 57	Agrarian reform credit & financing system	- do -	MLGCD, MAR, NEDA	Cooperatives development
G. PD 175	1. Institutional design of cooperatives & similar institutions 2. Budget allocation for MLGCD	Controllable input System design parameter	MLGCD & NEDA CB, MA, NEDA	---
H. PD 315	Borrowing requirements & procedures of financing institutions	System design parameter	CB, MA, NEDA	Masagana 99 (in agrarian reform areas)
I. ---	Interest rates on agricultural loans (for production, marketing, etc.) especially for rice & corn	Controllable input	CB, NEDA	- do -
J. ---	Irrigation fee	- do -	NIA	---
K. PD 464	Tax on agricultural land	- do -	NEDA	---
L. ---	Price support levels for rice & corn	- do -	NSA, MA	Masagana 99 (in agrarian reform areas)
M. ---	Level & timing of credit for rice & corn production and marketing	- do -	CB, Rural Banks, Commercial Banks, PNB, Development Banks, Cooperatives, ACA	- do -
N. ---	Budget allocation for extension services agencies (i.e., BAEExt & BPI of the MA)	- do -	MA, NEDA	Agricultural extension
O. ---	Level & timing of investment in land & water development	- do -	MAR, NIA	Resettlement program; Land consolidation projects
P. ---	Rice & corn export/import policy (i.e., import/export quota or tariff; import/export subsidy)	- do -	NEDA	Foreign trade
Q. ---	Scales & location of public works --land & water development, power, communication, etc.	System design parameter	DPWTC, BPH, NIA, NEA & MAR	Resettlement; land consolidation
R. ---	Specific technologies promoted by commodity (e.g., rice) & function (production, marketing, etc.) described by sets of technical coefficients	- do -	BAExt, MA	Masagana 99, Mascan
S. ---	Discount rate	- do -	CB, NEDA	---
T. ---	Population growth rate (rural & urban)	- do -	POPCOM, NEDA	Family planning program
U. ---	Land consolidation scheme	- do -	MAR	Land consolidation project
V. ---	Regional land use allocation to various crops including rice & corn	- do -	MA, MAR, NEDA	---
W. GO 47	1. Contractual arrangements with tenants or landowners 2. Mechanization	- do - - do -	NSA - do -	Corporate farming program - do -

^aPD 2 reaffirmed and accelerated the implementation of the Agrarian Reform Code (R.A. 3844 as amended by R.A. 6389 with funding provision R.A. 6390).

^bRepublic Acts (R.A.s) are pre-Martial Law policies passed by the now defunct Philippine Congress.

^cImplicit (rather than explicit) policy instrument.

^dThat is, a) membership requirements; b) sharing of costs and benefits; c) procedural rules; and the like.

Abbreviations:			
BAExt	- Bureau of Agricultural Extension	MA	- Ministry of Agriculture
BL	- Bureau of Lands	MLGCD	- Ministry of Local Government & Community Development
BPH	- Bureau of Public Highways	NEA	- National Electrification Administration
CB	- Central Bank of the Philippines	NEDA	- National Economic and Development Authority
DAR/MAR	- Department (Ministry) of Agrarian Reform	NSA	- National Grains Authority
DF	- Department of Finance	NIA	- National Irrigation Administration
DPWTC	- Department of Public Works, Transportation and Communication	PES	- Presidential Economic Staff
LB/LBP	- Land Bank of the Philippines	PNB	- Philippine National Bank
LRC	- Land Registration Commission	POPCOM	- Population Commission

APPENDIX M
LANDOWNER'S IDENTIFICATION SHEET (LIS)

APPENDIX M. Landowner's Identification Sheet (LIS)

TO BE FILLED BY DAR FIELD TEAM

LANDSIZE CATEGORY: LANDOWNERS CATEGORY:

☐ 1 HECTARE & BELOW
☐ MORE THAN 1 HECTARE
 AND LESS THAN 14 HECTARES

☐ 1
☐ 2

LANDOWNER'S IDENTIFICATION SHEET

TO FILLED BY THE LANDOWNER:

1. NAME OF LANDOWNER:		2. CIV. STAT.	3. SEX	4. AGE	5. NO. OF DEPENDENTS
6. PRESENT ADDRESS:		7. BIRTH DATE		8. HIGHEST EDUC. ATTAINMENT	
9. BIRTHPLACE:		10. P.T.A. NO.		11. T.A.N.	
LANDHOLDINGS (Please also accomplish attached form)					
STATUS OF LANDHOLDING	RICE & CORN LANDS		OTHER LANDHOLDINGS		
	☐ 1.0 REGISTERED & TITLED ☐ 2.0 UNREGISTERED & UNTITLED		☐ 3.0 REGISTERED & TITLED ☐ 4.0 UNREGISTERED & UNTITLED		
HISTORY OF TILLAGE OF RICE & CORN LANDS	1.0 PRESENTLY TILLING		AREA >	DATE STARTED TILLING	_____
	2.0 PREVIOUSLY TILLING		AREA >	INCLUDE FROM DATE OF TILLING TO	_____
	3.0 NEVER TILLED RICE & CORN LANDS				_____
REASONS FOR ABANDONMENT OF LANDHOLDINGS PREVIOUSLY TILLED BY LANDOWNER		☐ 1.0 DUE TO FORTUITOUS CIRCUMSTANCES OR EVENTS BEYOND THE CONTROL OF LANDOWNER ☐ 2.0 DUE TO SERVICES IN THE ARMY OR OTHER BRANCHES OF THE GOVT. ☐ 3.0 OTHERS (SPECIFY) _____			
INDICATE AREA OF PORTIONS OF LANDHOLDINGS WHICH HAVE BEEN THE SITE OF YOUR ANCESTRAL HOME AND FOR WHICH YOU HAVE STRONG EMOTIONAL ATTACHMENT	AREA		OCT/TCT NO.	UNTTLED	
	1.0 500 - 1500 SQ. METERS				
	2.0 2000 - 2500 SQ. METERS				
	3.0 3000 - 5000 SQ. METERS				
GROSS ANNUAL INCOME FROM LANDHOLDINGS		RICE & CORN LANDS >		P	
		OTHER LANDHOLDINGS >		P	
SOURCES OF INCOME OTHER THAN LANDHOLDINGS					
1. BUSINESS OR TRADE	NATURE OF BUSINESS		NO. OF EMPLOYEES	DATE STARTED	
	PLACE OF BUSINESS		ANNUAL GROSS INCOME > P		
2. EMPLOYMENT IN THE GOVT.	☐ 1.0 APP. ☐ 2.0 DEPT./BUREAU		DATE EMPLOYED	PRESENT POSITION	DATE RETIRED
	OFFICE ADDRESS		SALARY/ANNUUM	YEARLY PENSION	SSS NO.
3. EMPLOYMENT IN PRIVATE FIRM	NAME OF FIRM		DATE EMPLOYED	PRESENT POSITION	DATE RETIRED
	OFFICE ADDRESS		SALARY/ANNUUM	YEARLY PENSION	SSS NO.
I HEREBY CERTIFY ON MY OFFICIAL OATH that the information indicated above are true and correct to the best of my knowledge.					
WITNESS >	PRINTED NAME/SIGNATURE:		SIGNATURE OF LANDOWNER >		
SUBSCRIBED AND SWORN TO BEFORE ME this _____ the day of _____ Applicant exhibited to me his/her Res. Cert. No. A _____ issued on _____ issued on _____ at _____ and Res. Cert. No. B _____					
OFFICE ADMINISTERING THE OATH >		OFFICIAL DESIGNATION >			
EVALUATED BY > DAR TEAM LEADER				DATE _____	

APPENDIX N
BASIC INFORMATION ON LANDHOLDINGS

BASIC INFORMATION ON LANDHOLDINGS

[illegible][illegible]

U) IF RELATIONSHIP IS SHARE
TENANCY INDICATED CHANGE
AGREEMENT SUCH AS JO-JO,
41-55, ETC. IF LEASEHOLD
INDICATE FILED RENTAL
IN CAYANE/NA

VERIFIED BY	CERTIFIED CORRECT
DATE TIME PLACED	THROUGH BY LANDLINE

p. 174

APPENDIX O
OLT FORM 1-A

APPENDIX O. OLT Form 1-A

DEPT. OF AGRARIAN REFORM		OPERATION LAND TRANSFER		OLT FORM NO. 1-A	
IMPORTANT: THIS FORM WILL BE COMPUTERIZED ALL ENTRIES MUST BE MADE IN BLOCK LETTERS AND IN FULL CAPITAL LETTERS. THE INFORMATION SHOULD BE GIVEN UP IN BUREAU OF LAND SURVEY TEAM.					
1. LOCATION OF LANDHOLDING					
2. NAME OF LANDOWNER					
3. ADDRESS OF LANDOWNER					
4. LAND IDENTIFICATION					
5. OCT/CT NO.					
6. TAX DECLARATION					
7. NAME & ADDRESS OF MORTGAGEE (LAST, FIRST, M.I.)					
8. TOTAL AREA OF PARCELS					
9. NO. OF PARCELS					
10. AMOUNT OF MORTGAGE					
11. YES ☐ NO ☐					
12. YES ☐ NO ☐					
13. YES ☐ NO ☐					
14. YES ☐ NO ☐					
15. YES ☐ NO ☐					
16. YES ☐ NO ☐					
17. YES ☐ NO ☐					
18. YES ☐ NO ☐					
19. YES ☐ NO ☐					
20. YES ☐ NO ☐					
21. YES ☐ NO ☐					
22. YES ☐ NO ☐					
23. YES ☐ NO ☐					
24. YES ☐ NO ☐					
25. YES ☐ NO ☐					
26. YES ☐ NO ☐					
27. YES ☐ NO ☐					
28. YES ☐ NO ☐					
29. YES ☐ NO ☐					
30. YES ☐ NO ☐					
31. YES ☐ NO ☐					
32. YES ☐ NO ☐					
33. YES ☐ NO ☐					
34. YES ☐ NO ☐					
35. YES ☐ NO ☐					
36. YES ☐ NO ☐					
37. YES ☐ NO ☐					
38. YES ☐ NO ☐					
39. YES ☐ NO ☐					
40. YES ☐ NO ☐					
41. YES ☐ NO ☐					
42. YES ☐ NO ☐					
43. YES ☐ NO ☐					
44. YES ☐ NO ☐					
45. YES ☐ NO ☐					
46. YES ☐ NO ☐					
47. YES ☐ NO ☐					
48. YES ☐ NO ☐					
49. YES ☐ NO ☐					
50. YES ☐ NO ☐					
51. YES ☐ NO ☐					
52. YES ☐ NO ☐					
53. YES ☐ NO ☐					
54. YES ☐ NO ☐					
55. YES ☐ NO ☐					
56. YES ☐ NO ☐					
57. YES ☐ NO ☐					
58. YES ☐ NO ☐					
59. YES ☐ NO ☐					
60. YES ☐ NO ☐					
61. YES ☐ NO ☐					
62. YES ☐ NO ☐					
63. YES ☐ NO ☐					
64. YES ☐ NO ☐					
65. YES ☐ NO ☐					
66. YES ☐ NO ☐					
67. YES ☐ NO ☐					
68. YES ☐ NO ☐					
69. YES ☐ NO ☐					
70. YES ☐ NO ☐					
71. YES ☐ NO ☐					
72. YES ☐ NO ☐					
73. YES ☐ NO ☐					
74. YES ☐ NO ☐					
75. YES ☐ NO ☐					
76. YES ☐ NO ☐					
77. YES ☐ NO ☐					
78. YES ☐ NO ☐					
79. YES ☐ NO ☐					
80. YES ☐ NO ☐					
81. YES ☐ NO ☐					
82. YES ☐ NO ☐					
83. YES ☐ NO ☐					
84. YES ☐ NO ☐					
85. YES ☐ NO ☐					
86. YES ☐ NO ☐					
87. YES ☐ NO ☐					
88. YES ☐ NO ☐					
89. YES ☐ NO ☐					
90. YES ☐ NO ☐					
91. YES ☐ NO ☐					
92. YES ☐ NO ☐					
93. YES ☐ NO ☐					
94. YES ☐ NO ☐					
95. YES ☐ NO ☐					
96. YES ☐ NO ☐					
97. YES ☐ NO ☐					
98. YES ☐ NO ☐					
99. YES ☐ NO ☐					
100. YES ☐ NO ☐					
101. YES ☐ NO ☐					
102. YES ☐ NO ☐					
103. YES ☐ NO ☐					
104. YES ☐ NO ☐					
105. YES ☐ NO ☐					
106. YES ☐ NO ☐					
107. YES ☐ NO ☐					
108. YES ☐ NO ☐					
109. YES ☐ NO ☐					
110. YES ☐ NO ☐					
111. YES ☐ NO ☐					
112. YES ☐ NO ☐					
113. YES ☐ NO ☐					
114. YES ☐ NO ☐					
115. YES ☐ NO ☐					
116. YES ☐ NO ☐					
117. YES ☐ NO ☐					
118. YES ☐ NO ☐					
119. YES ☐ NO ☐					
120. YES ☐ NO ☐					
121. YES ☐ NO ☐					
122. YES ☐ NO ☐					
123. YES ☐ NO ☐					
124. YES ☐ NO ☐					
125. YES ☐ NO ☐					
126. YES ☐ NO ☐					
127. YES ☐ NO ☐					
128. YES ☐ NO ☐					
129. YES ☐ NO ☐					
130. YES ☐ NO ☐					
131. YES ☐ NO ☐					
132. YES ☐ NO ☐					
133. YES ☐ NO ☐					
134. YES ☐ NO ☐					
135. YES ☐ NO ☐					
136. YES ☐ NO ☐					
137. YES ☐ NO ☐					
138. YES ☐ NO ☐					
139. YES ☐ NO ☐					
140. YES ☐ NO ☐					
141. YES ☐ NO ☐					
142. YES ☐ NO ☐					
143. YES ☐ NO ☐					
144. YES ☐ NO ☐					
145. YES ☐ NO ☐					
146. YES ☐ NO ☐					
147. YES ☐ NO ☐					
148. YES ☐ NO ☐					
149. YES ☐ NO ☐					
150. YES ☐ NO ☐					
151. YES ☐ NO ☐					
152. YES ☐ NO ☐					
153. YES ☐ NO ☐					
154. YES ☐ NO ☐					
155. YES ☐ NO ☐					
156. YES ☐ NO ☐					
157. YES ☐ NO ☐					
158. YES ☐ NO ☐					
159. YES ☐ NO ☐					
160. YES ☐ NO ☐					
161. YES ☐ NO ☐					
162. YES ☐ NO ☐					
163. YES ☐ NO ☐					
164. YES ☐ NO ☐					
165. YES ☐ NO ☐					
166. YES ☐ NO ☐					
167. YES ☐ NO ☐					
168. YES ☐ NO ☐					
169. YES ☐ NO ☐					
170. YES ☐ NO ☐					
171. YES ☐ NO ☐					
172. YES ☐ NO ☐					
173. YES ☐ NO ☐					
174. YES ☐ NO ☐					
175. YES ☐ NO ☐					
176. YES ☐ NO ☐					
177. YES ☐ NO ☐					
178. YES ☐ NO ☐					
179. YES ☐ NO ☐					
180. YES ☐ NO ☐					
181. YES ☐ NO ☐					
182. YES ☐ NO ☐					
183. YES ☐ NO ☐					
184. YES ☐ NO ☐					
185. YES ☐ NO ☐					
186. YES ☐ NO ☐					
187. YES ☐ NO ☐					
188. YES ☐ NO ☐					
189. YES ☐ NO ☐					
190. YES ☐ NO ☐					
191. YES ☐ NO ☐					
192. YES ☐ NO ☐					
193. YES ☐ NO ☐					
194. YES ☐ NO ☐					
195. YES ☐ NO ☐					
196. YES ☐ NO ☐					
197. YES ☐ NO ☐					
198. YES ☐ NO ☐					
199. YES ☐ NO ☐					
200. YES ☐ NO ☐					
201. YES ☐ NO ☐					
202. YES ☐ NO ☐					
203. YES ☐ NO ☐					
204. YES ☐ NO ☐					
205. YES ☐ NO ☐					
206. YES ☐ NO ☐					
207. YES ☐ NO ☐					
208. YES ☐ NO ☐					
209. YES ☐ NO ☐					
210. YES ☐ NO ☐					
211. YES ☐ NO ☐					
212. YES ☐ NO ☐					
213. YES ☐ NO ☐					
214. YES ☐ NO ☐					
215. YES ☐ NO ☐					
216. YES ☐ NO ☐					
217. YES ☐ NO ☐					
218. YES ☐ NO ☐					
219. YES ☐ NO ☐					
220. YES ☐ NO ☐					
221. YES ☐ NO ☐					
222. YES ☐ NO ☐					
223. YES ☐ NO ☐					
224. YES ☐ NO ☐					
225. YES ☐ NO ☐					
226. YES ☐ NO ☐					
227. YES ☐ NO ☐					
228. YES ☐ NO ☐					
229. YES ☐ NO ☐					
230. YES ☐ NO ☐					
231. YES ☐ NO ☐					
232. YES ☐ NO ☐					
233. YES ☐ NO ☐					
234. YES ☐ NO ☐					
235. YES ☐ NO ☐					
236. YES ☐ NO ☐					
237. YES ☐ NO ☐					
238. YES ☐ NO ☐					
239. YES ☐ NO ☐					
240. YES ☐ NO ☐					
241. YES ☐ NO ☐					
242. YES ☐ NO ☐					
243. YES ☐ NO ☐					
244. YES ☐ NO ☐					
245. YES ☐ NO ☐					
246. YES ☐ NO ☐					
247. YES ☐ NO ☐					
248. YES ☐ NO ☐					
249. YES ☐ NO ☐					
250. YES ☐ NO ☐					
251. YES ☐ NO ☐					
252. YES ☐ NO ☐					
253. YES ☐ NO ☐					
254. YES ☐ NO ☐					
255. YES ☐ NO ☐					
256. YES ☐ NO ☐					
257. YES ☐ NO ☐					
258. YES ☐ NO ☐					
259. YES ☐ NO ☐					
260. YES ☐ NO ☐					
261. YES ☐ NO ☐					
262. YES ☐ NO ☐					
263. YES ☐ NO ☐					
264. YES ☐ NO ☐					
265. YES ☐ NO ☐					
266. YES ☐ NO ☐					
267. YES ☐ NO ☐					
268. YES ☐ NO ☐					
269. YES ☐ NO ☐					
270. YES ☐ NO ☐					
271. YES ☐ NO ☐					
272. YES ☐ NO ☐					
273. YES ☐ NO ☐					
274. YES ☐ NO ☐					
275. YES ☐ NO ☐					
276. YES ☐ NO ☐					
277. YES ☐ NO ☐					
278. YES ☐ NO ☐					
279. YES ☐ NO ☐					
280. YES ☐ NO ☐					
281. YES ☐ NO ☐					
282. YES ☐ NO ☐					
283. YES ☐ NO ☐					
284. YES ☐ NO ☐					
285. YES ☐ NO ☐					
286. YES ☐ NO ☐					
287. YES ☐ NO ☐					
288. YES ☐ NO ☐					
289. YES ☐ NO ☐					
290. YES ☐ NO ☐					
291. YES ☐ NO ☐					
292. YES ☐ NO ☐					
293. YES ☐ NO ☐					
294. YES ☐ NO ☐					
295. YES ☐ NO ☐					
296. YES ☐ NO ☐					
297. YES ☐ NO ☐					
298. YES ☐ NO ☐					
299. YES ☐ NO ☐					
300. YES ☐ NO ☐					
301. YES ☐ NO ☐					
302. YES ☐ NO ☐					
303. YES ☐ NO ☐					
304. YES ☐ NO ☐					
305. YES ☐ NO ☐					
306. YES ☐ NO ☐					
307. YES ☐ NO ☐					
308. YES ☐ NO ☐					

APPENDIX P
OLD PS FORM NO. 1

APPENDIX P. Old PS Form No. 1

CAUTION THIS REPORT WILL BE COMPUTERIZED ALL ENTRIES SHOULD BE LEGIBLE AND PRINTED IN BLOCK LETTERS.	DEPARTMENT OF AGRARIAN REFORM	OLT FORM	CONTROL NO.
	OPERATION LAND TRANSFER		

I. TENANT / PRODUCTION SURVEY (TO BE ACCOMPLISHED BY DAR FIELD REPRESENTATIVE)

1. NAME OF TENANT FAMILY NAME FIRST NAME M.		2. REFERENCE NO. TAX ACCOUNT NO.	3. MEMBER OF SAMAHANG NAYON ☐ 1. YES ☐ 2. NO
4. ADDRESS OF TENANT MUNICIPALITY CITY PROVINCE CODE		5. BIRTHDATE MONTH DAY YEAR	6. DEPENDENTS
7. NAME OF LANDOWNER FAMILY NAME FIRST NAME M.		8. REFERENCE NO. TAX ACCOUNT NO.	
9. LOCATION OF LAND PARCEL MUNICIPALITY CITY PROVINCE CODE		10. PRIMARY CROP ☐ 1. RICE ☐ 2. CORN	
11. AVERAGE PRODUCTION FOR THREE NORMAL CROP YEAR. DECLARATION BY:	FIRST CROP YEAR YIELD / HA. (CAV.)	SECOND CROP YEAR YIELD / HA. (CAV.)	THIRD CROP YEAR YIELD / HA. (CAV.)
TENANT			
LANDOWNER			

II. PARCELLARY MAP INFORMATION (TO BE ACCOMPLISHED BY BUREAU OF LANDS REPRESENTATIVE)

12. PMS NO.	13. LOT NO.	14. AREA (HAS.)	15. OLD SURVEY NO.	16. CERTIFIED CORRECT BY BUREAU OF LANDS REPRESENTATIVE
			16. TITLE NO.	NAME IN PRINT
17. LAND CATEGORY ☐ 1. FULLY IRRIGATED ☐ 2. PARTIALLY IRRIGATED ☐ 3. UN-IRRIGATED ☐ 4. UPLAND				SIGNATURE

III. APPLICATION FOR LAND OWNERSHIP (TO BE ACCOMPLISHED BY TENANT AND DAR FIELD REPRESENTATIVE)

To: The Secretary, Dept. of Agrarian Reform. I the undersigned, of legal age, single / married / widower, do hereby apply for the land parcel stated above. That my spouse and I, own / do not own _____ hectares of land devoted to _____. I certify that the above declaration is true and correct. _____ (DATE) _____ (APPLICANT'S SIGNATURE)		
19. REMARKS (IF NO SPECIFY REASON)		20. PART I & III CERTIFIED CORRECT BY DAR FIELD REPRESENTATIVE
A. INTERESTED TO OWN THE LAND ☐ 1. YES ☐ 2. NO	REASON	NAME IN PRINT
B. ENTITLED TO OWN THE LAND ☐ 1. YES ☐ 2. NO	REASON	SIGNATURE

TRIPPLICATE (COPY FOR DAR FIELD REPRESENTATIVE)

NCC 13

APPENDIX Q
OLT VALUATION FORM 1

APPENDIX Q. OLT Valuation Form 1

• OLT-VALUATION FORM 1 •

BARRIO: _____

DATE _____

MUN/CITY: _____

PROVINCE: _____

CODE

--	--	--

CODE

--	--	--	--

PRODUCTION FOR THREE NORMAL CROP YEAR BEFORE PD. 27 (CAYANS/HECTARE)

LAND CATEGORY	19	19	19	AVERAGE
1. LOWLAND RICE (IRRIGATED)				
AUXILIARY (SPECIFY)				
2. LOWLAND RICE (UN-IRRIGATED)				
AUXILIARY (SPECIFY)				
3. UPLAND RICE				
AUXILIARY (SPECIFY)				
4. CORN LAND				
AUXILIARY (SPECIFY)				

NAME OF DAR REPRESENTATIVE

--	--	--

LAST NAME

FIRST NAME

M.I.

S I G N E D

BARRIO CAPTAIN: _____ GN. REPRESENTATIVE: _____

TENANT-FARMER REP: _____ LANDOWNER REP.: _____

_____ OWNER-OPERATOR REP: _____

APPENDIX R

INFORMATION NEEDED BY POLICYMAKERS IN SOLVING POLICY
PROBLEMS AND ISSUES ON AGRARIAN REFORM AT
PRESENT AND IN THE FORESEEABLE FUTURE

Appendix R. Information Needed by Policymakers in Solving Policy Problems and Issues on Agrarian Reform at Present and in the Foreseeable Future^a

Kinds of Information Needed in Solving Problems & Issues
(arranged by priority)

A. At Present

- (1) Cases of land transfer that are getting bogged down.^b
- (2) Land Bank's policies and procedures on land compensation (related to the extremely slow land compensation).
- (3) Area not covered by existing policy: auxiliary crops--whether or not 2nd and 3rd cropping will be covered in the rental (e.g., tobacco).
- (4) Why CLT recipients are not willing to join the Samahang Nayon (SN).
- (5) In-depth research on the Filipino value system of attaching too much significance on the ownership of land per se.
- (6) Types of credit that are being provided to farmers; procedures and regulations imposed by the lending institutions.
- (7) Study on coordination problems in inter-agency approach, with particular emphasis on goals.
- (8) Financial resources to really carry out the program.
- (9) Anomaly in statistics as basis for planning: (a) the same type of data (e.g., production, area planted, land area) from different agencies do not reconcile; and (b) regional statistics do not reconcile with national statistics.
- (10) Resettlement
 - (10.1) Existing settlements: (a) When and how must the MAR phase out its settlements?; and (b) How should the MAR make the unallocated resettlement areas more viable farms to put in landless farmers?
 - (10.2) New settlements: availability of lands that can be proclaimed or set aside for settlement; More resettlement areas are needed; yet many forest lands are being denuded by kaingineros^c making erosion and flooding serious problems. How to help these kaingineros obtain ownership or title to the land.
- (11) In-depth survey to verify and get more specifics about the charge made by peasant leaders (allegedly based on their surveys) that MAR personnel have negative attitudes towards agrarian reform.

B. In the Foreseeable Future

- (1) Size of farm and income derived.
- (2) Diversion of landlord capital from agriculture to industry: (a) How many of the landowners who were paid actually reinvested their money to industry?; and (b) What type of industry did they invest in, that which would support further the growth of the agricultural sector or that which will support more the expansion of the manufacturing sector?
- (3) Land use projection.
- (4) Silting rates (relates to the problem of how to stop deforestation especially by logging concessions).
- (5) Aspirations of the Filipino farmer: (a) What does he really want in life?; (b) What is his aim? (c) What is his goal?; and (d) What does he want to do?
- (6) How to effect the Presidential pronouncement about plantation farms exceeding 25 hectares. Information on crops other than rice and corn is needed: (a) relationships and product-sharing arrangements in sugar, coconut, pineapple lands and the like; (b) How are these lands to be valued if they are going to be transferred? and (c) What is the most viable profit-sharing arrangement with the tenants (if there are) in coconut lands?
- (7) What agricultural lands can be converted to other uses, and landowners involved. Zonal plans and maps indicating areas for urban purposes.

^aBased on the judgments of six (6) respondents from among the core PD 27 policy-making participants.

^bThe respondent in this case suggests that "there is an Agrarian Reform Council, which has unfortunately not met for a long time, which can study the data and make definite decisions".

^cNatives who practice slash-and-burn cultivation.

BIBLIOGRAPHY

BIBLIOGRAPHY

- Abkin, Michael H. "The National Economy Component of the Korean Agricultural Sector Model." In Rossmiller, George E. (ed.) 1978. Agricultural Sector Planning--A General System Simulation Approach. East Lansing, Michigan: Agricultural Sector Analysis and Simulation Projects, Department of Agricultural Economics, Michigan State University. (Hereafter referred to as Agricultural Sector Planning).
- Abkin, Michael H. and Mangum, Fred A., Jr. "Use of a System of Models for Agricultural Decision Analysis." In Rossmiller, George E. (ed.) 1978. Agricultural Sector Planning.
- Agpalo, Remigio E. 1976. "Philippine Interest Groups and Their Role in Political Modernization and Development." Solidarity 10(4): 29-44.
- Agrarian Reform Communications Unit (ARCU). n.d. Land Valuation--Agrarian Reform. Manila, Philippines: National Media Production Center and Department of Agrarian Reform.
- Agrarian Reform Institute (ARI). n.d. The Agrarian Reform Institute. College, Laguna: ARI, University of the Philippines at Los Banos.
- Arcega, Victoria M. 1976. "Technocrats in the Philippine Rice Program: Middlemen in Masagana 99." Philippine Journal of Public Administration 20(2): 123-138.
- Arrow, Kenneth J. 1951. Social Choice and Individual Values. New York: John Wiley and Sons.
- _____. 1962. "Economic Welfare and the Allocation of Resources for Invention." In National Bureau of Economic Research. The Rate and Direction of Inventive Activity: Economic and Social Factors. Princeton, New Jersey: Princeton University Press.
- Bacuñgan, Froilan M. 1974. Agrarian Reform and Law. Diliman, Quezon City: U.P. Law Center.
- Bauzon, Leslie E. 1975. Philippine Agrarian Reform 1880-1965: The Revolution that Never Was. (Occasional Paper No. 31). Singapore: Institute of Southeast Asian Studies.
- Berte, Jesus C. 1976. Operation Land Transfer: Problems of Implementation. Unpublished Master's Thesis, National Defense College of the Philippines.

- Bonnen, James T. 1975a. "Improving Information on Agriculture and Rural Life." American Journal of Agricultural Economics (December): 753-763.
- _____. 1975b. "Problems of Agricultural Information Systems of the United States." Working Papers on Agriculture, Food and Nutrition Information Systems. Washington, D.C.: Office of Technology Assessment, Congress of the United States.
- _____. 1976. "An Information System Approach to National Agricultural Data Collection." Paper presented at the ADC-IADS Workshop on Minimum Information Systems for Agricultural Development in Low Income Countries, Oxford, England, December 1976.
- _____. 1977. "Assessment of the Current Agricultural Data Base: An Information System Approach." In Judge, G. G., et al. (eds.) A Survey of Agricultural Economics Literature. Vol. 2, Minneapolis: University of Minnesota Press, pp. 386-407.
- Bonnen, James T. 1979. "Policy Decision, Information Error and Federal Statistics." Paper presented as President's Invited Address, American Statistical Association, Washington, D.C., August 13, 1979.
- Bonnen, James T.; Duncan, Joseph W.; Goldstein, Harold; and Hagan, Robert L. 1980. "Policy Relevance and the Integrity of Statistics." Statistical Reporter 80(4): 64-69.
- Boulding, Kenneth. 1966. "Richard T. Ely Lecture: The Economics of Knowledge and the Knowledge of Economics." American Economic Review. 56(2): 1-13.
- Bullock, J. Bruce. 1981. "Some Concepts for Measuring the Economic Value of Rural Data." American Journal of Agricultural Economics 63(2): 346-352.
- Burch, John G. Jr., Strater, Felix R. and Grudnitski, Gary. 1979. Information Systems: Theory and Practice. 2nd ed., New York: John Wiley and Sons.
- Burch, John G. Jr. and Strater, Felix R. 1974. Information Systems: Theory and Practice. Sta. Barbara, California: Hamilton Publishing Company.
- Bureau of Agricultural Economics (BAEcon). 1978a. BAEcon Reporter. 9(1).
- _____. 1978b. Programs and Projects 1978. Quezon City, Philippines: BAEcon, Ministry of Agriculture.
- _____. 1975. The Impact of Agrarian Reform on Productivity and Income. Quezon City, Philippines: BAEcon, Ministry of Agriculture.

- Bureau of Lands. 1978. Performance Report CY '78 and Work Program CY '79. Quezon City, Philippines: Bureau of Lands, Ministry of Agriculture. (Mimeographed)
- Byerlee, Derek. 1973. "Indirect Employment and Income Distribution Effects of Agricultural Development Strategies: A Simulation Approach Applied to Nigeria." African Rural Employment Paper No. 9, African Rural Employment Research Network, Department of Agricultural Economics, Michigan State University.
- Calimlim, Pedro N. 1978. "Parcellary Mapping." In Country Review.
- Cardenas, Ramon B. 1975. "Policy Analysis and Development: The Philippine Experience." In Asian Center for Development Administration. Policy Analysis and Development. Policy Series One, Part I. Papers presented at the colloquium on Policy Analysis and Development organized by the United Nations Centre for Development Administration, Kuala Lumpur, Malaysia, November, 1974.
- Carnap, Rudolph. 1953. "Formal and Factual Science." In Feigl, Herbert and Brodbeck May (eds.) Readings in the Philosophy of Science. New York: Appleton-Century-Crofts, Inc., pp. 123-128.
- Carroll, Tom W. and Rossmiller, George E. 1978. "Agricultural Sector Model Conceptualization: The Korean Example." In Agricultural Sector Planning. Chapter 5, pp. 95-114.
- Carroll, Tom W. and Sloboda, John E. 1978. "The Population Component of the Korean Agricultural Sector Model." In Agricultural Sector Planning. Chapter 6, pp. 115-129.
- Casanova, Ramon N. 1978. "The Operation Land Transfer of the Land Reform Program: An Overview." In Country Review.
- Castillo, Gelia T. 1974. "Social Science Research and Rural Development: The Philippine Experience," In The Social Sciences and Development. Proceedings of a conference on the financing of social science research for development held in Bellagio, Italy, February 12-16, 1974.
- Center for Policy and Development Studies (CPDS). 1978. The Center for Policy and Development Studies. College, Laguna, Philippines: University of the Philippines at Los Banos.
- Cochran, William G. 1963. Sampling Techniques. 2nd ed. New York: John Wiley and Sons, Inc.
- Cohen, Suleiman I. 1981. "Distribution of Power and Agrarian Reform: An Explanatory Model Applied to India and Chile." Journal of Policy Modeling 3(1): 37-59.
- Cooperatives Education and Training Division (CETD). n.d. Primer on Bureau of Cooperatives Development. Quezon City, Philippines: CETD, Bureau of Cooperatives Development. (Mimeographed)

- Cummings, Ralph W. Jr. 1977. Minimum Information Systems for Agricultural Development in Low Income Countries. (Agricultural Development Council Seminar Report No. 14).
- Dalisay, Amando M. 1959. Development of Economic Policy in Philippine Agriculture. Quezon City, Philippines: Phoenix Publishing House, Inc.
- _____. 1976. "Economic Issues in Land Reform: The Philippine Case." (Occasional Papers No. 4) College, Laguna: Agrarian Reform Institute, University of the Philippines at Los Baños, February 15, 1976.
- Day, Richard H. 1977. "Toward an Adaptive Economic Theory." In Transatlantic Committee on Agricultural Change. Research on Problems of Agrarian Change. The Hague: European Review of Agricultural Economics. Ch. 6.
- de Haen, Hartwig and Bauersachs, Friedrich. 1978. "The Resource Allocation and Production Component of the Korean Agricultural Sector Model." In Agricultural Sector Planning. Ch. 9, pp. 173-204.
- Department of Agrarian Reform (DAR). 1978. 1977 Annual Report. Quezon City, Philippines: Public Information Division, DAR.
- _____. 1976. Planning Structures and Procedures in the Department of Agrarian Reform. (Expanded assistance to the Agrarian Reform Program UNDP/FAO PHI/74/012). Manila, Philippines: Planning Service, DAR. October 1976.
- Department of Agriculture/National Food and Agriculture Council. 1977. Philippine Agriculture Fact Book. Quezon City, Philippines. June 1977.
- Dorner, Peter (ed.) 1971. Land Reform in Latin America--Issues and Cases. (Land Economics Monographs No. 3). Madison, Wisconsin: Land Tenure Center, University of Wisconsin.
- Dozina, Geronimo E. Jr. 1978. "Agrarian Adaptation to Demographic and Technological Changes in Two Central Luzon Villages." Paper No. 78-17, Los Baños, Philippines: Department of Agricultural Economics, International Rice Research Institute.
- Dunn, Edgar S. Jr. 1970. Economic and Social Development--A Process of Social Learning. Baltimore: The Johns Hopkins Press.
- _____. 1974. Social Information Processing and Statistical Systems--Change and Reform. New York: John Wiley and Sons.
- Education and Training Division, Bureau of Cooperatives Development. n.d. Presidential Decree No. 175 (Strengthening the Cooperative Movement) and Letter of Implementation No. 23 (Rules and Regulations Implementing PD No. 175). Quezon City, Philippines.
- Estrella, Conrado F. 1974. Agrarian Reform in the New Society (Philippine Report).

- Estrella, Conrado F. 1978. Tenant Emancipation in the Philippines. 1st ed. Diliman, Quezon City: Public Information Division, Ministry of Agrarian Reform.
- _____. 1977. "The Agrarian Reform Program." Paper presented at the International Seminar on Agrarian Reform, Institutional Innovation, and Rural Development: Major Issues in Perspective, Land Tenure Center, University of Wisconsin, Madison, July 1977.
- _____. 1969. The Democratic Answer to the Philippine Agrarian Problem. Manila: Solidaridad Publishing House.
- Farquhar, John. 1972. Information System for Educational Management: Executive Summary. (Prepared for the Los Angeles Unified School District). Sta. Monica, California: The Rand Corporation.
- Flores, Thomas G. and Clemente, Francisco A. 1975. Socio-Economic Profile of Tenants and Landlords/Landowners in the Philippines. (Final report submitted to the Philippine Council for Agricultural Research, November 1975) College, Laguna: Agrarian Reform Institute, University of the Philippines at Los Banos.
- Food and Agriculture Organization of the United Nations (FAO). 1979. Agrarian Reform and Rural Development. Terminology Bulletin No. 35.
- Georgescu-Roegen, N. 1960. "Economic Theory and Agrarian Economics." Oxford Economic Papers. 12.
- _____. 1971. The Entropy Law and the Economic Process. Cambridge, Massachusetts: Harvard University Press.
- Golay, Frank. 1961. The Philippines: Public Policy and National Economic Development. Ithaca, New York: Cornell University Press.
- Gomez, Kwanchai A. 1972. Techniques for Field Experiments with Rice--Layout/Sampling/Sources of Error. Los Banos, Laguna, Philippines: The International Rice Research Institute.
- Gozon, Benjamin M. 1965. Official Record (First Annual Report Fiscal Year 1963-64 of the Governor, Land Authority). Diliman, Quezon City.
- Guanco, Efrain C. 1978. "Farmer Identification and the Automated Data Base System." In Country Review.
- Gutierrez, Hugo E. Jr. (ed.) 1976. The Living Constitution. Diliman, Quezon City: U.P. Law Center.
- Guzman, Raul P. de and Associates. 1977. "Citizen Participation and Decision-Making Under Martial Law Administration: A Search for a Viable Political System." Philippine Journal of Public Administration 21(1): 1-9 (January).

- Hanisch, Rolf. 1977. Land Reform in the Philippines: Decision-Making Processes and Problems of Implementation. Bruxelles: Centre D'Etude Du Sud-Est Asiatique et de L'Extreme Orient.
- Hardie, R. S. 1952. Philippine Land Tenure Reform: Analysis and Recommendations. Manila: Special Technical and Economic Mission, United States Mutual Security Agency.
- Harkin, Duncan A. 1976a. Strengths and Weaknesses of the Philippine Land Reform. (Occasional Paper No. 3). College, Laguna: University of the Philippines at Los Banos, Agrarian Reform Institute, January 15, 1976.
- _____. 1976b. Philippine Agrarian Reform in the Perspective of Three Years of Martial Law. (Research Paper No. 68). Madison, Wisconsin: Land Tenure Center, University of Wisconsin. April 1976.
- Hayami, Y. and Yamada, S. "Agricultural Research Organization in Economic Development: A Review of the Japanese Experience." In Reynolds, L. G. (ed.) 1975. Agriculture in Development Theory. Yale University Press.
- Hoque, Anwarul. 1977. A System Simulation Approach to Policy Planning and Evaluation in the Context of Integrated Rural Development in Bangladesh. Unpublished Ph.D. Dissertation, Department of Agricultural Economics, Michigan State University.
- International Bank for Reconstruction and Development (IBRD). 1976. The Philippines: Priorities and Prospects for Development. (World Bank Country Economic Report). Washington, D.C.: The World Bank.
- International Labor Office (ILO). 1974. Sharing in Development--A Programme of Employment, Equity and Growth for the Philippines. Geneva: ILO.
- Johnson, Glenn L. 1976. "Contributions of Economists to a Rational Decision-Making Process in the Field of Agricultural Policy." Paper presented at the 16th International Conference of Agricultural Economists, Nairobi, Kenya, July 26-August 4, 1976.
- _____. 1970. "The Role of the University and Its Economists in Economic Development." J.S. McLean Visiting Professor Lecture. (Pub. No. AE 70/2). Guelph, Canada: Department of Agricultural Economics, University of Guelph. March 23, 1970.
- _____. 1977. "Philosophic Foundations: Problems, Knowledge and Solutions." In Transatlantic Committee on Agricultural Change. Research on Problems of Agrarian Change. The Hague: European Review of Agricultural Economics. Ch. 5.
- Johnson, Glenn L.; Halter, A. N.; Jensen, H. R.; and Thomas, D. W. (eds.) 1961. A Study of Managerial Processes of Midwestern Farmers. Ames, Iowa: Iowa State University Press.

- Johnson, Glenn L. and Rossmiller, George E. "Improving Agricultural Decision-Making: A Conceptual Framework." In Rossmiller, George E. (ed.) 1978. Agricultural Sector Planning.
- Johnson, Glenn L. and Quance, Leroy D. 1972. The Overproduction Trap in U.S. Agriculture. Baltimore: Johns Hopkins University Press.
- Johnson, Glenn L. and Zerby, Lewis K. 1973. What Economists Do About Values. Center for Rural Manpower and Public Affairs, Michigan State University.
- Kemeny, John G. 1961. A Philosopher Looks at Science. Ch. 5, pp. 85-103.
- Kerkvliet, Benedict J. 1974. "Land Reform in the Philippines Since the Marcos Coup." Pacific Affairs 47(3): 286-304.
- _____. 1971. "Peasant Society and Unrest Prior to the Huk Revolution in the Philippines." Asian Studies 9(2): 164-213.
- Kickert, Walter J. M. and van Gigch, John P. 1979. "A Metasystem Approach to Organizational Decision-Making." Management Science 25(12): 1217-1231.
- Kikuchi, M.; Maligalig-Bambo, L.; and Hayami, Y. 1977. "Evolution of Land Tenure System in a Laguna Village." (Report No. 1 on the Project Dynamics of Agrarian Change. Paper No. 77-11). Los Banos, Philippines: Department of Agricultural Economics, International Rice Research Institute.
- Kim, Ho Tak. n.d. "A Macro Model of Economic Growth and Income Distribution: An Application of Systems Simulation to the Korean Case." (Korean Agricultural Sector Study (KASS) Special Report 10). National Agricultural Economics Research Institute, Ministry of Agriculture and Fisheries, Seoul, Korea, and Department of Agricultural Economics, Michigan State University, East Lansing, Michigan.
- Koone, Harold D. and Gleeck, Lewis E. 1970. "Land Reform in the Philippines." USAID Spring Review. Country Paper. (Mimeographed)
- Labayan, Benjamin R. 1977. A Modified Approach to an Old Task: Department of Agrarian Reform--The New Administrative Machinery. (Revised) September 22, 1977. (Mimeographed)
- Lamberton, D. M. 1976. "National Policy for Economic Information." International Social Science Journal 28(3): 449-465.
- Land Tenure Center. 1977. "Transformation of Small Holder Agriculture." In Proceedings: Part Two. International Seminar: Agrarian Reform, Institutional Innovation, and Rural Development--Major Issues in Perspective. Land Tenure Center Newsletter No. 57, July-September 1977, pp. 4-6.

- Ledesma, Antonio J. 1978. "Rice Farmers and Landless Rural Workers: Perspectives from the Household Level." (Department of Agricultural Economics Paper No. 78-19). Los Banos, Laguna, Philippines: International Rice Research Institute. October 28, 1978.
- Lee, Jeung Han. "The Technology Change Component of the Korean Agricultural Sector Model." In Rossmiller, George E. (ed.) 1978. Agricultural Sector Planning. Ch. 8, pp. 149-171.
- Lewis, C. I. 1955. The Ground and Nature of the Right. New York: Columbia University Press.
- Lucas, Henry C. Jr. 1975. Why Information Systems Fail. New York: Columbia University Press.
- Lynch, Frank. 1970a. A Bittersweet Taste of Sugar: A Preliminary Report on the Sugar Industry in Negros Occidental. Quezon City: Ateneo de Manila University Press.
- . 1970b. "Beyond the Minimum Wage: Sugarlandia in the Seventies." Philippine Sociological Review 18(3-4): 131-144.
- (ed.) 1972. View from the Paddy: Empirical Studies on Philippine Rice Farming and Tenancy. As Philippine Sociological Review 20(1-2).
- Madronio, Severino T. 1978. "A Short Note on the Issuance of CLTs to Tenant-Farmers." Discussion paper presented at the MAR Regional Directors' Conference, ARES Conference Hall, September 2, 1978.
- Makil, Lorna Peña-Reyes and Fermin, Patria N. 1978. Landless Rural Workers in the Philippines: A Documentary Survey. Quezon City: Institute of Philippine Culture, Ateneo de Manila University, January 1978.
- Manetsch, Thomas. "Theory and Practice of Model Building and Simulation." In Rossmiller, George E. (ed.) 1978. Agricultural Sector Planning. Ch. 4, pp. 71-92.
- Manetsch, Thomas, et al. 1971. A Generalized Simulation Approach to Agricultural Sector Analysis with Special Reference to Nigeria. East Lansing, Michigan: Michigan State University.
- Manetsch, Thomas and Park, Gerald L. 1977. System Analysis and Simulation with Applications to Economic and Social Systems. Parts I and II. Department of Electrical Engineering and System Science, Michigan State University, East Lansing, Michigan, August 1977 (Part I) and November 1977 (Part II).
- Mangahas, Mahar. "An Economic Theory of Tenant and Landlord Based on a Philippine Case." In Reynolds, Lloyd G. (ed.) 1975. Agriculture in Development Theory. New Haven: Yale University Press.

Mangahas, Mahar; Miralao, Virginia A.; and de los Reyes, Romana P. 1976. Tenants, Lessees, Owners: Welfare Implications of Tenure Change. Institute of Philippine Culture and Institute of Economic Development and Research, Quezon City: Ateneo de Manila University Press.

Mangahas, Mahar. 1974. "Economic Aspects of Agrarian Reform Under the New Society." Philippine Review of Business and Economics 11 (December 1974).

_____. 1975. "The Political Economy of Rice in the New Society." Food Research Institute Studies 14(3): 295-309.

Marcos, Ferdinand E. 1971. Today's Revolution: Democracy.

_____. 1973. Notes on the New Society of the Philippines.

_____. 1978. Revolution from the Center: How the Philippines Is Using Martial Law to Build a New Society. Hong Kong: Raya Books.

McLennan, Marshall S. 1969. "Land and Tenancy in the Central Luzon Plain." Philippine Studies. 17(4): 651-682.

_____. 1973. "Land Tenure Patterns in the Philippines, Their Origins and Evolution." Solidarity 8(5): 3-11 (November 1973).

Medina, Jose Jr. 1973. "The Meaning and Intent of Presidential Decree No. 27." Paper read on February 8, 1973 at the Seminar-Workshop on Agrarian Reform for College Instructors and Professors in the Bicol Region, Legaspi City. (Mimeographed)

_____. 1976. "Integrated Approach to Agrarian Reform: The NELRIDP Experiment." (Occasional Papers No. 5). College, Laguna: Agrarian Reform Institute, University of the Philippines at Los Baños.

Mercado, Cesar M.; Tabbu, Jaime Y.; Lacson, Jose R. Jr.; Pacis, Primo R.; and Tamayo, Angel B. 1976. Communication Study on Agrarian Reform. Volume I (Communication, Knowledge, Attitude and Behavior of Farmers, Landowners and Change Agents). A joint project of the University of the Philippines Institute of Mass Communication, Philippine Council for Agriculture and Resources Research, Department of Agrarian Reform Education Service, and University of the Philippines at Los Baños Agrarian Reform Institute. September 10, 1976.

Miller, Thomas A. 1981. "Some Concepts for Measuring the Economic Value of Rural Data: Discussion." American Journal of Agricultural Economics 63(2): 363-364.

- Ministry of Agrarian Reform (MAR). 1978. Country Review and Workshop on Agrarian Reform Program Implementation. Diliman, Quezon City, Metro-Manila, October 2-13, 1978. (This collection of workshop discussion papers and workgroup outputs is referred to elsewhere here as Country Review.)
- Mishan, Edward J. 1976. Cost-Benefit Analysis. (New and expanded edition). New York: Praeger Publishers.
- MIS Group, Bureau of Cooperatives Development (BCOD). 1974. Samahang Nasyon Field Reporting System--Field Worker's Reference Manual. (Mimeographed)
- Montemayor, Jesus M. 1975. "Agrarian Reform Implementation: Experiences and Problems." (Occasional Paper No. 2) Agrarian Reform Institute University of the Philippines at Los Banos. December 15, 1975.
- Montgomery, John D. 1972. "Allocation of Authority in Land Reform Programs: A Comparative Study of Administrative Processes and Outputs." Administrative Science Quarterly 17: 62-75.
- Moore, G. E. 1956. Principia Ethica. Cambridge, England: Cambridge University Press.
- Moser, C. A. and Kalton, G. 1972. Survey Methods in Social Investigations. 2nd ed. New York: Basic Books, Inc.
- Muego, Benjamin N. 1978. "The 'New Society' Five Years Later: The State of the Opposition." In Institute of Southeast Asian Studies. Southeast Asian Affairs. Singapore: Heinemann Educational Books (Asia) Ltd.
- Murray, Francis J. Jr. 1972. "Land Reform in the Philippines: An Overview." Philippine Sociological Review 20(1-2): 151-168.
- Murthy, M. N. 1967. Sampling Theory and Methods. Calcutta, India: Statistical Publishing Society.
- National Census and Statistics Office (NCSO). 1975. The National Census and Statistics Office 1975. December 1975.
- National Economic and Development Authority (NEDA). 1978. The National Economic and Development Authority. January 1978.
- NEDA. 1978. "Agrarian Reform: New Horizons for the Filipino Farmer." Philippine Development 6(11): 11-15. (October 31, 1978).
- NEDA. 1978. "The Philippine Development Planning Process." Philippine Development 6(11) 27-35. (October 31, 1978).
- Oñate, Burton T. 1978. "Monitoring as a Component of Rural Area Development Project Design." Paper delivered at the First National Convention on Statistics, Philippine International Convention Center, December 4-5, 1978.

- Oñate, Burton T. 1976. Statistics in Southeast Asian Agriculture. College Laguna, Philippines: Southeast Asian Regional Center for Graduate Study and Research in Agriculture.
- Overholt, William H. 1976. "Land Reform in the Philippines." Asian Survey 16(5): 427-451.
- Pahilanga-de los Reyes, Romana and Lynch, Frank. 1972. "Reluctant Rebels: Leasehold Converts in Nueva Ecija." Philippines Sociological Review 20(1-2): 7-78.
- Palacios, Concordia G. 1966. "Financing the Land Reform Program." Philippine Journal of Public Administration 19(1): 18-28.
- Parsons, Kenneth H. 1958. "The Value Problem in Agricultural Policy." In Heady, E. O., et al. (eds.) Agricultural Adjustment Problems in a Growing Economy. Ames, Iowa: Iowa State College Press.
- Pelzer, K. J. 1948. Pioneer Settlement in the Asiatic Tropics. New York: American Geographical Society.
- Philippine Council for Agriculture and Resources Research (PCARR). 1973. Workshop on National Priorities in Philippine Agriculture. Socio-Economics Research Division, Workshop Session No. 29. Macroeconomics Research Papers, Quezon City, Philippines, October 5-6, 1973.
- Philippines, Republic of. 1977. Five-Year Philippine Development Plan, 1978-1982. Manila, Philippines, September 1977.
- Pilot Project Systems and Procedures Committee (PPSPC), Operation Land Transfer. 1977. Operation Land Transfer Procedures Manual.
- Public Information Division (PID), Department of Agrarian Reform (DAR). (comp.) n.d. Vital Documents on Agrarian Reform in the New Society. Diliman, Quezon City.
-
1973. Provisions of the New Constitution Relevant to Agrarian Reform. Diliman, Quezon City, July 1973.
- Public Information Office, Land Bank of the Philippines. n.d. "Brief History of the Land Bank of the Philippines."
- Public Information Office, Land Bank of the Philippines. n.d. "The Role of the Land Bank of the Philippines in the Agrarian Reform Program."
- Raup, Philip M. 1967. "Land Reform and Agricultural Development." In Southworth and Johnston (ed.) Agricultural Development and Economic Growth. Ithaca, New York: Cornell University Press.
- Rajaretnam, M. 1978. "The Philippines: Challenge and Response." In Institute of Southeast Asian Studies. Southeast Asian Affairs. Singapore: Heinemann Educational Books (Asia) Ltd.

- Reinoso, Mario M.; Ganacias, Nilo G.; and Jimenez, Nicanor A. 1976. An Analysis of Land Reform Grievances and Resolving Procedures. College, Laguna: Department of Agrarian Legislation and Administration, Agrarian Reform Institute, University of the Philippines at Los Baños, March 1976.
- Reinoso, Mario M. and Ganacias, Nilo G. 1978. "An Evaluation of New OLT Procedures" and "The Effect of the New OLT Procedures on the Scope of the Land Tenure Improvement Program." College, Laguna: Department of Agrarian Legislation and Administration, Agrarian Reform Institute, University of the Philippines at Los Baños, March 1978.
- Reyes, Basilio M. de los. 1972. "Can Land Reform Succeed?" Philippine Sociological Review 20(1-2): 79-92.
- Rickert, John E. and Hale, Sandra L. (eds.) 1970. Urban and Regional Information Systems: Past, Present, and Future. 1st ed. (Papers from the Eighth Annual Conference of the Urban and Regional Information Systems Association, September 3-5, 1970, Louisville, Kentucky). Urban and Regional Information Systems and Kent State University.
- Richardson, Jim. 1972. "Does Grass-roots Action Lead to Agrarian Reform?" Philippine Sociological Review 20(1-2): 143-150.
- Rivera, Generoso F. and Mcmillan, Robert T. 1952. An Economic and Social Survey of Rural Households in Central Luzon. Manila, Philippines: Cooperative Research Project of the Philippine Council for United States Aid and the United States of America Operations Mission to the Philippines.
- Rockart, John F. 1979. "Chief Executives Define Their Own Data Needs." Harvard Business Review (March-April): 81-93.
- Rosenberg, David A. (ed.) 1979. Marcos and Martial Law in the Philippines. Ithaca, New York: Cornell University Press.
- Rossmiller, George E. (ed.) 1978. Agricultural Sector Planning--A System Simulation Approach. East Lansing, Michigan: Agricultural Sector Analysis and Simulation Projects, Department of Agricultural Economics, Michigan State University.
- Rossmiller, G. E., et al. 1972. Korean Agricultural Sector Analysis and Recommended Development Strategies, 1971-1985. East Lansing, Michigan: Department of Agricultural Economics, Michigan State University and Korean Agricultural Sector Study Team, Ministry of Agriculture and Forestry, Seoul, Korea.
- Riemenschneider, Charles H. 1977. "Economic Structure, Price Discovery Mechanisms and the Informational Content and Nature of USDA Prices." Paper presented at the AAEE-USDA Agricultural and Rural Data Workshop, Washington, D.C., May 1977.

- Riemenschneider, Charles H. and Bonnen, James T. 1979. "National Agricultural Information Systems: Design and Assessment." In Blackie, M. J. and Dent, J. B. Information Systems for Agriculture. London: Applied Science Publishers Ltd.
- Ruttan, V. W. 1965. "Equity and Productivity Issues in Modern Agrarian Reform Legislation." Philippine Studies 14(1): 52-64.
- _____. 1966. "Tenure and Productivity of Philippine Rice Producing Farms." Philippine Economic Journal 5(1): 42-63.
- Ryan, Betty H. 1978. Volume II--OLT Procedures Manual. (Presentation of DAR-BL Automated System Covering Phase I of DAR Integrated Data Base), June 1978.
- Sacay, Orlando J. 1963. "The Philippine Land Reform Program." Philippine Economic Journal 2: 169-183.
- Sandoval, Pedro R. 1976. "Land Reform: Patterns, Objectives and Economic Issues." Journal of Agricultural Economics and Development 6(1): 1-13.
- Sandoval, Pedro R. and Gaon, B. V. 1971. Agricultural Land Reform in the Philippines. College, Laguna: University of the Philippines at Los Baños.
- Santiago, Severino. 1978. "Procedures of Land Valuation." In Country Review.
- Santos, Guillermo. 1974. "Critical Survey of Supreme Court Decisions on Agrarian Reform." In Bacunãan, Froilan M. Agrarian Reform and Law. Diliman, Quezon City: U.P. Law Center.
- Salita, Domingo C. 1968. Agricultural Problems: Ownership, Tenancy, and Credit." In Huke, Robert E. Shadows on the Land: An Economic Geography of the Philippines. Manila, Philippines: Bookmark.
- Schick, B. C. and Plotkin, I. H. 1978. Torrens in the United States: A Legal and Economic History and Analysis of American Land-Registration Systems. Lexington, Massachusetts: Lexington Books.
- Schmid, A. Allan. 1978. Property, Power and Public Choice--An Inquiry Into Law and Economics. New York: Praeger Publishers.
- _____. 1980. Political Economy of Public Investment. East Lansing, Michigan: Michigan State University, January 1980.
- Shen, Shih-ko. 1966. "Land Taxation as Related to the Land Reform Program in Taiwan." In Woodruff, A. M.; Brown, J. R.; and Lin, Sein (eds.) International Seminar on Land Taxation, Land Tenure, and Land Reform in Developing Countries. Hartford, Connecticut: John C. Lincoln Institute, The University of Hartford.

- Simpas, Santiago S. and Mariano, Vivian. 1976. "Policy-Making Under Martial Law." (Study of Political and Administrative Reforms (SPAR) Series). P. Faura, Manila: College of Public Administration, University of the Philippines.
- Sta. Romana, Osmundo O. 1978. "Conversation: On Agrarian Reform 'The Government's Most Controversial Programs'." Philippine Panorama. 7-8 and 10. October 22, 1978.
- Statistical Coordination Office, NEDA. 1975. The Philippine Statistical System. Manila, Philippines.
- Smith, Kenneth F. 1975. The Masagana 99 Management Information System. Manila, Philippines: USAID, April 1975.
- _____. 1976. "Small Farmer Income and Production Project." (Project No. 492-55-130-259, Management Information System Progress Report No. 5, Final). Manila, Philippines: USAID, May to June 1978.
- Squire, Lyn and Van Der Tak, Herman G. 1975. Economic Analysis of Projects. Baltimore, Maryland: Johns Hopkins University Press (published for the World Bank).
- Sukhatme, Pandurang V. 1954. Sampling Theory of Surveys with Applications. New Delhi, India: The Indian Society of Agricultural Statistics (or Ames, Iowa: The Iowa University Press).
- Thurow, L. C. 1970. "Analyzing the American Income Distribution." American Economic Review 60(2): 261-269.
- Thodey, Alan R. 1978. "Data Requirements and Parameter Estimation." In Rossmiller, George E. (ed.) Agricultural Sector Planning.
- Takahashi, Akira. 1972. "The Peasantization of Kasama Tenants." Philippine Sociological Review 20: 129-133.
- _____. 1969. Land and Peasants in Central Luzon: Socio-Economic Structure of a Bulacan Village. Tokyo: Institute of Developing Economies.
- Vasquez, Noel D.; Cruz, Wilfredo; and Jimenez, Concepcion B. 1978. "Productivity and Employment in a G.O. 47 Farm." (Discussion Paper No. 78-02). Diliman, Quezon City: Council for Asian Manpower Studies, University of the Philippines at Diliman, February 1978.
- World Bank. 1975. The Assault on World Poverty: Problems of Rural Development, Education and Health. Baltimore & London: The Johns Hopkins University Press.
- Youngblood, Robert L. 1978. "Church Opposition to Martial Law in the Philippines." Asian Survey 18(5): 505-520.

