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ANNUAL REPORT, 1967-1968 OF THE BND

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BNDE/MIT JOINT DEVELOPMENT BANK TRAINING  
AND RESEARCH PROJECT

ANNUAL REPORT, 1967 - 1968 OF THE  
BNDE/MIT JOINT DEVELOPMENT BANK TRAINING  
AND RESEARCH PROJECT

by

J. D. Nyhart

GTM BNDE/MIT WP 4

GRUPO DE TRABALHO MISTO

WORKING PAPER

BANCO NACIONAL DO DESENVOLVIMENTO ECONOMICO

MASSACHUSETTS INSTITUTE OF TECHNOLOGY



The Grupo de Trabalho Misto is the working entity carrying on the goals of the BNDE/MIT Joint Development Bank Training and Research Project. The Project was created in 1967 with the support of a Ford Foundation grant. It is providing training, technical assistance, and action research designed to increase the capability of development finance institutions serving as BNDE financial agents in Brazil. The members of the Grupo de Trabalho Misto are:

Banco Nacional do Desenvolvimento Economico

Dr. Hélio Schlittler Silva, BNDE Director and Co-ordinator  
Dr. Roberto Félix de Oliveira  
Dr. João Lourenço Corrêa do Lago Filho  
Dr. Tarcísio B. Arantes

Massachusetts Institute of Technology

Professor J. D. Nyhart, Co-ordinator and Chief Investigator  
Professor George F. Farris  
Professor John F. Rockart  
Dr. Heinz E. F. Luzny, Senior Representative, Resident in Brazil.  
Dr. D. Anthony Butterfield, Representative, Resident in Brazil.



## TABLE OF CONTENTS

INTRODUCTION	1
I. <u>SUMMARY</u>	2
<u>GTM</u>	2
<u>Activities During the First Year</u>	3
<u>Other Activities</u>	3
<u>Intermediate Goals</u>	4
II. <u>DEVELOPMENT BANKING, MANAGEMENT AND ECONOMIC GROWTH</u>	5
III. <u>OBJECTIVES AND MEANS</u>	5
IV. <u>INTERMEDIATE GOALS</u>	6
<u>Management Information Systems</u>	6
<u>An Organizational Development Program</u>	7
<u>The Elaboration and Subsequent Propagation of the         Concept of a National System</u>	8
<u>The Elaboration and Subsequent Propagation of the         Concept of the Professional Specialist in         Development Finance</u>	8
V. <u>THE COMPOSITION AND OPERATION OF THE GRUPO DE TRABALHO MISTO</u>	9
<u>The Composition of GTM</u>	9
<u>The Operation of GTM</u>	10
VI. <u>LAYING THE GROUNDWORK: FEBRUARY-AUGUST, 1967</u>	11
VII. <u>ACTION AND RESEARCH TOWARD ACHIEVEMENT OF GOALS:         SEPTEMBER - DECEMBER, 1968</u>	12
<u>February 1967 - January 1968</u>	14
<u>Management Information Systems</u>	15
<u>Organization Development Program</u>	16
<u>The Professional in Development Finance</u>	17
<u>National System</u>	18
VIII. <u>CAPIDE - THE FIRST COURSE - JANUARY-FEBRUARY 1968</u>	18
IX. <u>WORK SINCE FEBRUARY 1968</u>	20



<u>ACTION AND RESEARCH TOWARD ACHIEVEMENT OF GOALS</u>	20
<u>Management Information Systems</u>	20
<u>Organizational Development Program</u>	21
<u>National System</u>	21
<u>Professional Development Banker</u>	21
X. <u>EVALUATION</u>	22



THE BNDE/MIT DEVELOPMENT BANK  
TRAINING AND RESEARCH PROJECT

ANNUAL REPORT, 1967 - 1968

J. D. NYHART, MIT CO-ORDINATOR AND  
CHIEF INVESTIGATOR \*

INTRODUCTION

In his letter of February 3, 1967, to the President of the Massachusetts Institute of Technology (MIT), the Secretary of the Ford Foundation advised MIT of the grant of \$336,000 to Brazil's Banco Nacional de Desenvolvimento Econômico (BNDE) for support of management training and operations research in development banking. MIT is participating with BNDE in the project by providing technical assistance and by administering approximately \$276,000 of the grant funds. The same letter stated the responsibility of MIT to provide the Foundation with annual reports on the expenditure of the grant funds. This report, slightly abridged from the form in which it was submitted to the Ford Foundation, covers the first year of the grant, from February 3, 1967 to February 2, 1968. The narrative portion also includes an account of some activities in the second year.

\* The author gratefully acknowledges the contributions of his GTM colleagues in the preparation of this report, particularly Professor G. F. Farris, Professor J. F. Rockart, Dr. H. Luzny, and Dr. T. B. Arantes.



## I. SUMMARY

Between April and August of 1966, MIT, BNDE and the Ford Foundation spelled out in a series of exchanges a program of cooperation concerning Brazil's regional and state development finance institutions.<sup>1</sup> The program envisaged MIT's participation through technical assistance, design and implementation of training, and action research on the processes of the program.

Implicit in this exchange was the idea of executing a program which would contribute to Brazil's economic growth: 1) by improving the ability of the nation's public development finance institutions to use available development credit facilities, and 2) by increasing the use of basic management concepts and skills by bankers and borrowers alike.

Experience since the start of the program in February, 1967, has amplified these goals as to whom the program is directed, as well as the form and content it is taking.

The project is committed to the goal of institutional and human resource development at three levels: a) the development finance institutions which act as agents of the Fundo do FIPEME system; b) those sectors in BNDE, including the FIPEME Núcleo, which have relations with these development finance institutions; c) the private businessmen who borrow from the agents.

GTM. The joint work of BNDE and MIT's Sloan School of Management is conducted through the Grupo de Trabalho Misto (GTM). Created in April, 1967, by the President of BNDE,<sup>2</sup> GTM is comprised of the senior Brazilian and North American personnel. From its initiation to January, 1968, the BNDE members were:

Dr. Hélio Schlittler Silva, BNDE Director and Co-ordinator  
 Dr. Ezio Távora dos Santos  
 Dr. Tarcísio B. Arantes  
 Dr. João Louvenço Corrêa do Lago Filho  
 Dr. Waldomiro Rocha

<sup>1</sup>The documents are: Nyhart letter to BNDE President April 20, 1966; BNDE aide-memoire presented at a meeting of MIT and the Ford Foundation representatives with the BNDE president at the Foundation's headquarters in New York, May 19, 1966; a memo, "A Suggested Program of BNDE-MIT Cooperation in Research and Management Training in the Brazilian National Development Banking System", with appendices, by Nyhart, forwarded to the BNDE president under letter of July, 1966; a letter from the BNDE president to Nyhart, dated August 23, 1966.

<sup>2</sup> Portaria No. 50/67, April 25, 1967. (Decree of the Bank President)



In January, as a result of a BNDE internal reorganization, Dr. Távora and Dr. Rocha left GTM and were replaced by:

Dr. Roberto Félix de Oliveira.

Sloan School faculty members of GTM from its initiation were:

Prof. J. D. Nyhart, MIT Co-ordinator and Chief Investigator  
 Prof. George F. Farris  
 Prof. John F. Rockart

In September, 1967, Dr. Heinz E. F. Luzny joined the MIT contingent as Senior Resident Representative in Rio. In July, 1968, Dr. D. Anthony Butterfield joined as the second Senior Resident Representative.

As detailed in section VI, nine Sloan School Masters or Doctoral Management candidates have worked on the program. On the BNDE side, several members of the FIPEME Nucleo are included in work relating to the project. GTM is not a line entity in the organizational sense; rather it advises and works with those units of BNDE which have operating responsibility for relationships with the state banks. Nevertheless, among the BNDE members of GTM are officers who direct those units.

Activities During the First Year. GTM's achievements during its first year took all the anticipated forms: training, technical assistance, and research.

The first Curso de Aperfeiçoamento para Tecnicos de Instituições Financeiras de Desenvolvimento (CAPIDE) was given from January 3, 1968 to February 23. Forty-two participants from 20 development finance institutions, including BNDE, attended the course. The 325 class hours of this first CAPIDE concentrated on the basics of project appraisal and control, on the economics and management of development finance institutions, and, to a lesser extent, on role of the professional specialist in development finance.

Other Activities. GTM's work vis à vis the agent banks took other forms during the first year.

1. Joint field visits of one to two weeks duration were made in July and August, 1967, to four state agent institutions. These institutions were selected to represent the different types of agents included in the national network. The visits provided GTM members with increased understanding of the operations and problem areas of development finance institutions in Brazil. They thus established the groundwork for the year's work.

2. Early drafts were completed of a development finance casebook and an operations manual- two of an envisioned five major project publications.



3. A new program was prepared for the control of agent banks by BNDE.
4. A basic information form for use in examining requests from agents for credit was completed.
5. The design and administration of an extensive questionnaire requesting data on respondents' attitudes towards the system, their banks, their jobs, and their profession, provided GTM with much needed information about the institutions and the people in the system. The questionnaire also marked the initiation of GTM's effort to evaluate the project, by providing one good "before" or benchmark measurement of attitudes at the beginning of the project.

Further details of GTM activities and research are found in sections VII and VIII.

Intermediate Goals. During the year, four subjects were identified whose content is pertinent to, or worth pursuing in, each of GTM's different activities. Because they cut across the whole program of training, technical assistance, and research, and are expected to help achieve the purposes of each, they have been called intermediate goals. They are the design and implementation of:

1. management information and control systems to provide necessary data for control and decision-making by the borrower, FIPEME agents, and the FIPEME Núcleo the BNDE unit responsible for relationships with state and regional banks;
2. an organizational development program to complement the information systems by creating effective management practices and working relationships among the people and institutions using these data;

and the elaboration and subsequent propagation of:

3. the concept of an effective, interacting national system of development finance institutions; and
4. the concept of the professional specialist in development finance.

After the completion of CAPIDE in February, 1968, an early draft of an integrated management information system for small and medium businesses took shape. Visits to development finance institutions in Maceió, Bahia, Niteroi, and Rio, established basic interest in such systems and in comparable management information systems for the banks themselves. Work with one borrower industry was begun in Rio in order to demonstrate the usefulness of the idea. Technical assistance visits to other agents were also completed by the FIPEME Núcleo. In Cambridge, two development banking games, one manual and one computerized, were created. A tentative scheme for measuring performance of development finance institutions was modeled. The results of questionnaires concerning the professional beliefs and expectations of the CAPIDE participants were analyzed. A draft of a descriptive study of the development bank institutional structure in Brazil was completed. Finally, an operational



planning diagram of the proposed directors' seminar was completed.

During the year under review, \$79,659 was expended of the annually budgeted \$138,000 administered by MIT. The underspending largely resulting from the delayed appointments of the senior resident representatives.

## II. DEVELOPMENT BANKING, MANAGEMENT AND ECONOMIC GROWTH

The basic rationale of this project is that both the institutions which allocate and disburse financial resources and the entrepreneurs who put them to use are vitally important to economic growth. Development finance institutions are among the key allocators of capital. Moreover, because they work directly with entrepreneurs and managers in private industry, they can play a significant educational role.

The men who manage and staff the regional and state banks throughout the country are usually in positions of leadership and influence. Discussions during field visits suggest that many are also teachers or consultants. Many will leave public development banking for industry. To the extent this project can help them acquire, use, and subsequently spread these skills and concepts, overall human and institutional capability will be increased in ways and places not reached by traditional educational programs.

The concern for the capability of institutional and human resources falls more into the area of the management of development than the economics of development. This concern underlies the joint BNDE/MIT effort. BNDE has demonstrated its interest in the development of human resources through its financing of several educational or training programs. The Sloan School of Management holds as a basic tenet that both it and the field of management gain when the School is involved in the propagation and implementation of current managerial concepts in a broad spectrum of public and private fields. The experience so gained feeds back into the School's teaching, research, and subsequent action projects. The School has long maintained an interest in management outside as well as inside the United States.

## III. OBJECTIVES AND MEANS

The purposes of the project stated in the July 22, 1966, proposal<sup>1</sup> continue to be valid. They can be summarized:

1. To assist technically in the establishment and growth of a Brazilian national development banking system.

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<sup>1</sup>See Footnote page 2.



2. To design and establish on-going training courses.
3. To record and study the process of establishing the system.
4. To contribute to the fields of development banking and of management science and technology.

Underlying these purposes is the implicit assumption that a better development finance system, with more soundly conceived businesses as borrowers, will benefit Brazil's economic growth. The primary approach is one of strengthening existing analytic tools and, where appropriate, adapting current managerial concepts to the needs of the different components of the system, e.g., BNDE, the FIPEME agents and the borrowers.

Basically, GTM's task is one of change. It seeks acceptance for ideas which it believes will improve the working of the system. It seeks their acceptance by different groups: the tecnicos in the banks, their directors, people in BNDE beyond GTM, and ultimately, the private borrower. These are called target groups. GTM is working to introduce change by a variety of means: courses, technical assistance, visits to banks, preparation of teaching and field materials (manuals, a textbook, a casebook, a development banking game, and a set of model information systems), and an organization development program.

#### IV. INTERMEDIATE GOALS

Four particular goals have emerged during the first year which give operational focus to GTM's work. They lead toward the achievement of the project's ultimate objectives. They are:

1. the design and implementation of management information and control systems to provide necessary data for control and decision making by the private industrial borrower, the agent banks, and the FIPEME Núcleo;
2. the design and implementation of an organizational development program to complement the information systems by creating effective management practices and working relationships among the people and institutions using the data;
3. the elaboration and subsequent propagation of the concept of an effective, interacting national system of development finance institutions; and
4. the elaboration and subsequent propagation of the concept of the professional specialist in development finance.

Management Information Systems. A development bank manager needs a wide variety of timely information if he is to make the most effective use of available resources. Typical of the kind of data he will want, but far from inclusive, is the knowledge that his bank's objectives are in line with his state's economic plans; the number of entrepreneurs that are likely to request loans in the next accounting period; an estimate of their quality; the knowledge that he will have enough financial



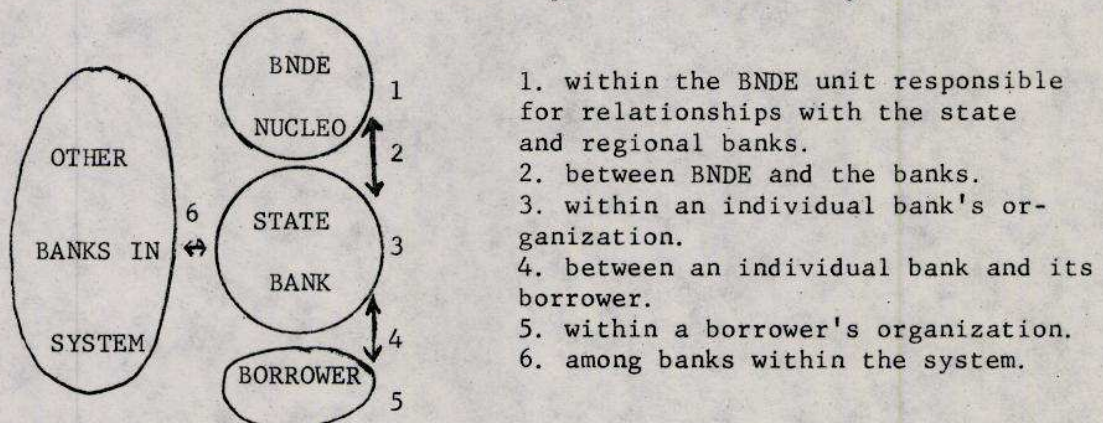
resources and staff to appraise and approve or reject the loans; the cost of appraising and controlling them; and an estimate of whether the entire process should be costing less. Some of the information needed to answer such questions is generated internally within the organization; much of it comes from outside. In development banking, particularly critical information comes from the institutions's clients, the borrowers.

GTM is seeking to provide managers with improved information gathering and processing tools for planning and budgeting, reviewing, analyzing, and reporting. The reference framework is the field of managerial control, which normally is concerned only with internal control. However, development finance institutions have a very real stake in the operational well-being of their borrowers over a long period of time. Therefore the lending institution will want to have more data about the operation of the firm than is normally made available for outsiders.

By helping the borrower implement a well-tailored information and control system, the development finance institution is not only helping its client but also raising the likelihood of obtaining reliable follow-up data.

GTM is thus adapting control concepts to the system as a whole - which is comprised of three institutional layers. The adaptations stress (as does good standard control theory) the two-way nature of information flows in such a system.

Six related information flows comprise the overall system:



The design and implementation of each information system includes the identification of the information needed by management for the decisions it must make which encompasses technical, legal, economic, and financial decisions. Implementation also connotes imparting the skills necessary to use the data, including an understanding of managerial control and the uses of information feedback loops.

An Organizational Development Program. The design and implementation of an organization development program is the second intermediate



goal of the project. It is complementary and necessary to the implementation of the information systems. Its areas of concern are those of communications between people, human factors in decision-making, motivation, career development, organization structure, and other topics falling within the organization field. A well-designed information system will be effective only if the people responsible for its operation are sufficiently motivated toward making it work.

The Elaboration and Subsequent Propagation of the Concept of a National System. The FIPEME network of agents comprises a system. But it is only beginning to be recognized as such by its members, or used as such by BNDE. The evolution, at an appropriate pace, of an effective system is one of the basic purposes of the project. The training course and the technical assistance work with the agents support this goal. So do the information systems, the organization development program, and the professional specialist goal. However, the need to design and spread concepts specifically intended to breathe life into the system should be recognized.

GTM is planning a network newsletter which will provide a medium for exchanging information concerning new projects; new appraisal, control or promotion ideas; recent economic research and the like. Macro-economic data useful to all the member agents could be generated by BNDE, analyzed and then propagated through the newsletter. A central data bank on projects could also serve the needs of the members. These and other possibilities were discussed by participants at CAPIDE.

The Elaboration and Subsequent Propagation of the Concept of the Professional Specialist in Development Finance. The project deals with the development of human as well as institutional resources. It is therefore insufficient to be satisfied with the upgrading of technical, administrative and leadership skills. GTM must be concerned with creating a long-term, career-oriented environment for the people it is training.

The goal here is to gain wider acceptance of the idea of a permanent career as a full-time specialist in development finance, with skills broader than those found in the traditional fields from which the specialists come.

Development finance is a multi-discipline profession drawing on the fields of economics, accounting, engineering, organizational studies, and law. Much as the modern management specialist is equipped with skills from different areas, so is the specialist in development finance.

Most of the technical level men in development finance institutions see themselves in terms of their collegiate field of training: economics, engineering, law, or accounting. An overall understanding of the multiple aspects of borrowers operations is increasingly needed as a man progresses within a development finance institution.



GTM has found very few people who plan to devote their full careers to development finance. In many cases the field is seen as a stepping stone to a private sector career. The project's training effort to increase managerial skills and entrepreneurial motivations may, in fact, help move men in this direction. While this result would not be a wholly negative prospect, competent, first-class people must remain in the development finance institutions.

Development finance is a part-time occupation in most state and regional banks. The remainder of the staff member's time is spent as a consultant, teacher, or entrepreneur. Being tied to these occupations inhibits many development finance functions, such as traveling to maintain continuing relationships with borrowers outside of the immediate city in which the development finance institution is located.

#### V. THE COMPOSITION AND OPERATION OF THE GRUPO DE TRABALHO MISTO

The Grupo de Trabalho Misto (GTM) is the structural entity through which the project's goals have been pursued, both in Rio and in Cambridge. Members of the GTM are:

Dr. Hélio Schlittler Silva, BNDE Director-Co-ordinator  
 Dr. Roberto Félix de Oliveira  
 Dr. João Lourenço Corrêa do Lago Filho  
 Dr. Tarcísio B. Arantes  
 Professor J. D. Nyhart, MIT Co-ordinator and Chief Investigator  
 Professor George F. Farris  
 Professor John F. Rockart  
 Dr. Heinz E. F. Luzny  
 Dr. D. Anthony Butterfield joined GTM in July as the second senior MIT representative resident in Rio.

Until the BNDE reorganization in January, i.e., practically throughout the first grant year, Dr. Ezio Távora do Santos, and Dr. Waldomiro Rocha served as members of GTM.

Dr. Jayme Magrassi de Sá, President of BNDE, participated in the formative discussions on the project in 1966 and has met subsequently with the MIT contingent when it is in Brazil. He delivered the opening lecture in the first basic course. Sloan School Dean William F. Pounds has worked closely with the MIT contingent and visited BNDE in January, meeting with Dr. Magrassi, GTM members, and the participants in the course.

The Composition of GTM. GTM members represent a wide variety of disciplines and skills, appropriate to the project's objectives. During the first year, three BNDE departments (International Operations, Projects, and Control of Applications) and three Sloan School groups (Policy, Information and Control Systems, and Organization Studies) were represented. GTM forms a core unit whose work is supported by others and whose



operational objectives vis-à-vis the banks are actually carried out by BNDE, particularly the Núcleo do FIPEME of BNDE's Department of Special Operations, and the Department of Resources.

On the MIT side, nine research assistants, all candidates for Doctoral or Masters degrees in management at the Sloan School, worked on the project during the year under review. During July and August, 1967, four worked in Brazil with North American members of GTM. Two have since left the project and the team has been joined by five new men. Those working as research assistance at the close of the grant year were: Garretson Chinn, Herbert Friedman, Paul Goldberg, David Hoover, Colin Senior, Miklos Vasarhelyi, and Lee Wakeman.

On the BNDE side, because of the overlap between BNDE and project goals, virtually all of the FIPEME Núcleo staff are involved in work related to the goals of the project. In addition, BNDE officers taught the major portion of the first CAPIDE session. A senior BNDE officer has been assigned to work full-time with Dr. Luzny on the management information systems task.

Thus, while the contributions in terms of time by GTM members, Núcleo staff, research assistants, BNDE officers vary, the overall commitment of BNDE and MIT personnel surpasses that foreseen in the project proposal.

The Operation of GTM. During its first year, GTM frequently worked through a task-force system. Objectives were discussed at full GTM meetings in Rio and informally among the MIT and BNDE members. Ideas and views were often circulated and tested by memos as well as oral communications. Then specific task teams were formed, frequently jointly comprised of BNDE and MIT members and junior staff. Work is carried on in Rio or Cambridge as appropriate, with memos, reports, and drafts of work moving between the two groups when they are not together.

In shaping GTM into an effective entity, BNDE and MIT faced several problems. Among the most important is the maintenance of communications between the two components, one in Rio and one in Cambridge. We believe that the best way to transfer technology is face-to-face communication. Strong MIT representation resident in Rio since the end of September has helped considerably, nevertheless, much of the communication between the groups must be written. Our experience has been that ideas flow less well over paper and that this factor has prevented optimal interaction between those in Rio and in Cambridge.

The communications gap has been closed by frequent travel between Cambridge and Rio. In addition to the July-August, 1967 period when the whole MIT component was in Brazil, Professors Nyhart and Farris worked in Brazil in May, 1967, again in January, 1968, and Professor Nyhart worked in Brazil during October-November, 1967.



One counterbalancing advantage to the communication hardship inherent in the existing structure is the added input from faculty and students of MIT because one part of GTM is physically located there. For example, Dean Pounds, Professors Mason Haire and David McClelland contributed significant ideas to the project during its first year. Others did also, through sessions of the Joint Organization Studies Group/Industrial Relations Seminar, a faculty luncheon presentation, etc. Graduate students have also contributed ideas through the course in Development Finance, where one of the development banking games was developed and tested.

The bilingual character of the project has also inhibited communications. However, by January, GTM meetings were conducted with participants speaking in either Portuguese or English without translation. Most Cambridge-based personnel, including research assistants and secretaries, have taken Portuguese lessons. The first senior MIT resident representative has working competency in Portuguese. The second began lessons prior to his arrival in Rio.

The difficulties have been outweighed by the opportunity to work with each other, and by the resulting friendships, trust, and mutual understanding that have been created during the first year.

The next three sections review the work of GTM thus far and the manner in which it has been accomplished.

#### VI. LAYING THE GROUNDWORK: FEBRUARY-AUGUST, 1967

BNDE had established credit relationships with many state and regional banks prior to the Ford Foundation Grant. Similarly, some preliminary work on MIT's side was underway before the grant-date. For example, brief visits were made to six state or regional banks in the Northeast and North in June 1966 by the MIT co-ordinator. Brief studies of BNDE's control practices by Research Assistant Everardo Wessels were completed in late 1966. Immediately before the grant, the MIT professors visited BNDE and two state banks, in Belo Horizonte and Goiana. In May, Professors Farris and Nyhart met with the BNDE component of GTM for a week, focusing primarily on the nature of the working relationship between BNDE and MIT, and between GTM and the member banks. At the beginning of the July-August field work, there was further emphasis on integrating both components into a working team. A benchmark questionnaire, which had been through one joint revision, was subjected to a final going-over by the full GTM, preparatory to its administration during the following two weeks.

Joint BNDE/MIT teams visited banks in Maceió, Belo Horizonte, Niterói, and Manaus, intent on learning how the banks actually worked. The purpose of these visits was to understand better the internal operation and organization of these banks, as typifying the banks in the system



as a whole. Procedures were elaborated for observing the information flows in the banks to be visited, based largely on a model offered by Professor Rockart. These flows, departmental structure, personnel relationships among the various disciplines, etc. were major targets. Flow charts were completed to indicate how projects are handled from appraisal through control. Reports were completed for two banks, with extensive notes on file in the remaining two cases. The basic questionnaire was administered in each of the banks.

During the final week of July, experience was summarized, tasks identified, and joint task-forces formed.

VII. ACTION AND RESEARCH TOWARD ACHIEVEMENT OF GOALS: SEPTEMBER - DECEMBER, 1968

CAPIDE, the first basic training course, was the main activity during the project's initial year. CAPIDE is described in section IX. Preparation for the course occupied most of the September-December period. A program of information required by BNDE for supervising its lines of credits to the agents was also worked out. A format for evaluating credit applications from them was also completed.

In addition to these action programs, considerable complementary research has been carried out during the grant year under review. This work has taken the two forms seen at the outset of the project.

First, there is a body of work dealing with development banking technology. These materials are working "nuts and bolts" tools for the practicing development banker. In some cases, their early drafts were used in CAPIDE as teaching materials. The first drafts of a casebook for teaching development finance and an appraisal/control manual which is introducing several new approaches to medium and small size project financing, are the major examples. Both are innovations not only for Brazilian development finance but also for the wider development finance community.

Second, there is the "action-research" on the process of the technical assistance relationship. One goal of the process research is to be able to say as much as is useful about the process implicit in this kind of technical assistance relationship, both during and at the end of the project. As a more short term goal, during the project, research will help improve the process even while it is going on. For example, the analysis of the basic questionnaire led to emphasis in the course on the problems to be faced by participants when they returned to their banks. Since both BNDE and MIT are likely to find themselves involved in future helping relationships, both will benefit from understanding more about making them effective. It is also our hope that others may learn from our experience.

To accomplish the process research, there has been a continuing effort

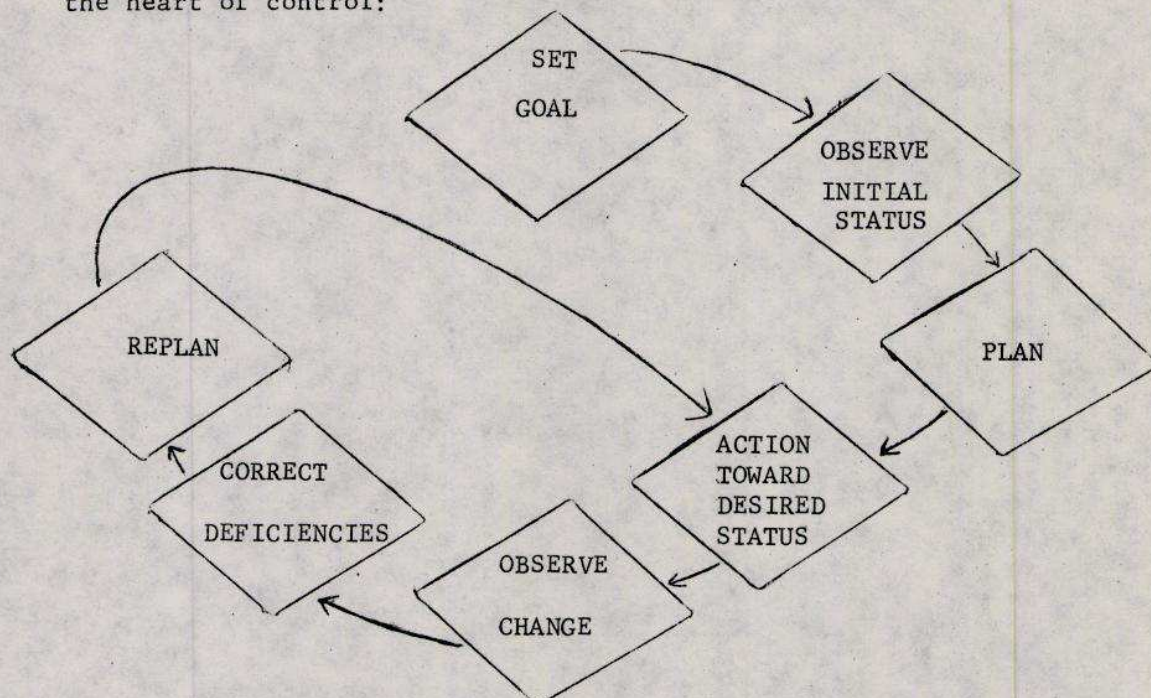


to record the situation at the beginning of the project, to set goals of different kinds for the progress of the project, to maintain a record of events in between the initial and the eventual final state, and finally, to measure what the condition of the final state is. GTM hopes in this way to be able to trace the evolution and development of specific ideas that are critical to the various goals of the project and to determine where change has taken place.

There is not always a crisp distinction among research work, teaching materials, evaluation and other activities. This is at least partly by design, since both the technical and the process research are applied in nature and serve a number of practical purposes.

Thus, much process research has focused on finding out where we are: the basic benchmark questionnaire applied last July and again to the participants of CAPIDE in January, a second questionnaire on professional skills applied to CAPIDE participants, the evaluation forms applied after many CAPIDE sessions, and the creation of measurements for determining the change in various aspects over the life of the project. The results of the questionnaires administered in July illustrate this point.

These instruments are also practical control tools. They are part of the "Observe Initial Status" step in the feedback loop that is at the heart of control:



The use is integral to the operational goals of BNDE.



GTM is planning five primary research products:

1. a teaching text on development finance
2. a teaching casebook on development finance
3. an appraisal and control manual
4. an administrative manual
5. a study of the process of transferring managerial technology.

Work has begun on all but the administrative manual. In addition, a number of papers and memoranda have been written for both research and action task purposes. In the near future, some of these will be produced as GTM working papers. Many will serve as components for the primary research works.

The activities, research, and much of the related memoranda are listed below under the most closely associated intermediate goal. Their significance varies, but collectively they portray the work of GTM. Work completed between the close of the grant year in February and May, 1968 is listed separately in section IX.

#### ACTION AND RESEARCH TOWARD ACHIEVEMENT OF GOALS

February 1967 - January 1968

##### General

##### A. Activities

1. Planning GTM. May 29-June 3. Rio GTM plus Nyhart and Farris.
2. Visits to representative banks, including planning and post-visit review. July 3-28, full GTM.
3. Planning curriculum for CAPIDE. July-November. Távora, Arantes and Nyhart with full GTM assistance.
4. The first Curso de Aperfeiçoamento para Técnicos de Instituições Financeiras de Desenvolvimento (CAPIDE). January 3-February 23. 325 hours. Rio GTM, including Luzny, and other teachers, plus Nyhart and Farris.

##### B. Research and Materials

1. May 3 letter to Távora dos Santos from Nyhart, outlining Appraisal and Control Manual.
2. Appraisal and Control Manual. Corrêo do Lago and Luzny, eds. First draft completed.
3. Casebook. Arantes, ed. First draft completed.



4. Missão ao Banco do Estado do Amazonas. Report. Erber and Friedman.
5. Some comments on my Visit to BDMG, July 17-July 21, 1967. Farris.
6. Interviews at BEA (Banco do Estado do Amazonas). Notes. July 11, 1967. Farris.
7. BDMG, Interview of 7/21/67 with the President. Notes. Iacueli.
8. Diary of a Field Trip to Maceió, Alagoas. Notes. Wessels.
9. Note on Case Material, as Reviewed by MIT/GTM. Memo. October 26, 1967. Nyhart.
10. Possible Agenda for a First Meeting of BNDE Instructors. Memo. November 7, 1967. Nyhart.
11. Materials for CAPIDE Sessions:
  - "The Refrigeration Plant Project," a role playing case on decision making. January, 1968. Farris.
  - Sr. Oliveira and CODERIO cases. Three problems on the functions of development finance institutions. January, 1968. Nyhart.
12. Comments on Course for Economists and Accounts. October 20, 1967. Rockart.
13. Possible Program for Sessions on Re-entry. Memo. October 21, 1967. Farris.
14. Possible Program for an Orientation Week at Beginning of Course. Memo. October 25, 1967. Nyhart.

#### Management Information Systems

##### General

###### A. Activities

1. Study of Existing Information Flows Within Four Representative Banks, including preparatory discussion led by Rockart and Farris. July-August. GTM.

###### B. Research and Materials

1. Memo on control. October 11, 1967. Rockart.

##### Sub-System 1 - Within BNDE's Núcleo

###### A. Activities

1. Study of BNDE's control system, based on BNDE documents. November-December, 1966. Wessels.

###### B. Research and Materials

1. Notes on Control of Development Bank Projects. Memo. November 1966. Wessels.



## Sub-System 2 - Between BNDE and the Banks

### A. Activities

1. Task Force on Control System within DOI. August. Távora dos Santos, Arantes, Gomez and Wessels.

### B. Research and Materials

1. Control and Follow-up Check-list Memo. Wessels.
2. Summary of Normative Work on Development Bank Control Within The FIPEME System. MIT/GTM.
3. Check-list for visits of BNDE to Banks. Arantes.
4. Variables we might want to examine vis á vis GTM/banks. Memo. Chinn.
5. Notes on interviews with Boston Capital Corporation, Watertown Bank, and First National Bank of Boston. March-April, 1967. Nyhart, Wessels, Iacueli.

## Sub-System 3 - Within the Individual Banks

### A. Activities

1. CAPIDE - two sessions on managerial control in development banks. Luzny.

### B. Research and Materials

1. The Control Department of a Local Bank Within the FIPEME System. 1966. Wessels.
2. Budgeting exercise for development finance institutions. January, 1968. Luzny.
3. Control for Development Finance Institutions. Outline. January, 1968. Nyhart.

## Sub-System 4 - Between the Individual Bank and its Borrower

### A. Activities

1. CAPIDE - Five days on control of projects. Corrêa do Lago.

### B. Research and Materials

1. Roteiro para Exposição. August 15. GTM Sub-grupo de Contrôles dos Repasses.
2. Follow-up for Small Entrepreneurs Under Hyper-Inflation. memo. Wessels.
3. Esquema de Contrôles (Primera Versão). Memo. August, 1967. Gomez, Wessels, Wakeman, Friedman.

## Organization Development Program

## Sub-System 1 - Between BNDE and the Banks

### A. Activities



1. CAPIDE - review of BNDE information needs in sessions on national system. Corrêa do Lago.

#### B. Research and Materials

1. Basic questionnaire, section on communications in the system. Analysis included in the "Basic Questionnaire Report" by Farris, Chinn, Friedman, Wakeman, and Nyhart. December, 1967.

### Sub-System 2 - Within the Individual Banks

#### A. Activities

1. CAPIDE - Group dynamics - working together as a team. Four hours.

#### B. Research and Materials

1. Basic questionnaire - section on "the respondent's bank as a place to work". Analysis included in report, see above.
2. Some suggestions for an Administrative Manual and its Development. Memo. January 12, 1968. Farris.

### The Professional in Development Finance

#### A. Activities

1. CAPIDE - orientation section of course. Three days. GTM/Rio, including Luzny.
2. CAPIDE - management framework section. Five days. Escola de Administração de Empresas do São Paulo.
3. CAPIDE - business game. One day. Escola de Administração (pós-graduado) da Universidade Católica do Rio.
4. CAPIDE - economic development and management section. Nyhart, Arantes, Luzny.
5. CAPIDE - administration of questionnaire on professional skills and basic management beliefs. GTM/Rio including Farris.
6. CAPIDE - Administradores, Técnicos e Problemas. Talk before participants. January 16, 1968. Dean Pounds.

#### B. Research and Materials

1. Basic Questionnaire, sections on the professional in development finance and values. Analysis included in questionnaire report analysis, see above.
2. Outline for the Professional Development Banker. Memo. August. Nyhart.
3. "Assumptions about Management Practices: Comparison of Brazilian Bankers with Managers from other Countries." April 8, 1968. Farris.



## National System

### A. Activities

1. Letter from BNDE President Magrassi to presidents of the state and regional banks.
2. CAPIDE - orientation section. Three days. GTM/Rio.
3. CAPIDE - national system section. Four hours. Corrêa do Lago.

### VIII. CAPIDE - THE FIRST COURSE - JANUARY-FEBRUARY 1968

The first Curso de Aperfeiçoamento para Técnicos de Instituições Financeiras de Desenvolvimento (CAPIDE) ran from January 3 through February 23, 1968. Forty-two participants from twenty state and regional banks and BNDE itself attended. CAPIDE illustrates in its overall design the manner in which a major vehicle is used to forward the goals of the project. A report by the course administrator, GTM member Dr. Arantes, has covered more fully those points touched on here.

The basic aim was the improvement of operational appraisal and control skills at the technical level in the regional and state banks in the North, Northeast and Central West. The majority of candidates came from these areas, the exceptions being those from São Paulo, Minas Gerais, Rio de Janeiro, and those from BNDE. Participants were drilled for three weeks in the basics of appraisal as they applied to their particular disciplinary backgrounds, e.g., economics, law, accounting, organizational studies and engineering. These groups were then re-united for a common period on appraisal and the subsequent section on control.

Emphasis was placed in several ways on the professional in development finance - as a person with something more than the skills of a single discipline. From the beginning, BNDE officers canvassing the North, Northeast and Central West sought candidates who indicated a high interest in continuing in development finance work. A three-day orientation period opened by Dr. Magrassi was held at the beginning of the course. Here BNDE officers and Dr. Luzny worked in lectures and small group discussions, seeking first, to motivate participants to get as much as possible out of the course, and second, to excite interest in their careers as development finance experts. There followed a week-long period designed to introduce participants to the problems faced by their client-borrowers, the private sector industrial managers. To this end, the Escola de Administração de Empresas of São Paulo provided a week-long series of introductory lecture discussion on various aspects of the manager's world. At the close of this session, the course members participated in a day-long business game oriented toward investment and finance, provided by the Instituto de Administração e



Gerência of the Catholic University of Rio.

Throughout most of the seven weeks of the course, one class session each day was devoted to the economics and management of development. The effort here was to introduce students to the overall theory and concepts of economic development, and then to move to questions concerning management of development finance: sources of development finance, the role of development finance institutions, and problems of their organization and management.

The potential of a national network was also discussed during the orientation period at the beginning of the course. At the end, GTM member Corrêa do Lago, who is in charge of the FIPEME Núcleo, conducted a series of sessions on the future of the system. The discussion stressed the kind of communications that both the participants and BNDE would find helpful. It thus formed the principle formal focus during the course on a broad information system. The critically related questions of planning, control and policy decision-making were discussed in the development bank management course, and in the sessions on control over the borrower.

Beginnings were also made on organizational development. Besides the orientation session, there were six hours on group dynamics - the problems of working as a team. Much of the work of project appraisal and control in development finance is based on teams composed of an economist, engineer, accountant, and lawyer. This fact led BNDE to urge banks to send teams. The participating banks had sent seven 2-man teams, five 3-man teams, and one 4-man team to the course. (In addition, five different institutions sent only one man.) The teamwork sessions reflected this fundamental character of current development finance.

Finally, there were sessions prior to the end of the course focussing on the problems and opportunities the participants would meet on re-integration into the bank after a period of absence and acquisition of new skills.

The fact that BNDE officers joined GTM members in doing most of the teaching afforded GTM an initial opportunity to discuss new ideas with other components of BNDE. Two topics particularly relevant in these discussions were the use of cases in teaching and the basic concepts of control as reflected in the manual.

The timing of the program for January and February was largely determined by the fact that many of the attendees were either teachers or students in universities in their cities. The summer vacation period was therefore picked in order to avoid conflict with these other interests. In view of the delayed start of work on the program, the period between the end of July and the first of January was crowded with preparation of materials, concepts, and administrative chores.



Two evaluations of the course, one by Dr. Arantes and another by GTM/Cambridge drawing on analysis of two short questionnaires applied to CAPIDE participants, indicated that CAPIDE met its basic objectives in reaching most of its participants and increasing their skills. Work by disciplines was particularly appreciated where it was good, but the differences in quality of teaching was reflected in differences of degree to which student expectations were met. More work clearly is required in preparation of materials before the next course and in improvement in the use of case material.

#### IX. WORK SINCE FEBRUARY 1968

Rio based work since the completion of CAPIDE has centered on technical assistance visits to the borrowers and elaboration of the first components of the management information systems.

At the close of the course, the FIPEME Núcleo began a series of technical assistance visits to the banks. GTM is supporting these missions by 1) preparation of information checklists for the technical assistance teams, 2) preparation of materials for use in evaluating banks as development finance organizations and 3) participation on the technical assistance teams in some cases.

The basic information which the FIPEME Núcleo will hold on each bank was reviewed. A scheme for evaluating the organizational quality of the agents was developed.

The basic concepts of management information and control systems for agents and for borrowers was elaborated within GTM. They were then reviewed with four agents, in Maceió, Bahia, Niteroi and Rio. Work was begun on a model accounting system, in conjunction with a Rio borrower in whose plant the system would be used.

In Cambridge, research resulted in several working papers on subjects agreed upon in January. They are indicated in the list below along with the Rio based activities. In addition, Professor Farris wrote a paper on the project for presentation at the 1968 International Congress of Applied Psychology in Amsterdam, The Netherlands.

#### ACTION AND RESEARCH TOWARD ACHIEVEMENT OF GOALS

##### General

##### B. Research and Materials

1. CAPIDE. Course evaluation report. Arantes.
2. Textbook. First Outline. Nyhart & Friedman.
3. Casebook. Revision work. Arantes.

##### Management Information Systems

##### A. Activities

1. Discussions with banks re Sistema de Informações Pequenas



e Médias Empresas (SIPEME), April-May. Luzny.

B. Research and Materials

1. Information systems for small and medium enterprises (SIPEME). Draft. Luzny.
2. Familosa, an appraisal case. Draft. Rockart, Wakeman, Vasarhelyi.
3. Checklist for visits to banks - revision work. GTM/Rio.
4. External performance criteria for development banks. Memo. March. Erber, Friedman, Hoover, and Wakeman.
5. Specific measures, development bank performance. Follow-up memo. March. Friedman, Hoover, Vasarhelyi & Wakeman.
6. Preparação de Missões do BNDE - Informações. Outline memo. April. Erber.
7. Measuring Performance of Development Finance Institutions. Working paper. Nyhart and Friedman.

Organizational Development Program

B. Research and Materials

1. Basic questionnaire analysis of questionnaires administered at CAPIDE. Farris, Butterfield & Chinn.
2. Observing management strength in development finance institutions. Working paper. May. 1968. Farris, Nyhart, Rockart, and Erber.
3. Applied Psychology, Development Banking, and Economic Development in Latin America: Status Report on an Attempt to Build a National System of Development Banks. Working paper. June, 1968. Farris.

National System

A. Activities

1. Field visits to banks - technical assistance and supervision. March-May. GTM/Rio, including Luzny, with other BNDE personnel.

B. Research

1. Study of structure of system (Part I, A Description of the Development Finance Structure Within the Brazilian Banking System). Draft. Goldberg.

Professional Development Banker

B. Research and Materials

1. Development Banking Game. February-June. Nyhart, Senior, and Development Finance class.
2. Plans for directors' seminar. Memo. April. Nyhart.



## X. EVALUATION

GTM's efforts at self-evaluation have two thrusts. First, it is attempting, as part of its basic action research discussed in Section VII, to establish quantitative measures of changes that take place in the project's goal areas. Second, GTM obtained direct feedback from participants in its first major activity - CAPIDE.

Two general instruments have been developed for measuring desired change. The basic sixty-four item questionnaire records attitudes and perceptions relating to the banks as places to work, jobs held by respondents, communications within and among the banks, and the professional status of the development banker. Changes may be recorded by retesting respondents at a later date.

The second measurement is a set of performance criteria presently being applied to the banks' procedures for appraising and controlling their projects. In August, the criteria will be applied to files of past projects from state banks submitted to BNDE for refinancing. This process we expect will provide a "before" measure. Periodic or continuing measurements may then be taken thereafter as a routine part of the Núcleo's work. Changes in performance may be observed.

The estimates of participants in CAPIDE regarding their professional skill levels can also be used for evaluative purposes, as readings were taken both before and after the course.

The second thrust at self-evaluation was the administration and analysis of direct feedback questionnaires regarding the performance of individual instructors in CAPIDE. Teachers could voluntarily request students to complete evaluation forms at the end of their teaching sessions. Many did, and the results were analyzed by the course administrator, Dr. Tarcísio Arantes, a GTM member.

The problem of evaluation is complex. Other measurements will be evolved as the project continues. By focusing now on change, GTM aims at the heart of its project. But it will be difficult to relate with a degree of absolute certainty any measurable changes with any specific component of the project. Similarly it will be difficult to say what would or would not have happened if BNDE, MIT, and the Ford Foundation had not joined together in the project. What can be said at this point is that GTM is developing instruments for measuring related change as part of its research and project management work and that it does believe it will have reasonable measurements of initial conditions.



