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RECORDS MANAGEMENT SECTION

Ec. Dept - Res Progr.

February 27, 1970

Dr. Robert K. Davis
Visiting Senior Research Fellow
University College
P.O. Box 30197
Nairobi
K E N Y A

Dear Dr. Davis:

Thank you for your letter of February 19.

My paper is just about ready to go to the printer. I expect that we should have copies available late next week. I will send you a few copies as soon as I get my hands on them.

The stochastic element that I have introduced there is still very tentative, as you shall see. We are planning to translate the program into conversational mode so that we may be able to access it on a time-sharing system.

I enjoyed our discussions, and look forward to having more of the same.

Sincerely yours,

Tariq Husain
Sector and Projects Studies Division
Economics Department

T.H.
THusain:bsc

February 26, 1970

Mr. J.S. Marsh
Deputy Vice President
International Association of Agricultural
Economists
Department of Agricultural Economics
University of Reading
Reading, England

Dear Mr. Marsh:

Following your advice, I have cut by half the first and third sections. I also eliminated most of the algebra of these two sections. The paper although not very substantial still exceeds the maximum length indicated. Unfortunately, I do not believe that I can do much better, as far as the size is concerned. I even dropped the bibliographic references.

I hope that this draft will nevertheless be satisfactory.

Yours sincerely,

Louis M. Goreux
Director
Basic Research Center

Attachments
LMGoreux:pmh

Ec-Dept- Research Program

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Mr. A. M. Kamarck

February 15, 1970

H. G. van der Tak

Sector and Projects Studies Division
Research Program - Six-Monthly Progress Report

I refer to my memorandum of January 12, 1970, submitting our program of studies in progress or to be started in the years 1970 and 1971, classified by research area. I also refer to my memorandum of August 6, 1969, transmitting our latest six-monthly report on the implementation of our research program.

I now attach our next six-monthly progress report. It is again divided into five parts:

- A. Studies completed since July 1969;
- B. Ongoing studies to be completed during January-June 1970;
- C. Ongoing studies to continue into fiscal 1970/71;
- D. New studies to be started during January-July 1970;
- E. New studies to be started during fiscal 1970/71.

Delays in completion and start of studies to date have, on the whole, been rather small. Most of the delayed studies listed in Section B are in an advanced state of preparation. The present program of implementation of studies broadly reflects the views on priorities expressed during our recent discussions with the Projects Departments. Previously planned research on major water resource planning models has been indefinitely postponed. Implementation of the program will depend, of course, on the staff, consultant, and data processing resources available to us in fiscal 1970/71. As we have discussed previously, our planning would be much facilitated by an early indication of the size of the division's budget for 1970/71, and some advance authorization to make commitments now against our budget for 1970/71.

Vas
HGvanderTak:zmc

cc: Mr. Baum
Mr. Stevenson
Mr. Reutlinger
Mr. de Weille

February 15, 1970

SECTOR AND PROJECTS STUDIES DIVISION
RESEARCH PROGRAM - 1970-71

A. Studies completed since July 1969

| <u>Title of Study</u> | <u>Brief Description</u> | <u>Principal Staff</u> |
|--|--|------------------------|
| <u>General</u> | | |
| W.P.58 - Secondary Effects and Project Appraisal | Review and classification of secondary effects and how better to take account of them in project appraisal | Masé ^{1/} |
| <u>Agriculture</u> | | |
| W.P.57 - Agricultural Production and Supply Response Research: A Review for Project Planners in Developing Countries | This paper reviews estimation techniques so that project planners and economists can more easily select satisfactory research methods | Seagraves * |
| W.P.56 - Use of Simulation in Appraising a Livestock Breeding/Fattening Project | This paper illustrates the use of computer simulation in the appraisal of a livestock project; additionally, it develops a set of computer programs which may be used as computation tools by the Livestock Division | Husain |
| W.P.66 - Evaluation of Benefits from a Season-to-Season Grain Storage Program | To provide framework for analysis of storage projects | Reutlinger/ Wilde * |
| <u>Education</u> | | |
| EC-173 - Cost-Benefit Analysis in Education: A Case Study on Kenya | Calculation of social and private rates of return, adjusted for socio-economic and other factors, and projection of demand for and supply of education manpower | Thias/ Carnoy * |

^{1/} Currently with Europe, Middle East and N. Africa Dept.

* Consultant

A. Studies completed since July 1969 (cont'd)

| <u>Title of Study</u> | <u>Brief Description</u> | <u>Principal Staff</u> | |
|---|---|---|--|
| <u>Transportation</u> | | | |
| W.P.67 - Optimum Depth of Water in a Port | Methodological study of suitable criteria, including data problems | Ray | |
| W.P.60 - Regional Macro Economic Model | This model quantifies the effects of alternative transportation policies and plans on the economy of a country | Harvard Transport Research Group; revisions and additions made by members of the Transport Planning Models Study Team | |
| W.P.61 - Transport Network Model | This model predicts the network link flows and the corresponding costs and performance measures | | |
| W.P.62 - Highway Cost Performance Model | This model computes vehicle operating cost and performance measures given the vehicle and road link characteristics and the volume of traffic | | |
| W.P.63 - Railroad Cost Performance Model | This model computes train operating cost and performance measures given the train and rail link characteristics | | |
| W.P.64 - Transfer Cost Performance Model | This model computes the transfer operating cost and performance measures given the characteristics of the transfer operation | | |
| W.P. ? - Brazil Transport Sector Model | Summary description of transport planning model methodologies (forthcoming) | | Based on consultant reports, with revisions and additions by members of the Transport Planning Models Study Team |
| W.P. ? - Sudan Transport Sector Model | | | |
| W.P. ? - Dahomey Transport Sector Model | | | |

B. Ongoing studies to be completed during January-June 1970

| <u>Title of Study</u> | <u>Brief Description</u> | <u>Principal Staff</u> |
|--|---|--------------------------------------|
| <u>General</u> | | |
| OPTIMUM TIMING OF INVESTMENTS | Analysis of criteria for deciding when investments should be undertaken | Ray/ de Weille |
| <u>Agriculture</u> | | |
| Revaluation of Mexican Irrigation Projects | Reevaluation of benefits of projects financed by the Bank (275-ME and 336-ME) | Manning/ Reutlinger |
| Analysis and Simulation of Irrigation Project ** | Computer simulation of irrigation project appraisal model | Husain |
| Manpower Requirements of Irrigation Project ** | A study of Mexican experience and construction of model for the allocation of scarce manpower | Haissman * (Reutlinger) |
| <u>Transportation</u> | | |
| TRANSPORT PLANNING MODELS STUDY PHASE II | Evaluation of existing transport models, especially the so-called Harvard Transport Model | de Weille Miller Harral, et al |
| ECONOMIC REGULATION OF THE ROAD TRANSPORT INDUSTRY | Discussion of objectives and instruments of road transport regulation in developing countries | Oort * (van der Tak) |
| APPRAISAL METHODOLOGY FOR FEEDER ROAD PROJECTS | Discusses analytical framework and data base for practicable methods of determining economic benefits of feeder roads | Israel |

* Consultant

** Not previously listed

Note: Capitals indicate completion delayed as compared with previous six-monthly report.

B. Ongoing studies to be completed during January-June 1970 (cont'd)

| <u>Title of Study</u> | <u>Brief Description</u> | <u>Principal Staff</u> |
|---|---|------------------------------|
| <u>Transportation</u> | | |
| SYSTEMS ANALYSIS OF RURAL TRANSPORTATION | Programming approach illustrated on area in West Pakistan | META * (de Weille/Israel) |
| RAILLINE CLOSURE | Discussion of economic criteria for deciding whether and when existing raillines should be closed | Sau * (de Weille) |
| Economics of Highway Design Standards - Phase I | To provide guidelines for design standards and timing or staging of road improvements, especially for low-traffic roads, taking account of the interrelationship between design characteristics, road maintenance costs, and actual operating costs in varying climate and terrain conditions | MIT * (de Weille/Israel) |
| <u>Public Utilities</u> | | |
| Ex post Evaluation of Power Demand Forecasts | Analysis of errors in electricity demand forecasts in Bank project reports | Anderson |
| Power Planning Models - Phase I | Review and comparative study of available planning models, both simulation and linear programming, and their uses, advantages and disadvantages for different purposes and power systems | Anderson |

* Consultant

Note: Capitals indicate completion delayed as compared with previous six-monthly report.

C. Ongoing studies to continue into fiscal 1970/71

| <u>Title of Study</u> | <u>Brief Description</u> | <u>Principal Staff</u> |
|--|--|------------------------|
| <u>Agriculture</u> | | |
| Agricultural Sector Planning Models | To provide analytical basis for identifying optimal sets of policies and investment decisions in agricultural sectors: (i) Brazil, (ii) Portugal | Egbert/ Ablasser |
| Reevaluation of Indian Irrigation Projects | Reevaluation of one or several projects financed by the Bank, with particular attention to alternative project designs | Duane |
| <u>Education</u> | | |
| Reevaluation of Education Project in Tunisia | Assessment of internal and external efficiency of project schools and educational subsystems they belong to (Loan 28-TUN of 1962) | Thias/ Carnoy * |
| Financing of Education | Exploratory study of ways in which education financing systems influence attainment of various educational policy objectives | Rogers * (Thias) |
| <u>Transportation</u> | | |
| Reevaluation of Rail Project in Thailand | Economic analysis of cost savings resulting from various railway improvements (Loan 280-TH of 1961) | Israel |

* Consultant

C. Ongoing studies to continue into fiscal 1970/71 (cont'd)

| <u>Title of Study</u> | <u>Brief Description</u> | <u>Principal Staff</u> |
|---|---|------------------------|
| <u>Public Utilities</u> | | |
| Power Planning Models - Phase II | Adaptation and testing of supply models | Anderson |
| Econometric Analysis of Demand for Electricity ** | Correlation of demand with economic and demographic variables. Use of international and regional data. Aim: to improve forecasting accuracy | Anderson |

** Not previously listed.

D. New studies to be started during January-July 1970

| <u>Title of Study</u> | <u>Brief Description</u> | <u>Principal Staff</u> |
|--|--|------------------------|
| <u>Agriculture</u> | | |
| Credit Project Simulation | Computer simulation of credit project appraisal model | Husain |
| Credit Project (Re)appraisal | Pakistan or Philippines credit projects (terms of reference to be prepared) | Manning |
| Grain Storage Projects (Phase II, Buffer Stock) | Simulation model for estimating various kinds of benefits for buffer stock operations | Reutlinger/ Wilde * |
| Agricultural Development Policy Studies <u>1/</u> | To clarify conceptual model and data requirements for analysis of policy issues relating to unemployment, mechanization, income distribution, etc. (terms of reference to be prepared) | Reutlinger, et al |
| <u>Education/Health</u> | | |
| EDUCATION PLANNING MODEL SURVEY | Inventory and review of models with emphasis on their usefulness for various purposes | Holm |
| Adaptation/Development of Selected Education Models | Simple (partial) models which can be applied to facilitate planning work (terms of reference to be prepared) | Holm |
| Exploratory Study of Issues in Rural Education | Preparatory work for study of influence of education on individual and community attitudes (modernization of agriculture, diversification of activities, propensity to migrate, health care, family planning, etc. (terms of reference to be prepared) | Thias, et al |
| Survey of Issues in Health Economics in Developing Countries | Definition of objectives of specific health policy efforts; identification and measurement of related costs and benefits (terms of reference to be prepared) | * (van der Tak) |

1/ Research on major water resource planning models has been indefinitely postponed.

* Consultant

Note: Capitals indicate start delayed as compared with previous six-monthly report

D. New studies to be started during January-July 1970 (cont'd)

| <u>Title of Study</u> | <u>Brief Description</u> | <u>Principal Staff</u> |
|--|--|-------------------------|
| <u>Transportation</u> | | |
| Transport Planning Models Study - Phase III (and IV) | Application and further development - Colombia, other (?) | de Weille, et al |
| Highway Design Standards Study - Phase II | Experiments in Africa to determine parameters of vehicle operating costs, road construction costs, and maintenance costs (terms of reference to be prepared) | * (de Weille/Harral) |
| Airport Projects | Methodology for appraising airport projects (terms of reference to be prepared) | * (de Weille) |
| Review of Rail Models | Inventory and brief review of available rail models, their uses and data requirements, etc. to identify areas for further research | Miller |
| Railline Closure (case study) | Purpose is to provide practical criteria for decisions on railline closures (terms of reference to be prepared) | ? (de Weille) |
| <u>Tourism</u> | | |
| Survey of Information on Potential Tourist Demand in North America and Japan | Together with available information for Europe, to provide better framework for estimating demand directed at particular tourist countries | ? (de Weille) |

* Consultant

D. New studies to be started during January-July 1970 (cont'd)

| <u>Title of Study</u> | <u>Brief Description</u> | <u>Principal Staff</u> |
|---|--|-------------------------------------|
| <u>Public Utilities</u> | | |
| Case Study of Practical Feasibility and Merits of Applying Marginal Cost Pricing to Power Rates (West Pakistan) | To clarify relation between pricing benefits and resource costs. Feasibility of controlling load by multi-part, time-dependent tariffs (terms of reference prepared) | * (Berrie <u>1/</u> Anderson) |
| Essay on Economic Issues in Urban Water Supply Projects | To clarify nature of benefits and costs and their relation to pricing policies | Ray |
| Study of Demand Projections for Water | Analysis of economic, demographic and other factors influencing the demand for water | Anderson |

1/ With Public Utilities Projects Department

* Consultant

E. New studies to be started during fiscal 1970/71

| <u>Title of Study</u> | <u>Brief Description</u> | <u>Principal Staff</u> |
|--|--------------------------|---|
| <u>Agriculture</u> | | |
| Simulation of other Agricultural Projects |) | ? |
| (Re)evaluation of Land Settlement Projects |) | ? |
| Reevaluation of Livestock Projects |) | ? |
| Studies Related to Agricultural Development Strategies and Policy |) | ? |
| <u>Education</u> | | |
| Country Case Study on Education Financing Problems |) | ? |
| Study on Technical/Vocational Training |) | See Sector and Projects Studies Research Program 1970-71 (January 12, 1970) |
| Reevaluation of Education Project with Focus on Some Special Aspects |) | ? |
| The Absorption of Educated Manpower in the Labor Market |) | ? |
| <u>Transportation</u> | | |
| Transport Coordination Studies (incl. toll roads) |) | ? |
| Substituability of Labor for Capital in Road Construction |) | ? |
| Evaluation of Time Savings |) | ? |
| Review of Port Models |) | ? |

E. New studies to be started during fiscal 1970/71 (cont'd)

| <u>Title of Study</u> | <u>Brief Description</u> | <u>Principal Staff</u> |
|--|---|------------------------|
| <u>Transportation</u> | | |
| Economics of Ports Study |) | ? |
| Reappraisal of Ports Project | | ? |
| Review of Urban Transport Planning Approaches | | ? |
| <u>Tourism</u> | | |
| Study of Tourism Project Appraisal Methodologies | See Sector and Projects Studies Research Program 1970-71 (January 12, 1970) | ? |
| <u>Public Utilities</u> | | |
| Power Supply Model Studies (Phase III) |) | ? |
| Reevaluation of Urban Water Supply (and Sewerage) Project |) | ? |
| State of the Art Paper on Urban Water Supply (and Sewerage) Planning |) | ? |

January 29, 1970

Dr. J. David Lockard
Director of the Science
Teacher Center
University of Maryland
College Park, Md. 20742

Dear Dr. Lockard:

In accordance with our conversation I am sending along the lists of science equipment from several schools included in our research project. Unlike equipment lists from the Education Projects Department these lists are very general. Therefore, I would appreciate it if you could briefly examine this material in order to determine: 1) the approximate dollar value of the equipment in each discipline (chemistry, physics, and biology) and 2) the relative ranking of the science departments among themselves based on the articles contained in the lists.

I am looking forward to hearing from you.

Sincerely,

RB
Rachel P. Brandenburg

Enclosures.

R.P. Brandenburg:gb

1 8 30 1970

'70 JAN 30 PM 8:17

В.Б. Влассович:Вр

Влассович:

Влассович В.Б.

Влассович:

I am looking forward to meeting you soon.

in the future.

science departments among themselves based on the criteria comprised (orientation, history and progress) and 2) the relative ranking of the 1) the administrative college level of the institution in each discipline. If it can be said that the criteria are not intended in order to determine the department these are the only criteria. Therefore, I would appreciate the attention of the science departments from the relevant professors. The criteria of science departments from relevant sources included in our in accordance with our conclusions I am sending you.

Dear Dr. Gorkov:

College Park, Md. 20742
Department of Mathematics
Levinson Center
Director of the Science
Dr. J. David Gorkov

January 28, 1970

EC-Dubay - Gorkov's program

EC Dept - Research Program

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OFFICE MEMORANDUM

TO: Mr. Richard H. Demuth

DATE: January 22, 1970

FROM: Louis M. Goreux ^{CG}

SUBJECT:

1. I am sending you attached (i) copy of my memo of January 14 to Friedman on work implications of "commodity programs"; (ii) a note on my Center. If you have time to glance through them, I would appreciate receiving your comments.

2. I have sent directly to Mrs. Boskey a note related to my telephone conversation with her a few weeks ago and to the second part of paragraph 20 of the note dated January 21.

Attachments

Amex

Mr. Irving S. Friedman

January 14, 1970

Louis M. Coreux

Commodity program; work implications, as requested in your memo of January 12

1. I am conscious of having simplified the problem in the attached note. But I believe that, as far as operations are concerned, it is preferable to start with a simple formula.
2. As you know, I plan to undertake a research project dealing with the problem of interactions between countries. There, the various methodological problems could be thoroughly analyzed. This research should lead to improved solutions, which could be applied at a later stage.

Attachment

Commodity Programs, Some Operational Considerations

I. Preparation of commodity programs

1. The commodities for which programs should be formulated have to be identified first. Assuming that 10 commodity programs have to be formulated by the end of FY1971, let us consider the operations required for a given commodity. It is proposed to proceed in three steps.

Step 1: Market projections in the absence of Bank action; initial policy proposal

2. The commodity specialist should collaborate closely with the Area and the Project Departments concerned throughout this stage of the work, but he should be the one responsible for issuing the paper. This paper should provide the projection of the most likely situation in the absence of any new ^{1/} Bank action and a first proposal on desirable policy changes.

3. The projections should identify separately each of the developing countries members of the Bank which are already, or are likely to become, significant exporters or importers of the commodity concerned, but only those of the developed countries members of the Bank which are major importers or exporters of that commodity. The other countries should be merged into groups such as: other developing countries, other developed countries, and rest of the world. For each of the countries or country groups the following parameters should be estimated for the base period: share of gross world exports and imports, price elasticities of demand for imports and of exportable supplies, opportunity cost of production. ^{2/}

4. On the basis of the policies most likely to be followed, but assuming no Bank action, an appropriate commodity model should be used to compute the most likely estimates of the world price and the quantities exported or imported by the countries or country groups referred to above. The commodity model should then be used to assess the impact of alternative policies. On the basis of these experiments, a proposal should be made of the feasible measures likely to improve the LDC prospects.

^{1/} If the commodity program is to be issued in June 1971, the projections should include all Bank projects likely to be passed by the Board prior to June 1971, but not those which might be passed later.

^{2/} If Burundi can export nothing but coffee and if the shadow price for foreign exchange is high in Burundi, the opportunity cost of producing coffee in Burundi is close to zero. If Brazil can export many other items than coffee, the opportunity cost of producing coffee is bound to be higher in Brazil than in Burundi, even if the cost of production at market prices is higher in Burundi than in Brazil.

Step 2: Dialogue among Projects, Area and Commodities regarding Bank action

5. The draft prepared in Step 1 should be the starting point for the tripartite dialogue aiming at defining the commodity policy to be advocated by the Bank and the specific projects to be financed by the Bank. The model should permit the comparison of the LDC position without Bank action and with alternative Bank actions. This model would take into account the interaction between countries; world prices would differ depending on the nature of Bank action. A proposal concerning the optimal Bank action should then be circulated.

Step 3: Adoption of the commodity programs and consistency check with the country programs

6. The procedure followed for the adoption of the commodity programs should be identical to that presently followed for the country programs. The commodity program itself should be a brief document. A more detailed commodity study should be available as background document.

7. The commodity projects included in the Bank's country programs and those included in the commodity programs should be the same. However, since country programs and commodity programs will not all be agreed upon simultaneously, the formulation of a commodity program will require adjustments in the country programs already adopted. In practice, the consistency (or near consistency) of country and commodity programs will be reached by successive approximations.

8. The implications of commodity programs on the work of the area economists may be illustrated in relation to the country projections currently underway. In the 1969-70 run of country projections, according to my understanding, country economists give an estimate of the rate of growth of total exports and total imports but no breakdown by commodity. In the next run of country projections, the area economists should specify, for each of the commodities selected for commodity programs, the volume of exports and imports at a given level of world prices. The consistency between the estimates of the various area economists should be checked through the commodity programs. A given projection of the balance of payments of the Bank's Part II countries should then be associated with a given set of national and international policies spelled out in country programs, commodity programs and aid programs.

II. Project Identification and Evaluation

9. At present, in addition to the rate of return at market prices, the Projects Department computes, whenever relevant, the rate of economic return using the set of shadow prices appropriate to the country where the project is located. For those projects which have a direct impact on world trade, it is now proposed to compute a third rate of return, which might be called "the LDC rate of return".

10. A method for computing the LDC rate of return is presented in my note of September 25, 1969. The model used could easily be programmed on the Bank's computer. The input would consist of a matrix where the lines are the countries or country groups described in paragraph 3 above and the columns are the parameters listed in the same paragraph; namely, the share of world gross exports and that of world gross imports, the price elasticity of export supply and import demand, and the opportunity cost of production. The output could be expressed in the form of a single figure giving the LDC rate of return. This single figure could be, however, supplemented by a matrix where the lines would correspond to the countries or group of countries and the columns to alternative sets of country weights. This matrix would show the losing and the winning countries and country groups under alternative sets of country weights. This would permit, at the experimental stage, to assess the sensitivity of the LDC rate of return to the set of weights selected.

11. To facilitate project identification, simple commodity guidelines characterizing the likely magnitude of the LDC rate of return could be issued. Thus, project missions could avoid spending time on projects likely to show a very unfavorable LDC rate of return and give more attention to those likely to show a very favorable LDC rate of return.

III. The need for a progressive approach

12. The Board decisions on commodities provide a convenient vehicle for launching the concept of "commodity programs". This is only one step, but a very significant one, towards the formulation of a true international Bank strategy. No attempt should be made to find the perfect solution at once, but rather to adjust our practices gradually to the changing role of the Bank without disturbing current operations.

Annex

L. M. Goreux
January 21, 1970

BASIC RESEARCH CENTER

Organization, Function, Budget

1. The Center was created in November 1968 with rather general terms of reference. Since the entire staff had to be recruited from outside, the work could only start gradually during the course of 1969. By now, the staff authorized for FY1970 has been recruited and the work has progressed substantially. On the basis of the experience gained, it is useful to review the organization of the Center and the functions the Center should fulfill. In the light of this review a proposal will be presented regarding the budget up to the end of FY1971.

I. Organization

2. The organization of the Center is based on three main principles: concentration on a few major research themes; use of team-work, ie, about three permanent economists supplemented by consultants on each research project; and emphasis on counterparts in the developing countries.

Concentration on major research themes

3. Three research projects have been selected. Due to budget limitations, resources have been initially concentrated on the first project. Work has started recently on the second project and the way has been paved for starting the third project.

4. The first research project is devoted to the problem of interaction between the project, the sector and the entire economy of a country. The objective of this research is to answer questions of the following types: To make a good decision for a given project, how much should one know about the sector in which this project is located and how much about the rest of the economy? What should be the balance between centralized and decentralized decisions? Which signals should the Center send to the periphery to ensure that the optimal decision for the periphery is also optimal for the economy as a whole? Reformulated in terms of Bank operations, these questions are: Under which conditions is the project's rate of return measured at market prices a satisfactory proxy for the contribution of the project to the economy of the country? What should be the relative emphasis between project missions, sector missions and economy-wide missions?

5. These questions will be analyzed on the basis of pilot studies conducted in three countries. In the case of Mexico, where the work is most advanced, an economy-wide model composed of 20 sectors has been built. For three of these sectors, (agriculture, energy and electrical machinery), a model has been or is being built, using a much greater degree of disaggregation than for the economy-wide model. To each of the

Three sectoral models is attached one project model which, in turn, is much more disaggregated than the corresponding sectoral model. The project model is to be optimized on the basis of signals sent in the form of shadow prices from the economy-wide and the sectoral models. In turn, the information obtained in the project study are fed back in an aggregate form to the sectoral and the economy-wide models. The emphasis will be placed on an analysis of the downward and upward linkages and of policy changes to be introduced at the sectoral and economy-wide levels.

6. The second research project differs from the first by the emphasis placed on socio-political objectives, employment and income distribution in particular, and on the impact of applied research on growth. An analysis of the relationship between economic growth and non-agricultural employment has already been conducted for a number of countries. Field work started in Ivory Coast in November 1969.

7. While the first and the second research projects deal with interaction within a country, the third deals with interaction among countries through the international flow of goods and capital. The first steps in the study were taken as a follow up activity of the Commodity Price Stabilization Study. The technique of analysis, based on multilevel programming models is similar to the one used for studying interactions in the first research project. As will be recalled, there the question to be answered was: to make a project decision optimal from country A's point of view, how much should be known about the rest of country A's economy? While in the third research project, the question to be answered is: how much should be known about countries other than A, to make a decision regarding country A optimal from the Bank's point of view?

Use of team-work

8. It is felt that a team composed of about three permanent economists and part-time consultants is large enough to permit the cross-fertilization of ideas, but small enough to preserve the flexibility required for creative thinking. The participation of university consultants has proved invaluable in bringing fresh ideas and up-to-date techniques of analysis. It has to be recognized that professors of international repute can better be attracted by consultancy, rather than by permanent employment.

9. The association of university professors as consultants on long-term research projects may be the most efficient way to establish a bridge between Bank operations and academic research, which was one of the main objectives in the creation of the Center. These consultants, after working with problems which are of interest to both the academic community and the Center, have an impact on the selection of research

topics in their universities. This feedback effect is already noticeable. For instance, one of our consultants has influenced the research program of some of his colleagues, as well as the choice of Phd. dissertation topics.

Emphasis on counterparts in the developing countries

10. The success of our study in Mexico owes a great deal to the remarkable cooperation received from the Mexicans. The extent of this cooperation can be illustrated by the fact that by the end of our summer visit, two models were operating on the CFE computer. On the other hand, transcription of the first model on the Bank's computer took more than six weeks. In addition, many of our research papers on this project have been issued jointly by members of and consultants to the Center and by their counterparts in Mexico. Apart from being economical, the major advantages of this association are the following: transfer of knowledge from the Bank staff and its consultants to local professionals, greater realism in the formulation of the model and more impact of the findings on actual policies.

11. The level of the sophistication of our counterparts cannot be identical in all countries, but the extent of local cooperation is always a major consideration in the selection of the countries to be studied. In the Ivory Coast, our study is carried out with local counterparts mainly from the Ministry of Planning. In East Africa, it is conducted jointly with the East African Development Bank.

12. I was recently approached by Nurul Islam, Director of the Institute of Development Economics in Pakistan, to conduct a joint study along lines similar to that in Mexico. I could not react positively in view of the limitation on our present resources.

II. Functions of the Center within the Bank

13. Research of one kind or another is currently being conducted throughout the Bank. The rationale for a Research Center in the Bank is that certain types of research can be carried out more efficiently, if concentrated in a specialized unit. It is then necessary to differentiate this type of research, called "basic", from immediately applicable research which will continue to be carried out throughout the Bank. It is also necessary to spell out how the work of the Center should relate to the work of the other departments in the Bank.

14. The differentiation between the Research Center and other Bank units involved in immediately applicable research may be characterized in two ways. First, the Center should not be a servicing unit answering a specific request of an operational department; it should concentrate on problems of general interest to the Bank. Second, it should try to anticipate the operational needs of the Bank; but once the analysis has been

accepted and the methodology tested on a pilot basis, the Center should withdraw.

Not a servicing unit

15. The function of the Center should not be to help an operational department to solve a problem which arises in the course of a given operation. Thus, the purpose of the first research project is not to study whether a particular project should or should not be financed by the Bank. The theme of this project originated from discussions with Bernard Bell who is familiar with both the country work, since he headed many Bank country missions, and the project work, since he was Deputy Director of the Projects Department. He thought that it was high time that the Bank initiated a basic study into the relationship between the project and the country approaches. Obviously, many units in the Bank have been concerned with this problem. However, a systematic study of this problem through a multilevel programming model, articulating the linkages between the project, sector and country missions had not been attempted.

16. Because the Center does not undertake research directly connected with a specific Bank operation, it cannot provide economists to participate in regular Bank missions like the Economics Department. Since the researchers of the Center have to work in close cooperation with their counterparts in the developing countries, the Center has to send its own small missions. These have to be carefully planned in relation to the regular Bank missions to avoid any possible confusion in the countries concerned. For this purpose, it has been convenient to arrange the timing of the research missions so as to overlap with the regular Bank missions. Thus, each mission could benefit from the other and the time of the local officials could be saved.

Anticipating operational needs

17. Due to the gestation period required for its research, the Center should try to anticipate the operational needs of the Bank. This function of the Center can be readily illustrated by the fact that the theme of the third research project, the interaction between countries, may be of prime concern to future Bank lending policy.

18. The Bank is now essentially formulating its policy towards country A without taking into account the impact of this policy on countries other than A. This attitude partly reflects the fact that only five years ago two-thirds of Bank lending went to power and transportation, both of which are non-tradeable. As Bank lending becomes more diversified and as the Bank chairs aid consortia for more and more countries, it will become increasingly difficult for the Bank to ignore the impact of its policy towards country A, on countries other than A.

It is therefore anticipated that soon the Bank may not be satisfied simply to optimize for each country separately and then to assume that the optimum for all the IDC can be obtained by adding the values optimized independently for each country. In future, the Bank probably will have to formulate its policy towards country A, within an overall strategy towards the IDC, which would require an analysis of the interaction among countries.

19. As a first step in this direction, the formulation of "commodity programs" was suggested as a complement to the "country programs". The very fact that this idea is now seriously considered suggests that Bank thinking is evolving rapidly. From the formulation of a concept to its applicability to Bank operations, there is a need for basic methodological research, which is where the Center enters. But, once the method becomes operational, the application should be left to the operational departments.

20. The articulation between the Center and the operational departments may be illustrated by another example. The Center analyzes the methodology for setting appropriate shadow prices and the policies which affect labor employment. It analyzes the margin of choice between technologies and how this margin can be expanded. This analysis may suggest that the Bank should contribute to the financing of research, the purpose of which is to adapt the technology of the rich countries to the conditions of the poor countries. In this instance, the Center studies the economics of research, taking into account the externalities between the developing countries. But, when it comes to the appraisal of the actual project to be financed by the Bank, the Center leaves the matter entirely to the operational department concerned. In the same way, the Center leaves to the regular Bank missions the full responsibility of assessing the adequacy of a country's policy regarding labor employment.

21. The function of the Research Center in the Bank could therefore be analogous to that of a department of Research and Development in a large firm. For instance, when faced with complex problems, the production engineers of a firm may need the help of specialized service units to solve them. During this process, important innovations may be generated. However, such firms have found that they cannot rely only on this source for innovations. They have found it necessary to create, in addition, an R & D department where research could be conducted in a systematic way.

22. Similarly, a Bank economist may make a basic research contribution during the course of performing his regular tasks. However, on a probability basis, he would have a better chance to make such a contribution, if he were working within a research team whose primary motivation was research accomplishments, rather than the quality of services directly rendered to operational departments. After having dealt with operations, some economists might well wish to work on basic research within an organized research team for one or two years.

23. Taking as criterion the long-term efficiency of Bank lending, a Research Center, following the lines presented above, could fulfill a useful function in the Bank. As a matter of fact, research centers or research departments exist in several international agencies. But among all international agencies, the World Bank is the one with the greatest comparative advantage for having a successful Research Center.

24. The present size of the Basic Research Center is far below the optimal size for a research center. There is a rationale for proceeding gradually towards the optimum size and for adjusting progressively the function of the Center in the light of the experience gained. But I see no rationale for keeping the Center at its present size.

III. Budget

(1) Budgetary request

25. The following request reflects a policy of gradual expansion for the next two years with a view to reaching the adequate size in FY1972. The request covers only the balance of FY1970 and FY1971, since the budgetary needs for FY1972 can be assessed later, on the basis of further experience. The budgetary request may be summarized as follows.

Professionals

26. Eight slots are presently authorized; seven are filled and one is committed. Five additional slots are requested. One should be filled in FY1970; the others should be filled in FY1971, but commitments must be made now to allow for the time lag in recruitment.

Research assistants

27. No slot is available since Miss Davis was promoted assistant economist. Two slots are requested. One should be filled in FY1970 and attached to project II. The other should be filled in FY1971 and attached to project III.

Secretaries

28. Three slots are authorized. Two additional slots are requested for FY1971. As in the past, it is proposed to recruit additional secretaries only when the situation cannot be handled with the help of temporaries.

Consultants

29. The request for FY1971 amounts to \$110,000. In relation to the FY1970 expenditure, this increase is in the same proportion as the increase in the number of professional slots.

(2) Staffing pattern

30. As shown in Table 1, the economists and consultants will be distributed among the three research projects.

Project I - (multilevel programming model: project, sector, economy-wide)

31. Mexico: Condos will work on the linkages between models with Manne and Kornai. Norton will work on the agricultural sector model and the agricultural project model carried out in Mexico by Winkelman and Miss Bassoco. Miss Davis will work on the model for heavy electrical equipment with Vietorisz and Lissak.

32. East Africa: Mr. Stoutjesdijk, to be recruited, will work with Frank. Following arrangements made with Dr. Simba, Director General of the East African Bank, the field work will start in February 1970.

33. South Korea: No full-time economist has been assigned to help Westphal presently in Korea, who will be an active consultant in FY1971.

Project II - (emphasis on social factors)

34. Singh, who has already produced a paper on the relation between growth and non-agricultural employment in selected countries, will work with Ranis on the choice of technologies. Vaurs will work with Irma Adelman on Ivory Coast. A third economist, to be recruited, will work with Thorbecke on Peru and Guatemala.

Project III - (interaction among countries)

35. Duloy, to report in May 1970, is the first member of the third team. Two other economists as well as consultants have to be recruited.

Director's Office

36. Each of the research projects, consisting of contributions by economists and consultants of the Center as well as by their counterparts in the developing countries, should lead to publications. A position is requested in the director's office, for harmonizing these contributions in a publishable form, for facilitating the administration of the Center and for providing the required flexibility in the staffing pattern of the research-teams.

(3) Past performance

37. It should be stressed that, apart from myself and Miss Davis, the total input^{1/} by the end of 1969 amounted to 12 months time of a permanent economist (Singh 6 months, Norton 4 months and Vauris 2 months) plus consultant services. During the first 6 months, I had to spend most of my time on the commodity study. During the last 8 months, I had to prepare various ad hoc papers: a paper on unemployment for McNamara's address to the annual meeting; and two papers on the Pearson Commission recommendations regarding the commodity problem. Taking into account this work, the net input available for the three research projects was limited. It is in relation to the net input that the progress achieved so far on these projects has to be assessed.

38. In view of the shortage of resources, I decided to concentrate initially on Mexico for Project I and on unemployment for Project II. Thus, we could at least reach a critical mass somewhere. Regarding unemployment, a background paper was given to the President and a working paper by Singh was circulated in November 1969. Regarding the multilevel programming model, we have succeeded in arousing interest in Mexico, in the Bank and in the academic community. Although our terms of reference specified that we should engage only in "problems taking several years for fruition", we have set the end of December 1970 as the target for a contribution on Project I to be published in the form of a book.

^{1/} For administrative purposes, Sundrum and Oury were previously shown on the staff of the Center. Sundrum has never worked for the Center. Oury was here for 8 months before being transferred to the Agriculture Department. During this period, Oury pursued his study on weather and crop insurance, the findings of which, he published in an article in Finance and Development. He is applying the methodology which he developed to several countries in his present work in the Agriculture Department.

Table 1: Staffing pattern

| | Permanent | | Consultants |
|--------------------|-------------------------|--------------|--------------------|
| Director's office | (1) Goreux | (French) | |
| | (a) Economist | | |
| <u>Project I</u> | | | |
| Mexico | (2) Condos | (Greek) | (7) Manne, Kornai |
| | (3) Norton | (U.S.) | Winkelman, Bassoco |
| | (4) Miss Davis | (U.S.) | Vietorisz, Lissak |
| East Africa | (b) Stoutjesdijk | (Dutch) | Frank |
| South Korea | | | Westphal |
| <u>Project II</u> | | | |
| | (5) Singh | (Indian) | Ranis |
| Ivory Coast | (6) Vaurs | (French) | Mrs. Adelman |
| Peru | (c) Economist | | Thorbecke |
| | (i) Research assistant | | |
| <u>Project III</u> | | | |
| | (8) Duloy | (Australian) | Consultant |
| | (d) Economist | | Consultant |
| | (e) Economist | | Consultant |
| | (ii) Research assistant | | |

Professional budget: The slots presently authorized are numbered (1) to (8); slot (7) is occupied by a long-term consultant and slot (8) is committed and will be filled in May 1970. The five slots requested are numbered (a) to (e).

Consultants' budget: Manne, who occupies a slot, does not fall under the consultants' budget; the others do. Contracts with Kornai and Ranis have to be negotiated. Kornai's contract will be short-term, as are those of Winkelman and Bassoco.

Research assistants' budget: Two slots are requested; one is to be filled in FY1970 and one in FY1971. These are numbered (i) and (ii).

Miss Penny Davis

January 22, 1970

Richard C. Manning

Request of Mr. Norton

1. In your conversation with Mr. Roger Norton on Friday January 23, please pass on the following message:

"Many thanks for your offer to help in tracking down data. There is just one crucial link missing amongst the items we could reasonably hope for at this stage. These are production costs for principal crops in the project areas for years around 1960. Would you please call Lic. Atanacio Espinosa R. at 546-0214 (Oficina de Estadística y Estudios Economicos of S.R.H.). You will be obliged to speak Spanish. Thank him for all he has done to date and ask him if he has not already done so, to mail these costs lo mas pronto posible. Please try to impress him with the fact that lack of these data is really holding up the study.

Should he be unavailable you might call the Director of Irrigation Districts, Ing Abelardo Amaya B. at 546.8070 or 546.6586 to whom I wrote on this matter quite recently. He, by the way, speaks English fluently. I would be overjoyed to have a positive outcome of this request rather than yet another vague promise - even incomplete material will be an infinite improvement on our present state of ignorance".

2. If you feel the message is too long to handle in your conversation just let me have a number where Mr. Norton can be contacted and I will call him directly. Thank you for your assistance.



Ec. Dept Research Program

INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: MR. ORIS WELLS
FOODAGRI
ROME

DATE: JANUARY 21, 1970

**CLASS OF
SERVICE:**

LT Poly

Wi

COPIES - ERGAS AND ADOMAKOH, FAO

COUNTRY: ITALY

TEXT: EAST AFRICAN FERTILIZER STUDY CONDUCTED JOINTLY BASIC RESEARCH
Cable No.: CENTER WORLD BANK AND EAST AFRICAN DEVELOPMENT BANK STOP WOULD
GREATLY APPRECIATE FAO COOPERATION FOLLOWING OUR DECEMBER CONVERSATION
HAVE CONTACTED COUSTON STOP UNDERSTAND COUSTON WILLING SPEND FIRST
OR SECOND WEEK FEBRUARY EAST AFRICA ON WAY INDIA STOP UNDERSTAND
WORLD BANK WOULD COVER SUPPLEMENTARY COST REROUTING AND SUBSISTENCE
EAST AFRICA STOP OUR CONSULTANT PROFESSOR FRANK WILL STOP FAO
JANUARY TWENTYSIXTH AT FOUR PM FINALIZE ARRANGEMENTS STOP LETTER
FOLLOWS REGARDS

GOREUX

NOT TO BE TRANSMITTED

MESSAGE AUTHORIZED BY:

NAME Louis M. Goreux

DEPT. Basic Research Center

SIGNATURE *[Signature]*
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

CLEARANCES AND COPY DISTRIBUTION:

cc: Messrs. Friedman
Collier
Jeffries

LMG:pmh

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INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO:

MR. ORS WELLS
FOODAGEL
ROME

DATE:

JANUARY 21, 1970

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SERVICE

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COPIES - ERGAS AND ADOMAKOR, TAO

COUNTRY:

ITALY

TEXT:

EAST AMERICAN FERTILIZER STUDY CONDUCTED JOINTLY BASIC RESEARCH
CENTER WORLD BANK AND EAST AMERICAN DEVELOPMENT BANK STOP WOULD

Cable No:

GREATLY APPRECIATE TAO COOPERATION FOLLOWING OUR DECEMBER CONVERSATION
HAVE CONTACTED GOURTON STOP UNDERSTAND GOURTON WILLING SPEND FIRST
OR SECOND WEEK FEBRUARY EAST AMERICA ON WAY INDIA STOP UNDERSTAND
WORLD BANK WOULD COVER SUPPLEMENTARY COST REROUTING AND ASSISTANCE
EAST AMERICA STOP OUR CONSULTANT PROFESSOR FRANK WILL STOP TAO
JANUARY TWENTYSIXTH AT FOUR PM FINALIZE ARRANGEMENTS STOP LETTER

1970 JAN 21 PM 6:09

RECEIVED
GENERAL FILES

FOLLOWS REGARDS

GOVEXUX

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MESSAGE AUTHORIZED BY:

NAME: Louis M. Govaux

DEPT: Basic Research Center

COMMUNICATIONS
JAN 21 7 36 PM 1970

[Handwritten Signature]

(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

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EC Dept - Research Program

Form No. 27
(7-61)
INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: MR. IDDI SIMBA
EADEVBANK
13 PORTAL AVENUE (P.O. Box 7128)
KAMPALA

DATE: JANUARY 20, 1970

CLASS OF SERVICE: LT

COUNTRY: UGANDA, EAST AFRICA

TEXT:
Cable No.: RE YOUR CABLE JANUARY 15 STOP FRANK WILL ARRIVE KAMPALA TUESDAY
MORNING JANUARY TWENTYSEVENTH AND REMAIN EAST AFRICA UNTIL FEBRUARY 13
STOP STOUTJESDIJK EXPECTED FEBRUARY FIRST UNTIL FEBRUARY TWENTIETH
LETTER FOLLOWS REGARDS

GOREUX

NOT TO BE TRANSMITTED

MESSAGE AUTHORIZED BY:
NAME Louis M. Goreux
DEPT. Basic Research Center
SIGNATURE *[Signature]*
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

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Created for Director

Set Up by Accounting Division

SIGNATURE

(SIGNATURE OF INDIVIDUAL AUTHORIZED TO SIGN)

RECEIVED
GENERAL FILES

DATE: 1970 JAN 20 PM 6:14

NAME: JAMES M. COLEMAN

MESSAGE AUTHORIZED BY:

STANDARDIZATION AND COPY DISTRIBUTION:

NOT TO BE REPRODUCED

CONFIDENTIAL

RECEIVED FOR THE DIRECTOR

FROM: DIRECTOR, FEDERAL BUREAU OF INVESTIGATION, WASHINGTON, D.C.

TO: SAC, NEW YORK (100-15739)

COPY NO:
TEXT:

RE: MURDER OF MARTIN LUTHER KING, JR., CIVIL RIGHTS

CLASSIFICATION:

CONFIDENTIAL

RE: MURDER OF MARTIN LUTHER KING, JR.
FEDERAL BUREAU OF INVESTIGATION
NEW YORK OFFICE

SERIAL: 11
CLASS OF:

DATE: JANUARY 20, 1970

OUTGOING MIBS

ASSOCIATION

INTERNATIONAL DELEGATION

(1-1)

Form No. 33

RECONSTRUCTION AND DELEGATION

INTERNATIONAL BANK FOR

COOPERATION

INTERNATIONAL FINANCE

OFFICE MEMORANDUM

TO: FILES

DATE: Jan. 19/70

FROM: C. P. van Dijk

SUBJECT: Economics Department - Sector and Projects Studies Program for 1970-71

On December 31, 1969 a meeting took place between Messrs. Ballantine and van Dijk of the Education Projects Department and Messrs. van der Tak and Thias of the Economics Department to discuss Mr. van der Tak's proposed research program for 1970-71 as set out in Mr. van der Tak's Office Memo dated October 31, 1969. The meeting discussed Items 8 through 14 of the proposed program.

Item 8. Reevaluation of Projects

The reevaluation of the Tunisian Project is now in progress and would be available for study in EPD in the course of 1970. Reevaluation of other projects would be necessary in the future, but a decision about other specific projects would be postponed till the first reevaluation has been studied and discussed.

Item 9. Education Planning Models

It is unlikely that in the short run much progress can be made in developing useful comprehensive education planning models, but in certain more limited fields "technical models" can be developed to rationalize and greatly accelerate our present work (enrollments projections, financial projections, etc.). It was agreed that Mr. Holm from Berkeley would join the ED on February 1970 to carry out a survey of existing models and their usefulness. It was agreed that not too much time should be spent on this item and that Mr. Holm should be able to carry out this survey in about 2-3 months.

Item 10. Education Policy Problems

Professor Rogers from Columbia University would continue his study of alternative ways of financing education. Further steps in this field would not be taken without comparing our work program with what is carried out by IIEP.

Item 11. Labor Market Problems

At the present stage this item is not so much a separate research project but a topic included in other research items such as the Tunisian study mentioned in Item 8. It would be necessary to keep ourselves fully informed about developments in ILO's World Employment Program. It was agreed that as a separate item, this project would be kept in cold storage until more is known about the results of the ILO program.

Item 12. Efficiency of General Education Processes

It was agreed that much work on this item had been done already outside the Bank and that an extensive literature in the field exists. This item was not considered of high priority.

Item 13. Rural Education and Training for Socio-Economic Development

This item is of very high priority for the Bank's future operation in the education sector. It was agreed that the issues involved are extremely complex, closely tied to a number of other sectors and that the expertise of a great number of different professions would be required. The sheer magnitude of the problem should not discourage us, however, from making a start in investigating the problems involved and seeking solutions.

Item 14. Technical/Vocational Training for Industry and Urban Employment

It was agreed that this also is an item of high priority and presents problems of comparable magnitude to Item 13. Here also a start should be made by ED, but not without taking a close look at what Messrs. Coombs and Perkins may be doing.

CPvD/DSB:lm

cc: Messrs. Chadenet, Baum.
van der Tak, Thias

EC Dept - Research Program

Form No. 27
(6-68)

INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: MR. E. STOUTJESDIJK
17 TAMBOERSTRAAT
ROTTERDAM

DATE: JANUARY 20, 1970

CLASS OF SERVICE: LT

W4

COUNTRY: NETHERLANDS

TEXT: WISH CONFIRM TELEPHONE CONVERSATION STOP FRANK ARRIVES TEN PM
Cable No.: SUNDAY JANUARY TWENTYFIFTH WILL CALL ON ARRIVAL TO ARRANGE
MONDAY MORNING MEETING WITH YOU AND MONTY STOP ~~LEAVES PARIS~~ FRANKLEAVES PARIS
1320 MONDAY

L. GOREUX

NOT TO BE TRANSMITTED

MESSAGE AUTHORIZED BY: Louis M. Goreux
NAME: Louis M. Goreux
DEPT.: Basic Research Center
SIGNATURE: *L. Goreux*
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

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Checked for Dispatch: 7

INCOMING CABLE

DATE AND TIME OF CABLE: **JANUARY 15, 1970** **1041**

LOG NO.: **ITT 10 / 15**

TO: **GOREUX INTBAFRAD**

FROM: **KAMPALA**

| ROUTING | |
|-------------------|-------------------|
| ACTION COPY: | MR. GOREUX |
| INFORMATION COPY: | |
| DECODED BY: | |

TEXT:

RE YOUR LETTER DECEMBER THIRTYFIRST CONFIRM THAT YOUR PROPOSED
STUDY ON FERTILIZERS IS ACCEPTABLE. PLEASE MAKE ARRANGEMENTS
FOR THE STUDY. LETTER FOLLOWS

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January 13, 1970

Professor Robert Oliver
Division of the Humanities and Social Sciences
California Institute of Technology
Pasadena, California 91109

Dear Bob:

I have recently returned from an extensive mission to India, Pakistan and Iran and thus have not had time to write you concerning your prospective role with us starting this summer. At present we are in the process of refining our research program for the next year and to some extent thereafter. I am sure one of the topics will interest you. In particular, I would like to have you deal with one major operational issue of urban economics in terms of an important country. In that way you could cover the literature on the subject as well as test your conclusions with field data. The Bank would have the benefit of your research as well as useful knowledge on a country which is important to our urban work.

I understand that the financing of your year with us can be handled by the budget which the Economics Department is likely to get next year. Accordingly, I suggest you plan on being here next June.

All the best for the New Year to you and your family,

Sincerely,

Richard M. Westebbe
Chief, Economics of
Urbanization Division
Economics Department


RMWestebbe:cc

cc: Mr. Kamarck

Mr. Herman G. van der Tak

December 30, 1969

Noel McIvor *NM*

Economics Department Sector and Projects Studies Program for 1970-71

1. I attach a copy of a memorandum from Mr. Evans to Mr. Baum about your studies program for 1970-71.

2. I attach also two memoranda from our Divisions on irrigation and livestock. I think these memoranda are self-explanatory. In work on the evaluation models for grain storage programs, we feel the emphasis should be on price stabilization effects and their benefits rather than on the problem of waste, which is theoretically comparatively simple. We have some doubts as to whether the incentives for farmers and intermediary banks, the study of which is proposed in the evaluation of agricultural credit projects, is really justified as a study of a methodological problem. The proposals for investigation of Indian irrigation projects seem loosely defined and would seem to require a tighter focus.

NMcIvor:ptv

Attachments (3)

Ec. Dept - Research Program

Mr. W.G. Baum

December 30, 1969

L.J.C. Evans
LJE

Economics Department Sector and Projects Studies Program for 1970-71

I refer to Mr. van der Tak's memorandum to you of October 31. We are in general agreement with the proposals in the field of agriculture in the program attached to the memorandum. In particular, we agree with the emphasis given to studies in the fields of livestock, irrigation, credit and land settlement. There have been some discussions between our staff and Mr. van der Tak on these proposals and I suggest that Mr. van der Tak's people keep in close touch with the Divisions concerned in our Department during the course of the studies being undertaken.

NM
NMclvor:ptv

cc: Mr. van der Tak

Mr. H. van der Tak

December 29, 1969

A. D. Knox *AK*

Sector and Projects Studies Program for 1970-71

1. Following the discussions between yourself, Mr. de Weille and Mr. Hogg, the purpose of this memo is to confirm our understanding both as to the need and priority of the items affecting this Department that appear under the sub-head TRANSPORTATION in your October 31 memo to Mr. Baum.

2. The proposed studies under the sub-head are:

- No. 15 Transport Planning Models Study - Phase III - Applications
- 16 Highway Design Study - Phase II - Experiments in Africa
- 17 Re-appraisal of a Port Project
- 18 National Transport Policy - Transport Coordination Studies
- 19 Economics of Ports Study
- 20 Review of the Economics of Aviation
- 21 Review of Urban Transport Planning Approaches
- 22 Study of Tourism Project Appraisal Methodologies

3. Obviously Item 21 (Urban) and Item 22 (Tourism) must now be discussed with the appropriate new Departments as well as with us, to the extent there may be transport aspects involved in the study. From our side we can see no objections with the broad scope of work indicated for them.

4. As regards No's 15, 16 and 17 these are essentially the continuation of already agreed work. It is clear, however, that No. 16 (Highway Design Study) will involve substantially greater funds than was envisaged when Phase I began, or has ever been involved in a Bank research project. There may be a case, therefore, for considering the costs (US\$150-200,000) outside the normal consultants/research budget. As you know, Phase I for this study was borne on this Department's budget. As soon as the first phase is complete or firmer cost estimates are available, I suggest we meet to discuss how we should approach Programming and Budgeting on this item.

5. Item 19 (Economics of Ports Study) could well result in the publication of a collection of papers on the topics involved, as has been suggested in the past.

6. Item 20 (Aviation) we feel should concentrate more on the methodological issues of appraisal (particularly benefit measurement and forecasting techniques in an environment where there are significant shortages of crucial data). We face a growing number of proposals or requests for financing/technical assistance in relation to airport projects. In many instances our first contacts or discussions of such projects involve the general transport economists, most of whom are not expert in the field. A paper which would

December 29, 1969

help them to discuss meaningfully with consultants and government officials such matters as preparing terms of reference for studies, or for preparing documents in support of financing requests, would be particularly helpful.

7. Our main reservation at this stage relates to Item 18 (National Transport Policy - Transport Coordination Studies). In principle, we can see the need for additional work on this important topic, especially as we move to a 'country strategy' approach in Bank work. From the staff discussions between our two Departments, however, it appears that your proposal needs both clarification and expansion. May I suggest, therefore, that a separate paper be drawn up on this and then considered. While appreciating that the researcher should not condition the research, I would stress that this is a topic which requires wide, practical experience on the part of the person undertaking it as well as sound professional ability. I hope you will take this into account.

8. Since the proposed research program will require cooperation at a number of points with this Department's staff, I would be particularly grateful if you could identify as soon as practicable the help needed, by whom, and approximately when so that we can take it into account not only in assessing our staff work load for budget purposes but also in our forward planning of staff assignments and travel.

8. In relation to the General Study (No. 1) - Labor versus Capital Intensive Techniques - I draw your attention to the fact that the ILO has been interested in this field. As to the specific suggestion of examining a road project, may I suggest you prepare a separate paper for discussion with the Highway Division Chiefs?

9. Finally, I attach a copy of a memo (L. Foulquien to E.V.K. Jaycox) suggesting some other points that may be worth investigation either by your Department or our own General Economics Group in the context of operational work. This could form the basis of a separate discussion before we both finalize our consultant's budget preparation for the next fiscal year.

ADKnox/VWHogg:mk

cc: Messrs. W.E. Baum, G. Baldwin/S. Lipkowitz
Division Chiefs and Advisers

Ec. Dept. - Research
Prog.

Mr. D. S. Ballantine

December 24, 1969

C. P. van Dijk

Economics Department - Sector and Projects Studies Program for 1970-71
Some Comments

May I submit the following comments on Mr. van der Tak's research proposal for 1970-1971.

Item No.

8 Reevaluation of Projects. Our agreement with any additional projects under this heading should await the outcome of the Tunisian study, of which the analytical approach and results should be studied carefully to evaluate the usefulness for our work.

9 Education Planning Models. A comparative study of available models is useful in a general way; the evaluation of their relevance should take place with reference to specific objectives. If this research item should contribute to the Bank's operational work (identification, preparation, appraisal, etc.) these objectives should be worked out in close collaboration with EPD to avoid entering dead-end sheets.

10 Educational Policy Problems (Financing of education). This item has been discussed in detail before in connection with Prof. Rogers terms of reference. No comments.

11 Labor Market Problems. Before the Bank would undertake independent research in this field, I would like to see closer coordination with ILO's World Employment Program.

12 Efficiency of the General Education Processes. Research into what has already been done in this field would appear to be the first priority before any new research project is undertaken.

13 Rural Education and Training for Socio-Economic Development. This is obviously a priority sector and we should try to convince Economics Department to put more emphasis on this item than on items 9 through 12.

14 Technical/Vocational Training for Industry and Urban Employment. Also a priority item of the same order as No.13.

CPvD:lm

Mr. Mats Hultin

December 16, 1969

Richard Johanson

Comments on Proposed Sector and Project Studies Program for 1970-71

During your absence I have taken the liberty of commenting on the proposed research program by the Economics Department.

Perhaps these comments will be useful to you in responding to Mr. van Dijk regarding his request of December 5.

Education Planning Models (#9)

The application of simulation techniques to school building would seem appropriate. In cases where required expansion of secondary schools is constrained by available financial resources, perhaps the efficiency of building resources could be maximized by (1) varying the architectural specifications to suggest alternative configurations, and (2) by automatically scheduling use of space and teacher time.

Efficiency of General Education Processes (#12)

This research program serves the second general objective of E.P.D., viz., "increased efficiency to reduce cost levels to the limits of available resources". (Guidelines for Sector Reviews, p.2.). As such, it should be accorded high priority. Teacher salaries largely determine costs per graduate. One method of reducing these costs might be to increase the number of pupils per teacher. Experiments with increased class size, therefore, ought to be a prime candidate for research on educational efficiency.

Rural Education and Training for Development (#13)

This proposal appears to be based upon a fallacy, viz., that the "urban bias" of rural primary education has contributed to the low esteem of agriculture and exodus to the cities. If the findings of Foster and Clignet in West Africa are representative, "... the popular notion that curriculum is a major determinant of vocational aspirations will have to be abandoned, and with it the idea that one can generate economic development by according high priority to agricultural and technical education." (M. Blaug, Cost-Benefit Approach to Educational Planning, p. 27). The question of education's role in rural economic development is indeed crucial. However, it should not overrate the efficacy of education from the start.

In short, it is difficult to assess the proposed research program without further details on scope and objectives of each proposal. They cover a wide range of questions. Eventually, they will require sharp focus on specific issues. What resources will the Economics Department bring to bear on these questions in terms of number and competence of personnel?

RJohanson/sp

Ec. Dept - Research Program

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(7-61)
INTERNATIONAL DEVELOPMENT
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INTERNATIONAL BANK FOR
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INTERNATIONAL FINANCE
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TO: DEMUTH
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PARIS 16^e

DATE: NOVEMBER 25, 1969

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COUNTRY: FRANCE

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NOT TO BE TRANSMITTED

MESSAGE AUTHORIZED BY:

NAME Louis M. Goreux *Lgoreux*

DEPT. Basic Research Center

SIGNATURE *Lgoreux*
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

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Mr. Hans Fuchs

November 24, 1969

George Kalmanoff

Research Program for 1970-71 of Sector and Projects Studies Division
of Economics Department

This is in response to your query of November 17, 1969 on what the subject Division could be doing for us.

A basic point to be made is that this Division does not work in the industrial sector, though there is, of course, some overlap with industry in some of the things it does. It works on problems of agriculture, transportation, education, and public utilities. Our "research arm" in the Economics Department is the separate Economics of Industrialization Division.

The research activities of the latter Division are set forth in the attached memorandum of July 14, 1969. These were discussed at a July 29, 1969 meeting of the Economics Department Research Committee, which has inter-departmental representation; the minutes of this meeting are also attached. As you will note, Messrs. Baum and Hilton were present. One topic, "Economic Evaluation of Industrial Projects", is specifically earmarked for cooperative efforts with the Sector and Projects Studies Division (see paragraph 12 of July 14 memo). Future modifications of the research program of the Industrialization Division can, of course, be considered in the light of the needs which arise from our experience in the Industrial Projects Department.

The topics listed in Mr. van der Tak's draft of October 31, 1969 relate to the four sectors on which his Division works, including the one listed under "General" but which it is intended to apply initially to transportation (this is the topic "Labor versus Capital Intensive Technologies"). Nevertheless, it seems to me the Industrial Projects Department would be interested directly in the research results of some of the topics, and indirectly in the later application to industry of the approaches taken in others. We would be directly interested in the results of a study of Labor Market Problems (no. 11) and of Technical/Vocational Training for Industry and Urban Employment (no. 14). Our interest would be indirect, in the sense indicated above, in the cases, among others, of Labor versus Capital Intensive Technologies (no. 1), Computer Simulation of Appraisal Models (no. 2), and of Empirical Investigations Based on Project Experience and Reevaluation of Projects (nos. 4, 8, and 17).

GK:yib

G.K.

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NOVEMBER 19, 1969

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GOREUX INTBAFRAD

FROM:

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(7-61)

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RECONSTRUCTION AND DEVELOPMENT

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CORPORATION

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NAME Louis M. Goreux
DEPT. Basic Research Center

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(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

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cc: Mr. Bazin
LMGoreux:pmh

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NAME: L.M. Goreux
DEPT.: Basic Research Center
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CC: M.L. BAZUN

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TO: MR. KOCHAV
AMBASSADOR HOTEL
MEXICO CITY

DATE: OCTOBER 10, 1969

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Basic Research Center

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MR. KOCHVA

DATE:

OCTOBER 10, 1969

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ASSOCIATION

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CORPORATION

INTERNATIONAL FINANCE

October 21, 1969

Those Listed Below

Jack L. Lowther

Minutes of Research Committee Meeting Regarding Quantitative Techniques
and Analysis Division Research Program

Attached for your information are the minutes of a Research Committee Meeting held on October 17, 1969, to discuss the research program of the Quantitative Techniques and Analysis Division of the Economics Department. The research program of the Division was discussed by research topic. Topic numbers used in the minutes are the same used in the Division's research program. I have attached a copy of the Division's research program for those who have not yet received one.

Attachment:

Distribution: Those Present, and
Messrs. Stevenson
Bass
Chamfournier
Hoffman
King (B.)
Gulhati
Collier
de Wilde
McLarnid
Loridan

JLlowther:rl

Mr. Louis Goreux

October 23, 1969

Thomas Geer and Kenji Takeuchi

Your Memorandum of October 15, 1969 on Pearson Commission Recommendation No. 9

1. We have examined your paper and we are sympathetic to the approach. However, the economic reasoning behind your hypothesis that there exists a relationship between the level of opportunity costs and the size of a market share of a producing country is not obvious to us. We must also admit that we were not able to be persuaded by your arguments because of difficulties in reading your paper. It would certainly require a considerable amount of time and effort to scrutinize the logical validity of your model and the assumptions underlying it.
2. It would certainly help a reader if you could include a simple example of two exporting LDC's with one having a larger market share (say, 80 percent) and the other a smaller market share (20 percent), in which you show in numerical terms the desirability of locating a project in the smaller exporting country with the higher opportunity cost in preference to locating it in the larger exporting country with a relatively lower opportunity cost.
3. We would like to see, if it is convenient and if you want us to give you any additional comments, your algebraic model in a concise manner allowing for a step-by-step evaluation of it.

TGeer/KTakeuchi:dfb

R. KS

cc: Messrs. Kamarck
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Mr. C. G. Harral, Mrs. I. Isaac, Mr. A.P. Israel
Mrs. J. Mijares, Mr. L.H. Miller, Mr. E.M. Pernia, Mr. A. Ray
Jan de Weille

October 17, 1969

Next Year's Research Program

I attach a discussion draft of a research program for next year. I would like to discuss this draft with you on Tuesday, October 21 at 11:30 a.m. in the small conference room.

Attachment

cc: Mr. H. G. van der Tak

JdeWeille:ann.

Mr. Alexander Stevenson

October 16, 1969

Arthur E. Tiemann *AT*

Research Projects

Regarding your memo on the above subject (dated October 7, 1969), I would like to draw your attention to the fact that some work on employment trends mentioned in item b) of Sir J. G. Crawford's letter is already in progress within the Bank. Mr. Lara, an Assistant Statistician of the General Statistics Section, is helping Mr. S. K. Singh of the Basic Research Center in estimating a world unemployment model, which covers, among other things, estimation of an employment function for non-agricultural employment and projection of unemployment over the next two decades. Presumably projection of unemployment will be done after taking into consideration the additional employment opportunities in the non-agricultural sector and shifting of surplus labor available in the agricultural sector.

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A.Kundu/nss

OFFICE MEMORANDUM

TO: Mr. H. G. van der Tak

DATE: October 29, 1969

FROM: Shlomo Reutlinger *SR*SUBJECT: Major Research Areas and Studies in Progress and Proposed, October 1969

1. Below is a list of topics of studies now in progress and proposed to be initiated during the next year. (THE NEW STUDIES ARE IN BOLD FACE.) The classification merely suggests the major characteristics or focus of a study. The classes are not always mutually exclusive.

I. Project Studies1. Computer Simulation of Appraisal Models

2. The purpose is to make explicit the calculations which are common in the appraisal of a certain type of project and to program them for computerized calculations. The immediate benefits consist of (i) clarification of model and assumptions, (ii) opportunity for sensitivity and risk appraisals. There is a very strong demand for computer programmed project appraisal models in the Bank and from many agencies who appraise projects in developing countries. Often we find that there is a capability in a country for assembling basic data and relationships but a shortage of people who can synthesize their implications. Also many countries have more computers than capable programmers.

In Progress: - Beef Range Project

- Irrigation Project

Proposed : - MORE TYPES OF LIVESTOCK PROJECTS

- MORE IRRIGATION PROJECTS

- LAND SETTLEMENT PROJECTS

- CREDIT PROJECTS

2. Project Planning and Appraisal Models

3. The purpose is to suggest appropriate new models for planning and appraising specific types of projects or modify presently used models.

In Progress: - Cost-Benefit Models for Grain
Storage Programs

Proposed : - EVALUATION OF AGRICULTURAL CREDIT
PROJECTS: INCENTIVES FOR FARMERS
AND INTERMEDIARY BANKS

3. Empirical Investigations Based on Project Experience

4. These studies aim at providing empirical testing of models and parameter values used in appraising projects and advising on policy. Some studies will aim at comprehensive reappraisal of a particular project. Other studies will report on topical investigations based on project experience. Some attention will be devoted to setting up design and reporting systems of data in conjunction with new and ongoing projects.

In Progress: - Re-evaluation Study of Mexican Irrigation Projects

Proposed : - INVESTIGATION OF ISSUES IN PLANNING IRRIGATION PROJECTS IN INDIA: EXTENSIVE VS. INTENSIVE WATER APPLICATION PER UNIT OF LAND; MECHANIZATION AND EMPLOYMENT IMPLICATIONS, WATER CHARGES, ETC.

- SOME EXPERIENCES WITH CREDIT PROJECTS

- RE-EVALUATION OF LAND SETTLEMENT PROJECT IN KENYA

- RE-EVALUATION OF LIVESTOCK PROJECT

II. Sector Studies

4. Analytical Approaches to Agricultural Sector Planning

5. Much of the sector analysis of the Bank is on a piecemeal or fragmented basis. Developments in particular commodity areas are analyzed without regard to available factor supplies within and outside the sector. Market potentials are similarly analyzed without considering demand substitutions. Development programs resulting from such analyses become impossible as bottlenecks develop and prices slide unexpectedly.

6. The general objective of this project is to evaluate the efficiency and sufficiency of various concepts and tools for comprehensive sector analysis. Mathematic programming and simulation models will be the first and principal methods to be analyzed and tested. However, it is expected that other methods may be suggested as a result of the experience gained from these investigations.

In Progress: - Agricultural Sector of Portugal

- Agricultural Sector of Brazil

5. Studies Related to Agricultural Development Strategies

7. The objective is to conduct empirical investigations primarily based on countrywide data on questions of agricultural development strategy.

Selected Proposed
Topics:

- PROJECTION OF SUPPLY AND DEMAND
EXPANSION OF FOODGRAINS IN ASIA
WITH ALTERNATIVE AGRICULTURAL,
FOOD AND OPULATION POLICIES
- INCOME DISTRIBUTION EFFECTS OF
"GREEN REVOLUTION"

6. Major Water Resources Development Models

8. The objective is to review and suggest improvements in models used for planning of large multi-purpose water resource development projects in terms of their operational significance for Bank decisions (through the Special Projects Department) in this area.

SReutlinger:bsc

cc. Messrs. G. Ablasser
A. C. Egbert
P. Duan
T. Husain
R. C. Manning
H. Kim
P. King
Mrs. C. Carr

RESEARCH PROGRAM FOR QUANTITATIVE TECHNIQUES AND ANALYSIS DIVISION

The following program outlines seven major areas of research in which studies should be undertaken by the division. The two-year program will be based on these outlines. All are substantial areas of interest both to the Bank and to the development community in general, and all are relevant to the country economic work of the Bank. It should be emphasized that the studies chosen will be carried out in full cooperation with the area departments and will focus on specific countries and case studies.

A. Simulation

1. Simulation Models - A study of the uses of simulation models and their application to development analysis and projection. Comparisons will be made with conventional methods and the relative strengths and weaknesses set forth. Such models will include the macro-economic section of the Harvard transport model, the Lockheed model, the Simulmatics Venezuela model, the various CSNERD models, and others. These models will be developed typically on the computer and will focus on specified countries. Examination will be made of the data sensitivities and of the various specifications of the functional equations. This area is particularly important as the Bank needs to have a sound expertise to be able to judge the increasing number of "systems analysis" proposals made both to it and to the member countries.

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2. Micro-Analytic Model - This will be a model that is built up from the various components of economic activity to the whole macro model. Typically it would consider separately all the firms in the economy and would attempt to cover 20 or 30 representative groups of individual consumers. The model would at the same time identify the flows of some one-hundred or so major resources and goods in the economy. These would all be combined on a computer with a view to looking at the macro-economic implications of the behavior of the micro-components. Beyond this experiments would be made of the differences of applying policy (taxes, etc.) on a micro-level and applying the same on a macro-basis, also the effects of random shocks on both levels will be assessed. Specifically, this approach is already being applied to Ghana in the present study. It also may be possible to link this approach with work of the Population Studies Division.

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B. Programming and Planning

3. Programming Models and their Application to Development - This study will look at the various types of programming models and will identify the manner in which these models can be of assistance in the planning and execution of development. Typically the study will look at the various methods of approaching non-linearities and the areas in which it is important to find some better form than the linear model. Examples of areas which should be covered are integer programming of plant decision, and log linear functions to represent consumption so that pricing can play a role and the consumer can react to the extremes of the market (as evidenced in the shadow prices) that are so often found in programming models of a linear type.

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4. Planning Techniques - This study will look at the various quantitative planning techniques that are currently being used in the LDCs and try to assess their effectiveness and realism. It will attempt to evaluate whether the techniques being used are suitable for the problems at hand and whether they are at the correct level of sophistication (most techniques are too sophisticated). Furthermore the study will look at the data requirements for the various techniques and the implicit manpower needs and whether these are matched to the country availability. Finally the study will concentrate on the problems that must be answered by the planners (and those that they should avoid) and then come up with a set of planning techniques that are optimal in an operational sense for the planning situations encountered, and outline the data, time and manpower needed for each and what can be expected of the outputs. Also the study will try to define what the external aid donors (as distinct from the nation) needs to have in the way of a country plan.

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5. Information Systems - This study will look at the role of information flows in the process of economic development, particularly between the public sector and the rest of the economy and also within the public sector itself. An examination will be made of the extent to which limitations upon what is commonly termed "absorptive capacity" are the direct result of faulty or incomplete information systems. The study will also proceed to look at the role of data banks, and remote access information systems in facilitating the flow of economic and operational information around the operating parts of the economy. Another part of the study will focus on the information needed to make decisions in less developed countries and the current and potential ways of getting this information to the decision makers. This then will involve asking questions as to what data is now being collected and by whom and how much is being used and by whom. Finally, some assessment will be made of existing data facilities, how they can be better utilized and whether they need to be supplemented.

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6. Input-Output Analysis - This study will try to answer the following questions. How can this tool best be used in the analysis of development and in the projection of the possible economic activity of these countries? What are the problems encountered as a result of changing coefficients or of poor data? What type of data is important and what type of interpolations and guesses typically have to be made? What is the optimum balance between the desire for sectoral detail and the data requirements for a disaggregate model? The study will also look at the questions of industry coefficients and the extent to which they are transferrable on a worldwide basis, and if so, can the results of import substitution and the growth of industry be assessed correctly with an input-output analysis. Finally, the study will look at the proposition that certain coefficients are measures of the level of development and that there is a continuum of the values of these coefficients along the path of development.

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C. Macro-Economic Projection Models

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7. Projection Model Methodology - This study will explore the various types of models that can be used to make projections of economies, particularly the types of projections needed for country economic analysis. It will try to evolve a limited set of small models, differing solely in their focus or in the central constraint on development that is assumed, that can be used in a moderately uniform fashion for country analysis. Furthermore, it will attempt to clarify the significance of the various national income accounting definitions required. Finally the aim will be to come up with a generalized set of computer programs for using such models.

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8. Review of Country Projections - This study will look at the economic reports of the Bank and focus on their macro-economic projections. It will assess the extent to which these projections turned out to be correct and what were the reasons for divergences from the projections. At present Bank economic reports are interesting, but rarely useful in the long run as there is little or no attempt made to look in retrospect at the projections and recommendations, and rarely if ever is a country called to task for not "performing". Such a study will enable us to understand the reasons for falling short of expectations, and enable us to obtain a better framework for writing economic reports.

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D. The Analysis of Growth

9. Sources of Growth - This study will look at the factors which produce growth in an economy, particularly those sectors which produce surplus resources so that the process of growth can be augmented. For example, traditional agriculture is likely to grow, but only about as fast as population and it may not be a true source of growth; on the other hand, sectors such as petroleum are likely to grow at a very rapid rate and to the extent that the earnings are retained in the economy, they become available for investment elsewhere. One important question will be the extent to which the public sector can itself be an engine of growth, or whether in fact it more often turns out to be an inhibitor.

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10. Imports and Growth - This will be a study of the role of imports in economic activity and the impact of imports on growth. (It may also look at the process of import substitution and comparative advantage.) Import classification systems will come under this project and an attempt will be made to arrive at standard end-use classification that can be related meaningfully to macro-economic variables. The study will look at different types of imports, specifically capital goods, raw materials, and consumer goods and identify the ways in which these relate to economic activity and growth. Finally, the study will consider the interrelationship between the supply of foreign exchange, output and employment and the extent to which the former can be used to further the aims of the latter two.

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E. Interface Analysis

11. Interface Problems - This study will look at the relationship between macro-models and sectoral models and try to bridge the gap. Of particular interest will be the extent of the information that must be passed across such

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* Item 8 embraces work in its early stages as well as advanced work.

an interface, and thus the events in the sectors that will have little or no effect on the macro considerations, and conversely, those things that are in the macro model which will not affect the micro sectors. Linkages will be studied and both the supply and the demand connections will be analyzed. Furthermore, along the same line, the study will tackle the problem of aggregation. Theory suggests that there is substantial bias introduced into a system by a lack of detail, and that adding up sectors and treating them in concert loses valuable information. Practice however seems to indicate just the opposite, that the macro-micro linkages are minimal and that working from the macro level down to detail does not uncover any noticeable bias. Beyond this the study will of course look at the question of the macro-economic implications of a project and whether it is at all necessary to look at anything more than the direct effects of a project.

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F. Macro-Economic Analysis

12. Demand Models - The purpose of this study is to look at the nature of demand for output in LDCs, whether it be exports, consumption, or investment goods. Typically the models of these countries look at the production side, as it is assumed that underdevelopment is a matter of supply bottlenecks, lack of social overhead, minimum plant size, etc. Demand is typically treated as a fixed coefficient function, particularly consumption. To add to the distortion consumer patterns are derived from cross section elasticities which are likely to be more divergent from unity than time series. The purpose of these studies would be to look at the actual nature of demand in LDCs and to determine why it is demand, not supply, that usually makes projections fail to come close to realizations. The point is that demand is at present the weakest part of any model of an LDC and thus a substantial effort should be directed to ascertaining its functional nature. In addition to the consumer demand, attention should be paid to the nature of demand for investment goods and how this flows into domestic and import demand.

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13. Recessions in LDCs - Typically it has been assumed that the problems of development are problems of supply and that growth is held back by lack of productive capacity. Recently however, the Bank has run into several cases where underdeveloped countries have experienced recessions of varying lengths, and these setbacks have been entirely due to a lack of aggregate demand, usually brought about by an overextension of capacity. The study will try to assess the extent to which such problems are true aggregate demand questions, or whether they are more the result of sectoral bottlenecks or deficiency in the supply of a particular factor other than productive capacity. Furthermore, the study will go on to try to answer the questions as to how such problems should be dealt with if they do exist, or at least to refine our tools of observation to the extent that we can define exactly what is happening in such cases of apparent lack of aggregate demand.

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14. Prices and Markets - The sources of price changes will be examined with particular focus on the public sector, monetary and fiscal policy and the role of external influences in generating them. Also the role of the agricultural sector will be studied and the questions asked as to what are the

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principal causes of price movements in this sector, and whether such movements are reversible. Finally the study will look at the role of institutions in price determination and examine the monopolistic elements of the economy and whether they contribute to instabilities. Since prices are determined in markets this will lead to consideration of the role of the market mechanism in development. What exactly is the role of the market in an underdeveloped economy? Is underdevelopment simply a matter of the partial or complete failure of this mechanism, and if so what are the methods by which it might be made to work? Are indivisibilities a real or perceived impediment to the functioning of the market? What should be the role of the public sector in the functioning of the market? Can it substitute completely for the market, or should it simply ensure through policy that the market has the best possible conditions in which to operate? What should government do about the wide swings typically encountered in a functioning market in LDCs?

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G. Labor and Employment

15. Study of Employment - This important factor is becoming quite common as an objective of development, yet we know very little of the nature of employment in LDCs. The excuse of data is often given, but there may be enough information now available for studies to be made into the nature of employment and how it relates to output and growth. Questions such as the conflict between growth and employment will be explored. Beyond this the study will get into questions of the nature of employment and look at the characteristics of employment when differentiated according to skill class, and to what extent the production functions have fixed coefficients with respect to these classes. This then leads to questions of skill bottlenecks and the problems of identifying them.

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16. Productivity - The intention would be to look at the determinants of productivity in the developing countries, in order to investigate the hypothesis that additional output can be obtained without the injection of new capital if labor productivity can be raised. The possibility of a clash between the objectives of higher productivity and increases in employment will also be reviewed.

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March 13, 1969

THE ECONOMICS DEPARTMENT RESEARCH COMMITTEE

Minutes of Meeting Held Friday, October 17, 1969 on Research
Program of the Quantitative Techniques and Analysis Division

Those Present: Messrs. Kamarck, (Chairman), Economics; Henderson, Economics - Q.T.A. Division, Chief; Carter, Economics - Q.T.A. Division; Knox, Public Utilities Project Department; Schmedtje, Western Africa Department; Baldwin, Office of the Director, Projects; Adler, Director, Programming and Budgeting; Krishnaswamy, Director, E.D.I.; Niebuhr, South Asia Department; Goreux, Basic Research Study Group; and Lowther, (Secretary), Economics.

1. Mr. Henderson made the following introductory remarks:
 - (i) The research program circulated to the members of the committee represented the Division's opinion of the broad range of topics on which much research was needed of a kind which the Division was in principle able to undertake. In view of the small size of the Division, it was not an indication of the actual work they expected to do in the near future, or indeed at all.
 - (ii) In the past, the research work undertaken by the Division has arisen almost entirely from specific needs expressed by operational departments of the Bank. Such needs would certainly continue to be an extremely important factor, but it was hoped that through the agency of the Research Committee the aims and content of the program could be broadened.
 - (iii) The precise nature of the work they will do will be affected by the staff they have - both in a quantitative and a qualitative sense - i.e. the amount of work is strictly limited by staff constraints and the kind of work depends in some degree on the interests and abilities of the staff members.

2. After Mr. Henderson's remarks, Mr. Kamarck gave some background on the Division. It was established to explore the possible uses within the Bank of quantitative techniques that were being developed in the academic world, and to act as a channel of information concerning such work. It has achieved a substantial degree of success in this, and has achieved useful results in some practical applications of techniques. The division now needs advice on the approach they should take in relation to future research activities.

3. The committee expressed concern about the vagueness of the research program circulated to them. Since the topics listed covered broad fields in general terms it was difficult to give precise advice on the contemplated research. They wished to know how the researchers conceived of each project before passing judgement on its relevance and suggesting changes or additions to the program. Also, they desired to know whether the research will attempt to contribute to econometric literature or draw on existing literature and relate it to Bank operations. The best way to answer the committee members' questions and discuss the specific details of the program was to consider each topic individually. A discussion of the topics ensued.

(1) Simulation Models: The Division will review various simulation techniques and critically analyze them to determine their potential contribution to Bank economic work. The object is to take an unbiased critical look at such techniques, for which excessive claims are sometimes made. A specific research project now under way is an evaluation of the macro-economic portion of the Harvard Transport Model (HTM) being developed for Colombia. The results of the current activities will be:

(i) Improvement of the H.T.M. paper on the lessons learned from this; and

(ii) A more general paper on the uses of simulation models.

The Division also hopes to develop expertise that will enable them to comment upon systems analysis proposals which consulting firms may make to the Bank.

A question was raised about whether or not the research would yield a general computer program which could be used for simulations in other countries. The answer was that it was hoped that a generalized macro-economic model would eventually be developed.

(2) Micro-Analytic Model: The Division is developing a country macro model based essentially on a micro-economic foundation. It uses the relatively simple economy of Ghana (work based on a request from the West Africa Department) where there are a tractable number of economic entities affecting the overall functions of the economy.

(3) Programming Models and their application to Development: Current work on this project is to evaluate non-linear techniques in development programming models. The object is to explore within the framework of a quantitative model the possible implications of different sets of development goods.

(4) Planning Techniques: The Division has been looking at some of the quantitative techniques of planning that are being currently applied in developing countries, with a view to advising Area Departments and the countries concerned of what seem to be the uses and limitations of these techniques. Mr. Adler felt that this aspect of the Division's activities deserved particular attention.

4. Of the remaining topics (5 through 16) only 7, 8 and 11 were discussed in detail by the Committee because these are the only ones on which some work is being done.

- (7) Projection Model Methodology: The Division has developed projection models for some of the countries in which Division staff members have participated in economic missions (including Ghana, Jamaica, Solomon Islands and Kenya). Their object is to evaluate projection model techniques in the Bank's operational environment and suggest improved methods of making projections.
- (8) Review of Country Projections: In this project, the Division wishes to review past country Economic Reports to determine the nature and accuracy of projections made therein. In effect, they wish to analyze the methods and the outcomes of country projections, and if possible to suggest methods for improvement.
- (11) Interface Problems: This is a study to look at the relationship between macro-models and sectoral models and an attempt to bridge the gap. An instance of this is the Division's involvement in the Harvard Transport Model. The point was made that since the present Divisional Research Program was prepared, this particular topic has become a major concern of the Basic Research Center.

5. Some committee members felt that some of the inactive topics not discussed in detail by the Committee should be considered for inclusion in the active work program. They were as follows:

Mr. Adler felt more consideration should be given to No. 15, A Study of Employment because of the Bank's new emphasis in this area and the lack of information available. Mr. Kamarck pointed out that work in several of the Divisions of the Department relates to the employment problem and that we are coordinating with other International Organizations in this field. (Mr. Kamarck will attend an ILO seminar on research in unemployment in early November.)

Mr. Schmedtje suggested that consideration be given to No. 10 Imports and Growth.

Mr. Niebuhr suggested that No. 15 Employment and No. 5 Information Systems be considered at the expense of items 7 and 8. He indicated that the initial steps in evaluating projection models and their use in the Bank (7 and 8) were successful and the effort in these areas should now be covered by Area Department so that the Q.T.A. Division could turn to other items like 15 and 5. Mr. Kamarck pointed out that the techniques referred to in relation to topics 7 and 8 were not as widely used as they might be and further work is needed in this area. Mr. Henderson indicated the Division's desire to study these topics further and in particular to continue

the analysis, already undertaken in relation to the 1968, 5 year projections of the characteristics of country economic forecasts. Nevertheless, Mr. Kamarck recognized the need for investigations of the field of information handling (Mr. Niebuhr specifically suggested a study of the ways of converting data into information) and expressed the hope that it might be possible to place it on the list for active research.

6. The final consensus was that the research program as now written is somewhat too broad and general for specific conclusions from the committee. The Division's explanations of their work in progress were clear and understandable and the committee generally agreed with the Division's approach to the problems being investigated. Mr. Henderson said that he would be glad to prepare another paper setting out in more detail the possibilities for future research by the Division, with the object of enabling the Research Committee to give specific advice on priorities and choices.

General Files ~~Mr. Allen~~*Economics Dept -
Research Program*

OFFICE MEMORANDUM

TO: Members of the Research Committee
and Mr. Hans Schmitt

DATE: October 7, 1969

FROM: Andrew M. Kamarck *amp*SUBJECT: Meeting

in D556

There will be a meeting of the Research Committee on Wednesday, October 15, at 2.30 p.m. The Committee will discuss the proposed research program of the Quantitative Techniques and Analysis Division (Q.T.A.).

Attached is a paper on Q.T.A.'s proposed research program written in March of this year. The program has not changed since that time. The paper will provide the basis for the Committee's discussion.

Work in some of the areas has begun or is about to begin. The topics listed in the program can thus be categorized according to the amount of progress that has been made. The three categories that might be distinguished are:

- A. Topics on which substantial progress has been made.
- B. Topics on which work has just begun or will begin soon.
- C. Topics which are of interest and importance but which will receive little or no attention this fiscal year because of insufficient time and staff.

On the attached paper, the category of each topic is marked in the right hand margin of the page. You may thus review the research program as a whole and simultaneously be informed as to the amount of work done on each topic.

When the committee meets, I would like the members to discuss the relevance of the program to Bank needs and offer some judgement with regard to the priorities assigned to each area of study and each topic.

If you are unable to attend the meeting, you may send an alternate of your own choosing. If it will not be possible for you or an alternate to attend, please notify Mr. Lowther (Ext. 2285).

Attachment:

JLowther:rf

RESEARCH PROGRAM FOR QUANTITATIVE TECHNIQUES AND ANALYSIS DIVISION

The following program outlines seven major areas of research in which studies should be undertaken by the division. The two-year program will be based on these outlines. All are substantial areas of interest both to the Bank and to the development community in general, and all are relevant to the country economic work of the Bank. It should be emphasized that the studies chosen will be carried out in full cooperation with the area departments and will focus on specific countries and case studies.

A. Simulation

1. Simulation Models - A study of the uses of simulation models and their application to development analysis and projection. Comparisons will be made with conventional methods and the relative strengths and weaknesses set forth. Such models will include the macro-economic section of the Harvard transport model, the Lockheed model, the Simulmatics Venezuela model, the various CSNERD models, and others. These models will be developed typically on the computer and will focus on specified countries. Examination will be made of the data sensitivities and of the various specifications of the functional equations. This area is particularly important as the Bank needs to have a sound expertise to be able to judge the increasing number of "systems analysis" proposals made both to it and to the member countries.

Cat.

A

2. Micro-Analytic Model - This will be a model that is built up from the various components of economic activity to the whole macro model. Typically it would consider separately all the firms in the economy and would attempt to cover 20 or 30 representative groups of individual consumers. The model would at the same time identify the flows of some one-hundred or so major resources and goods in the economy. These would all be combined on a computer with a view to looking at the macro-economic implications of the behavior of the micro-components. Beyond this experiments would be made of the differences of applying policy (taxes, etc.) on a micro-level and applying the same on a macro-basis, also the effects of random shocks on both levels will be assessed. Specifically, this approach is already being applied to Ghana in the present study. It also may be possible to link this approach with work of the Population Studies Division.

B

B. Programming and Planning

3. Programming Models and their Application to Development - This study will look at the various types of programming models and will identify the manner in which these models can be of assistance in the planning and execution of development. Typically the study will look at the various methods of approaching non-linearities and the areas in which it is important to find some better form than the linear model. Examples of areas which should be covered are integer programming of plant decision, and log linear functions to represent consumption so that pricing can play a role and the consumer can react to the extremes of the market (as evidenced in the shadow prices) that are so often found in programming models of a linear type.

A

4. Planning Techniques - This study will look at the various quantitative planning techniques that are currently being used in the LDCs and try to assess their effectiveness and realism. It will attempt to evaluate whether the techniques being used are suitable for the problems at hand and whether they are at the correct level of sophistication (most techniques are too sophisticated). Furthermore the study will look at the data requirements for the various techniques and the implicit manpower needs and whether these are matched to the country availability. Finally the study will concentrate on the problems that must be answered by the planners (and those that they should avoid) and then come up with a set of planning techniques that are optimal in an operational sense for the planning situations encountered, and outline the data, time and manpower needed for each and what can be expected of the outputs. Also the study will try to define what the external aid donors (as distinct from the nation) needs to have in the way of a country plan.

B

5. Information Systems - This study will look at the role of information flows in the process of economic development, particularly between the public sector and the rest of the economy and also within the public sector itself. An examination will be made of the extent to which limitations upon what is commonly termed "absorptive capacity" are the direct result of faulty or incomplete information systems. The study will also proceed to look at the role of data banks, and remote access information systems in facilitating the flow of economic and operational information around the operating parts of the economy. Another part of the study will focus on the information needed to make decisions in less developed countries and the current and potential ways of getting this information to the decision makers. This then will involve asking questions as to what data is now being collected and by whom and how much is being used and by whom. Finally, some assessment will be made of existing data facilities, how they can be better utilized and whether they need to be supplemented.

C

6. Input-Output Analysis - This study will try to answer the following questions. How can this tool best be used in the analysis of development and in the projection of the possible economic activity of these countries? What are the problems encountered as a result of changing coefficients or of poor data? What type of data is important and what type of interpolations and guesses typically have to be made? What is the optimum balance between the desire for sectoral detail and the data requirements for a disaggregate model? The study will also look at the questions of industry coefficients and the extent to which they are transferrable on a worldwide basis, and if so, can the results of import substitution and the growth of industry be assessed correctly with an input-output analysis. Finally, the study will look at the proposition that certain coefficients are measures of the level of development and that there is a continuum of the values of these coefficients along the path of development.

C

C. Macro-Economic Projection Models

Cat.

7. Projection Model Methodology - This study will explore the various types of models that can be used to make projections of economies, particularly the types of projections needed for country economic analysis. It will try to evolve a limited set of small models, differing solely in their focus or in the central constraint on development that is assumed, that can be used in a moderately uniform fashion for country analysis. Furthermore, it will attempt to clarify the significance of the various national income accounting definitions required. Finally the aim will be to come up with a generalized set of computer programs for using such models.

A

8. Review of Country Projections - This study will look at the economic reports of the Bank and focus on their macro-economic projections. It will assess the extent to which these projections turned out to be correct and what were the reasons for divergences from the projections. At present Bank economic reports are interesting, but rarely useful in the long run as there is little or no attempt made to look in retrospect at the projections and recommendations, and rarely if ever is a country called to task for not "performing". Such a study will enable us to understand the reasons for falling short of expectations, and enable us to obtain a better framework for writing economic reports.

A*

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B

D. The Analysis of Growth

9. Sources of Growth - This study will look at the factors which produce growth in an economy, particularly those sectors which produce surplus resources so that the process of growth can be augmented. For example, traditional agriculture is likely to grow, but only about as fast as population and it may not be a true source of growth; on the other hand, sectors such as petroleum are likely to grow at a very rapid rate and to the extent that the earnings are retained in the economy, they become available for investment elsewhere. One important question will be the extent to which the public sector can itself be an engine of growth, or whether in fact it more often turns out to be an inhibitor.

C

10. Imports and Growth - This will be a study of the role of imports in economic activity and the impact of imports on growth. (It may also look at the process of import substitution and comparative advantage.) Import classification systems will come under this project and an attempt will be made to arrive at standard end-use classification that can be related meaningfully to macro-economic variables. The study will look at different types of imports, specifically capital goods, raw materials, and consumer goods and identify the ways in which these relate to economic activity and growth. Finally, the study will consider the interrelationship between the supply of foreign exchange, output and employment and the extent to which the former can be used to further the aims of the latter two.

C

E. Interface Analysis

11. Interface Problems - This study will look at the relationship between macro-models and sectoral models and try to bridge the gap. Of particular interest will be the extent of the information that must be passed across such

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* Item 8 embraces work in its early stages as well as advanced work.

an interface, and thus the events in the sectors that will have little or no effect on the macro considerations, and conversely, those things that are in the macro model which will not affect the micro sectors. Linkages will be studied and both the supply and the demand connections will be analyzed. Furthermore, along the same line, the study will tackle the problem of aggregation. Theory suggests that there is substantial bias introduced into a system by a lack of detail, and that adding up sectors and treating them in concert loses valuable information. Practice however seems to indicate just the opposite, that the macro-micro linkages are minimal and that working from the macro level down to detail does not uncover any noticeable bias. Beyond this the study will of course look at the question of the macro-economic implications of a project and whether it is at all necessary to look at anything more than the direct effects of a project.

A

F. Macro-Economic Analysis

12. Demand Models - The purpose of this study is to look at the nature of demand for output in LDCs, whether it be exports, consumption, or investment goods. Typically the models of these countries look at the production side, as it is assumed that underdevelopment is a matter of supply bottlenecks, lack of social overhead, minimum plant size, etc. Demand is typically treated as a fixed coefficient function, particularly consumption. To add to the distortion consumer patterns are derived from cross section elasticities which are likely to be more divergent from unity than time series. The purpose of these studies would be to look at the actual nature of demand in LDCs and to determine why it is demand, not supply, that usually makes projections fail to come close to realizations. The point is that demand is at present the weakest part of any model of an LDC and thus a substantial effort should be directed to ascertaining its functional nature. In addition to the consumer demand, attention should be paid to the nature of demand for investment goods and how this flows into domestic and import demand.

C

13. Recessions in LDCs - Typically it has been assumed that the problems of development are problems of supply and that growth is held back by lack of productive capacity. Recently however, the Bank has run into several cases where underdeveloped countries have experienced recessions of varying lengths, and these setbacks have been entirely due to a lack of aggregate demand, usually brought about by an overextension of capacity. The study will try to assess the extent to which such problems are true aggregate demand questions, or whether they are more the result of sectoral bottlenecks or deficiency in the supply of a particular factor other than productive capacity. Furthermore, the study will go on to try to answer the questions as to how such problems should be dealt with if they do exist, or at least to refine our tools of observation to the extent that we can define exactly what is happening in such cases of apparent lack of aggregate demand.

C

14. Prices and Markets - The sources of price changes will be examined with particular focus on the public sector, monetary and fiscal policy and the role of external influences in generating them. Also the role of the agricultural sector will be studied and the questions asked as to what are the

C

principal causes of price movements in this sector, and whether such movements are reversible. Finally the study will look at the role of institutions in price determination and examine the monopolistic elements of the economy and whether they contribute to instabilities. Since prices are determined in markets this will lead to consideration of the role of the market mechanism in development. What exactly is the role of the market in an underdeveloped economy? Is underdevelopment simply a matter of the partial or complete failure of this mechanism, and if so what are the methods by which it might be made to work? Are indivisibilities a real or perceived impediment to the functioning of the market? What should be the role of the public sector in the functioning of the market? Can it substitute completely for the market, or should it simply ensure through policy that the market has the best possible conditions in which to operate? What should government do about the wide swings typically encountered in a functioning market in LDCs?

C

G. Labor and Employment

15. Study of Employment - This important factor is becoming quite common as an objective of development, yet we know very little of the nature of employment in LDCs. The excuse of data is often given, but there may be enough information now available for studies to be made into the nature of employment and how it relates to output and growth. Questions such as the conflict between growth and employment will be explored. Beyond this the study will get into questions of the nature of employment and look at the characteristics of employment when differentiated according to skill class, and to what extent the production functions have fixed coefficients with respect to these classes. This then leads to questions of skill bottlenecks and the problems of identifying them.

C

16. Productivity - The intention would be to look at the determinants of productivity in the developing countries, in order to investigate the hypothesis that additional output can be obtained without the injection of new capital if labor productivity can be raised. The possibility of a clash between the objectives of higher productivity and increases in employment will also be reviewed.

C

March 13, 1969

Division Chiefs

October 7, 1969

Alexander Stevenson

Research Projects

I attach a note ^{oct 3} which Sir John Crawford has sent me giving some suggestions for research projects. I would be glad to have any comments you may wish to make about them.

Attachment

AStevenson:js
cc: Mr. Kamarck



INCOMING CABLE

DATE AND TIME
OF CABLE:

OCTOBER 6, 1969

1829

LOG NO.:

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TO:

GOREUX INTBAFRAD

FROM:

RIO DE JANEIRO

TEXT:

HAVE ADVANCED MY SCHEDULE TO BE IN MEXICO OCTOBER 13 TO 19

REGARDS

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REVIEW

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FROM: SAC DE TUNISCO
TO: COMEX BUREAU
DATE: 10/3
OCTOBER 7 1969

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INCOMING COPY

OFFICE MEMORANDUM

TO: Mr. Alexander Stevenson

FROM: J.G. Crawford

SUBJECT:

DATE: October 3, 1969

Dear Sandy,

I find I have little of value to contribute by way of ideas for your research program. The field is so vast that almost anything goes!

However, you might care to consider the following in respect of developing countries:

- a) Using the Bank's economic surveys, identify the most common institutional (economic) weaknesses. Examples: marketing facilities for foodgrain, livestock, small industry credit facilities, capital market, etc.
- b) Employment trends in agricultural and non-agricultural employment, confirming or modifying view that non-agricultural industries are not able to absorb urban "workers" let alone unemployed farm workers.
- c) Correlation of growth in agriculture and agriculture oriented industry, (i.e. supply of inputs). (Similarly, relate role of growth in agriculture to growth rate achieved in secondary tertiary industry sectors. Thus, does depression in agriculture sector induce depression in other sectors?)
- d) What are the implications for Burma and Thailand of self-sufficiency in rice production if achieved in India, Pakistan and Indonesia? We need to be studying all the economic implications of recent changes in agricultural development.

The general idea would be to derive the maximum for both topics and material from Bank surveys - in the interests of what students rightly call "relevance".

Best wishes.

Sincerely,

JGCrawford/ah

Mr. H. G. van der Tek

September 4, 1969

D. S. Ballentine DSB

Sector and Projects Studies Division Research Program for
FY 1969/70 - Education Sector

With reference to your memorandum of August 6, 1969 to Mr. Kismarck on the above, we support the inclusion of the following studies in your FY 1969/70 research program:

- Education planning models
- Financing of education.

We would welcome an opportunity of discussing the proposed terms of reference for these studies when you are in a position to undertake them.

ell
OHC:alika:ec

cc: Messrs. Baum
van Dijk

August 21, 1969

Mr. Fred M. Westfield
Professor of Economics
Vanderbilt University
Nashville, Tenn. 37203

Dear Mr. Westfield:

I thank you for your letter of June 26 and apologize for the delay in replying.

Considerable work on multi-purpose reservoirs has been done in the Bank, in particular, in Pakistan during the Indus study. When I saw Falcon, I had been thinking of including the Indus as a case study in our first research project, but this has not been done. Mr. Yumus should rather contact Mr. Van der Tak's division if he needs information.

Regarding finance, I, unfortunately, would not be able to do anything from my side, and I hope that Mr. Yumus has now found a satisfactory solution.

Yours sincerely,

Louis M. Goreux
Director
Basic Research Center

LMGoreux:pmh
cc: Mr.H. Van der Tak

Orig - Eco Dept - Research
Yellow copy Prog

THE ECONOMICS DEPARTMENT RESEARCH COMMITTEE

Minutes of Meeting Held Tuesday July 29, 1969 on Research
Program in Industrialization

1. The Committee met to discuss the research program of the Economics of Industrialization Division, on the basis of a presentation of the program in a memorandum of July 14, 1969 a background document. Mr. Kalmanoff introduced the discussion:

(i) Limited Resources:

Due to the heavy requirements for operational support fulfilled by the Industrialization Division, only 40 per cent of available manpower is allocated to research. The other 60 per cent is allocated to country mission work. (Requests for mission support called for 90 per cent of the manpower in the Division but by reducing the number of missions from 20 to 13, the 90 per cent figure was reduced to 60 per cent. It is felt that adequate coverage of priority missions can be achieved if the Division supports 13 missions and recommends the use of consultants for some of the others.) The very limited manpower requires the establishment of very strict priorities for research.

(ii) Development Strategies in Semi-Industrial Countries:

Mr. Bela Balassa, consultant to the Economics Department, has proposed a study on Development Strategies in Semi-Industrial countries. The study will be a sequel to the Structure of Protection study now being concluded. It shifts the major research emphasis of the Division from detailed reviews of major industry branches to country policies regarding the industrial sector. The Committee was invited to comment on the general worthiness of the study and make specific recommendations regarding the countries to be studied. Argentina, Chile, Ireland, Spain, Taiwan, Singapore were being considered.

(iii) Industry Branch Studies:

The Division has been devoting considerable time to studies of industry branches. The Committee was asked to consider whether or not these studies are useful and, if they are, what branches should be studied.

(iv) Other Studies:

The Committee was asked to comment on the needs for research in the following areas:

- (a) Exports of Manufactures,
- (b) Small Scale Industries,
- (c) Public Sector Industries,
- (d) Regional arrangements.

2. The Committee asked whether staff expansion would be necessary to meet the mission support and research requirements of the future. Considering the Bank's intention to visit 30 larger, borrowing member countries annually and others biennially and triennially for a total of about 55 missions per year, the Division's participation in 13 missions seemed meager. Mr. Kalmanoff indicated that, if the Division were expected to support country mission work adequately, additions to the staff would be necessary. Requirements would undoubtedly be greater after fiscal year 1970.

3. Discussion of the proposal for a study of Development Strategies in Semi-Industrial Countries began with Mr. Balassa explaining the background. The Structure of Protection Study, which will be completed this fall, explores the effects of protection systems on industrial development and resource allocation. As a sequel, the Development Strategies Study will evaluate the experience of semi-industrial countries to cover more comprehensively the features of industrial policy which affect development. The recently completed OECD Development Center study, "Industry and Trade in Seven Developing Countries", concerns the same general field but does not obviate the need for the Bank to undertake a study. The OECD study contained country studies of uneven quality and concentrated on historical aspects. The Bank study will analyze country situations more systematically on the basis of a common methodology.

4. The Committee felt the Development Strategies Study would be worthwhile, but some concern was expressed about the choice of countries to be reviewed. Countries suggested as alternatives to some of those presented were: Israel, Brazil, Colombia, Korea, Malaysia, Nigeria, Turkey, Iran, Yugoslavia.

5. Mr. Balassa explained that the six countries mentioned by Mr. Kalmanoff were chosen because:

- (i) They have all reached a comparable level of industrialization.
- (ii) They all have a high degree of industrialization relative to other LDC's. The study could thus be used to learn lessons which would enhance further industrial development in those countries as well as provide guidance to less industrially developed countries.
- (iii) Certain specific issues, such as data base, coverage elsewhere, etc. ruled some countries out.

6. It was agreed that the Economics Department should make the final decision on which countries to study after considering the Committee's observations.

7. Questions regarding the details of methodology and content were raised but the Committee felt this should be left to the researchers to decide.

8. While considering the Industry Branch Studies, the Committee raised and answered the following questions:

(i) Do the studies have an impact on Bank operations? Are they helpful in evaluating projects?

- Generally there is little impact on Bank operations. The studies are not very useful in project appraisal because they provide only peripheral data that do not afford much help in dealing with the specific problems found in each project.

(ii) Do the studies contribute to general knowledge concerning industrial development?

- Some Committee members felt that no useful central tendencies can be drawn from cross-sector analyses. However, the studies were reported to be very much in demand by development finance companies in LDC's.

(iii) Would it be more appropriate for UNIDO to do this type of study?

- UNIDO has an Industrial Technology Division staffed with engineers specialized by branches of industry. They produce technically oriented studies, but with inadequate coverage of the economics of industries.

9. The consensus of the Committee was that Industry Branch Studies are of dubious value to the Bank and the Industrialization Division should reduce its effort in this area to maintaining a bibliography of studies done elsewhere.

10. With respect to the other study areas mentioned by Mr. Kalmanoff in item four of his introductory remarks, the Committee felt that high priority should be given to studies of Small Scale Industries and Exports of Manufactured Goods from LDC's. The study of Small Scale Industries should be operationally oriented and useful in defining Bank policy in this area. The study of Exports of Manufactured Goods should be directed toward the broad aspects of the problem and not attempt to come up with lists of products with good prospects. Mr. Kalmanoff agreed and indicated his Division conceived of the study precisely along the lines indicated by the Committee.

11. Before adjourning, the Committee recommended that the Industrialization Division consider a project to review the industry sections of Country Economic Reports and make recommendations for standardizing them. Existing good reports could be used as examples and some sort of a checklist could be developed. The Economics Department will consider doing this.

Attachment: List of members present.

JLLowther:rf
Cleared with Messrs. Kamarck/Kalmanoff.

THE ECONOMICS DEPARTMENT RESEARCH COMMITTEE

Meeting Held Tuesday July 29, 1969

List of Those Present

Mr. A. M. Kamarck, Economics (Chairman)
Mr. H. J. Hilton, I.F.C.
Mr. P. M. Mathew, D.F.C.
Mr. G. H. Reif, East Asia and Pacific
Mr. M. L. Hoffman, D.S.D.
Mr. G. B. Baldwin, E.D.I.
Mr. E. Lerdau, Western Hemisphere
Mr. W. Baum, Office of the Director, Projects
Mr. J. Schmedtje, Western Africa
Mr. J. Adler, Programming and Budgeting
Mr. B. Balassa, Economics
Mr. G. Kalmanoff, Economics, and
Mr. J. L. Lowther, Economics (Secretary).

June 25, 1969

✓
Letter No. 215

Dear Mr. Lutolf:

I enjoyed very much my stay in Abidjan, but I have been very busy since then. I went to Paris and Mexico and I returned just in time for a two-week seminar on our first research project.

I wrote the attached note rather quickly, but it might be of some help in our discussion with the Western Africa Agriculture and Project Departments. If the reaction is favorable, the next step would be to discuss a technical note on the survey in the Abouasso area and to contact Ivory Coast. I hope that I shall be able to write you on the subject in about two weeks. In the meantime, I would be most grateful to receive any suggestions you might have.

I wish to thank you for all the help you gave us in Abidjan, and I would appreciate it if you could pass on my thanks to Geli, Bourgin and the other members of your staff. I hope Mrs. Lutolf and yourself will enjoy your holiday in Europe, and that I may see you soon.

Yours sincerely,

Louis M. Goreux

Attachment

Mr. Franz Lutolf
IBRD-PMWA
B.P. 1850
Abidjan
Ivory Coast

LMGoreux:pmh

JUN 25 1969

Mr. I.S. Friedman, Mr. B. Chadenet,
Mr. R. Chauffournier
Louis M. Goreux

June 24, 1969

Research Project No.II: Transformation of traditional agriculture;
Case studies in Ivory Coast

1. I found considerable interest in Ivory Coast for Research Project No.II. This research project, which is to analyze alternative modes of agricultural production in relation to several economic and social criteria, would be based on two case studies. One would be in the forest zone and the other in the Savannah zone.

2. The first case study would cover the Abouasso area in the forest zone. In this area coffee and cocoa have been cultivated extensively for several decades. More recently the intensive cultivation of pineapple and palm oil has been introduced combining "blocs industriels" and "plantations villageoises". The rapid development of the "plantations villageoises" for these two crops appears to be one of the success stories of African agriculture in the forest zone. The planter, after signing a contract with the factory, has to apply a fairly sophisticated technology following precise instructions from the factory. In several respects the system is comparable to the type of production under contract recently developed in North America and Western Europe by firms such as Libby's and A & P. It represents a jump from traditional African agriculture to a type of agriculture modern even by western standards. It is proposed to analyze the socio-economic implications of such a transformation in regard to income distribution, savings and investments, creation of a "bourgeoisie rurale", etc. This could be done by slightly expanding the scope of a survey, which the Ivoirian Government plans to undertake in the Abouasso area during the course of 1970.

3. An interesting point of the study would be to analyze under which conditions it would be better to jump directly to an advanced technology rather than to reproduce the intermediate stages of the evolution of European agriculture. In addition to the general problem of transferability to other parts of the forest zone in Africa, the study could be of direct interest to the Agriculture and Transportation Departments. In this respect the survey would provide an opportunity to follow up the economic and social consequences of the palm oil project for which the Bank has signed an \$18 million loan in June 1969, and to study the economics of feeder road improvements, which may represent an additional cost to this project.

4. The second case study would relate to the Savannah zone, where opportunities for agricultural production are much more limited. A number of operations have been conducted for cotton with C.F.D.T., for groundnuts, rice and cattle. The largest scale operation has probably been for cotton. However, since a family could not harvest more than 1.5 hectares of cotton a year, the increase in cash income has been modest compared with wage opportunities in the forest zone and in Abidjan. To relax the labor constraint in the peak period, experiments have also been made with "culture attellee" and mechanization, as well as with "culture polyvalente" and an organization of production at the village rather than at the family level. A number of partial solutions have been worked out, but there is not yet a really satisfactory economic solution applicable on a sufficiently large scale, in view of the powerful stimulant the young people have to move South for finding better opportunities. This raises a very serious social and ethnic problem between North and South within Ivory Coast, and even more so, between the land locked and the coastal countries. A very profitable investment might therefore consist of promoting several centers of applied research in countries of the Savannah zone consisting of mixed teams of agronomists, economists and anthropologists to find workable solutions to agricultural development in this area. Such projects could be partly financed by the Bank under the new proposals for diversification.^{1/} It may be worth considering with the Western Africa Department whether a research project of the Basic Research Center which could lead to such a recommendation is worth undertaking.

5. The case studies would be related to the objectives and constraints of the development program of the Ivory Coast. This program consists of two sets of documents. First, an \$8 million regional socio-economic study which includes long-term prospectives was carried out between 1962 and 1967. Second, the draft Plan issued in the Spring of 1969 will be revised by the end of 1969. The Plan is complemented by a linear programming model with 27 sectors and 4 categories of labor; the objective of this model was to assess the value of the shadow prices.

^{1/} "...the Bank Group, while applying its normal lending standards and procedures, will be prepared to: ...
(f) Participate in financing agricultural and other research having high priority in developing countries, as much as possible in cooperation with other national and international institutions."
Report of the Executive Directors on Stabilization of Prices of Primary Products: Decision 1, page 3, IBRD, June 19, 1969.

INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

org. - Ec. Dept - Res. Proj.

OUTGOING WIRE

TO: *M.* LUTOLF
INTBAFRAD
ABIDJAN

DATE: MAY 20, 1969

CLASS OF
SERVICE: LT

COUNTRY: IVORY COAST

Rc

TEXT:
Cable No.: 151 ✓

YOUR CABLE 110 REF ECONOMIC WORK MISSION INCLUDING RESEARCH PROJECT STOP
GOREUX WILL ARRIVE ABIDJAN MAY 24 STOP MISS ADELMAN SCHEDULED ARRIVE FROM
ACCRA MAY 23

INTBAFRAD

NOT TO BE TRANSMITTED

MESSAGE AUTHORIZED BY:

NAME Marc L. Bazin *Marc L. Bazin*
DEPT. Western Africa, A

SIGNATURE _____
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

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cc. Mr. Goreux (Basic Research Center)
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2

INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: LUDOLF
INTABRAD
ABIDJAN

DATE: MAY 20, 1969

CLASS OF
SERVICE: LT

COUNTRY: IVORY COAST

TEXT: ISI
Cable No.

YOUR CABLE AND THE ECONOMIC WORK MISSION INCLUDING RESEARCH PROJECT STOP
GORBUX WILL ARRIVE ABIDJAN MAY 21 STOP MISS ABIDJAN SCHEDULED ARRIVE FROM
AGORA MAY 23

INTABRAD

NOT TO BE TRANSMITTED

MESSAGE AUTHORIZED BY:

COMMUNICATIONS
MAY 20 11 32 AM 1969

NAME: Harold J. Bess

DEPT: Western Affairs, A

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OFFICE MEMORANDUM

TO: Mr. L. J. C. Evans

DATE: July 18, 1969

FROM: Louis M. Goreux ⁴SUBJECT: Concentrating the scarce Bank resources in the way most beneficial to the LDC; an illustration

1. You stressed on Monday that the Bank has to concentrate its scarce human and financial resources where they can be most beneficial to the LDC. This brought to my mind a methodological problem which has preoccupied me for some time. I thought it might be useful to illustrate the methodological issue by the familiar example of cocoa. Purely for the sake of illustration, I have drawn on some data given in the Bank Report^{1/} on Cocoa, the theme of this Report is to increase yields by large applications of subsidized^{2/} fertilizers and pesticides.

2. I shall initially limit myself to the impact of Bank action on the balance of payments of the LDC. I shall suppose that the Bank has to make recommendations and to consider loan applications for several of the main cocoa producers. I shall attempt to assess the impact of Bank action by comparing two situations: in the first, the Bank does nothing in regard to cocoa; in the second, the Bank presents recommendations and extends loans for cocoa. Drawing from the abovementioned Report on cocoa, I shall make four assumptions:

- (a) In the absence of any Bank action on cocoa, production in 1973^{3/} would be equal to the medium-term supply projections given in the Report, and the world price would be equal to 24 cents per pound^{4/}. For ease of computation in this note, the corresponding figure for LDC cocoa export earnings will be taken as \$600 million.

^{1/} "The Current Economic Position and Prospect of Ghana." Vol. II
"Status and Prospects of Cocoa" AW-6a, Vol. II, May 6, 1969

^{2/} It is recommended that, for the first three years, fertilizers be supplied free to cocoa growers. AW-6a, Vol. II, para. 96(1)

^{3/} Recommendations made today cannot affect fertilizer applications before the 1970-71 campaign. Since it takes three years for the full impact of fertilizers to be felt, it seems appropriate to select the 1972-73 crop year (corresponding to 1973) for the comparison.

^{4/} Projection given in para. 212.

- (b) The supply response to prices between now and 1973 is negligible and the demand elasticity is equal to $-.5\frac{1}{2}$.
 - (c) Fertilizers and pesticides are imported from developed countries and \$1 of additional imports leads to \$5 of additional cocoa production^{2/}, when valued at 24 cents per pound.
 - (d) The impact of Bank action (recommendations and loans in the various cocoa producing countries) is to increase world cocoa production by 5 percent above the medium-term projection^{3/} for 1973 indicated in paragraph (a) above.
3. With these four assumptions, Bank action would lead to:
- (a) A 10 percent price decline.
 - (b) A 5 percent reduction in LDC export earnings, amounting to \$30 million.
 - (c) A \$6 million increase in fertilizer and pesticide imports into the LDC.
 - (d) A net loss of \$36 million in the trade balance of the LDC.
 - (e) A net gain for the developed countries.

^{1/} Chapter III stresses that supply elasticity is low. Chapter V estimates demand elasticity at $-.4$ in the 40 cents price range and $-.3$ otherwise." Para. 228. The $-.5$ value was selected to be on the safe side.

^{2/} The precise value of the ratio is unimportant to the argument.

^{3/} The medium projection corresponds to "the minimum mission estimate for Ghana and the probable estimate for Nigeria." (Table 11). The difference between the minimum and the optimistic projection for Ghana alone corresponds to 7 percent of world cocoa production. The choice of 5 percent is arbitrary. However, the argument would remain unchanged as long as the Bank action has an impact on world cocoa production. Thus, if the impact was 1 instead of 5 percent, all figures in para. 3 would be divided by 5. Similarly, if the medium-term supply projection included the impact of Bank action, the level of production in the absence of Bank action could be assumed to be 5 percent below the medium-term projection. Again the argument would remain unchanged, but the price decline referred to in para. 4(a) would be from 26.6 to 24 cents per pound instead of from 24 to 21.6 cents.

4. I shall now assume that Bank action is limited to Ghana. I shall ignore the impact of a production increase in Ghana on the other producing countries and consider only the impact on the trade balance of Ghana. I have no reason to believe that, if Ghana strongly pushes the use of fertilizers, the other countries will refrain from applying them and vice versa. Consequently, I shall assume that whether Ghana increases its production moderately or rapidly does not affect the production programs of the other countries. With these assumptions, I shall compare two cases:

- (a) In the first case, Ghana increases production without any help from the Bank; with the assumptions made previously in paragraph 2(a), this would correspond to a world price of 24 cents in 1973.
- (b) In the second case, as a result of Bank recommendations and loans, Ghana imports more fertilizer and pesticide and consequently reaches by 1973 a level of production 10 percent higher than in the first case.

Since Ghana accounts for approximately 30 percent of world exports, world supply in the second case would be 3 percent higher than in the first. The problem is to find out whether Ghana would be better off in the second case rather than the first.

5. Using two different values for the price elasticity of world demand, $-.3$ as suggested in the Report and $-.5$ as assumed in paragraph 2(b) above, these two cases can be illustrated by the following table.

| | Quantity (Q) | Price (P) | Export Earnings (PQ) |
|---|-----------------|--------------|-------------------------|
| <u>Case 1</u> | 100 | 24 | 2400 |
| <u>Case 2 (elasticity = $-.3$)</u> | 110 | 21.6 | 2376 |
| - difference with Case 1 (absolute) | +10 | -2.4 | -24 |
| - difference with Case 1 (percent) | +10 | -10 | -1.0 |
| <u>Case 2 (elasticity = $-.5$)</u> | 110 | 22.6 | 2482 |
| - difference with Case 1 (absolute) | +10 | -1.4 | +82 |
| - difference with Case 1 (percent) | +10 | -6 | +3.4 |
| $(\Delta PQ = 2482 - 2400 = 82 = 8.2 \times 10 = .36 \times 22.6 \times 10 = .36 P \Delta Q)$ | | | |

6. As appears from the table, if the price elasticity of world demand is equal to $-.3$, as suggested in the Report, prices in the second case would be 10 percent lower than in the first. Ghana would obviously lose, since its export earnings would be almost the same while its import bill would be higher.

7. If the price elasticity of world demand is equal to $-.5$, as assumed in paragraph 2(b) above, prices in the second case would be 6 percent lower than in the first. Ghana's export earnings would be 3.4 percent higher with its export volume up 10 percent. This additional output of 10 would only increase Ghana's export earnings by 82. Therefore, each additional unit of production would be worth 8.2 cents a pound for Ghana, although the prevailing world market price would be 22.6 cents. Ghana would be better off in the second case than in the first case, only if the additional output valued at 8.2 cents exceeded the additional cost of production. The additional cost in the second case would consist of the additional cost of imported fertilizers and pesticides and of the opportunity cost of the additional domestic resources needed, transportation and supervisory skills in particular.

8. Measured on the basis of the projected price which will prevail after completion of this project, the rate of return of a project may be very favorable. However, this does not imply that a country which is a major exporter would gain from the project, as shown by the above example.

9. If the projected price without Bank action appears unduly high, it may be wise for the Bank to take action which stimulates production. But in the case under consideration, the projected price of 24 cents ^{1/}, based on the minimum mission estimate for Ghana's production, does not appear unduly high. Of course, all this assumes that the action taken by the Bank would have an impact on the level of cocoa production. If it had no impact, the argument would fall. However, if the human and financial resources of the Bank are scarce, then perhaps they could be used elsewhere more profitably for the LDC.

10. For clarity, the discussion above was limited to one specific question: "Given the projection of the world prices in the absence of Bank action, is it desirable for the Bank to take actions leading to an increase in the volume of world production?" On the other hand, if a cocoa agreement with strict production or export quotas were enforced, the question could be formulated in another way,

1/ If the "optimistic estimate" for Ghana alone were used, the price would fall to 20 cents. If the optimistic estimate for Ghana, Nigeria and Cameroon were used, it would fall below 18 cents, the lowest price recorded in the post-war period.

namely: "Given the production quota of country X, which is the most efficient way for country X to achieve this production?"

11. For this second problem, the optimum solution cannot be found by considering cocoa alone. The various resource limitations have to be specified as well as the different activities reflecting the various ways of producing cocoa and other commodities from common resources. The net gain in foreign exchange^{1/} which could be obtained from the production of other crops on lands liberated from cocoa, may be greater than the foreign exchange cost attached to the intensification of cocoa production.

12. I had initially approached this problem by using a mathematical model. Since the results of such models largely depend on the assumptions made, I thought that their validity could more easily be assessed on the basis of a simple illustration. I wish to stress that the object of this note is only to stimulate discussion on the methodological issues.

LMGoreux:pmh

^{1/} For simplicity, each resource may be expressed in terms of its foreign exchange cost, following Little's proposal.

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OFFICE MEMORANDUM

July 18, 1969

To: Members of the Economics Department Research Committee, and Messrs. Raj, Diamond, C.H. Thompson, McDiamid, Weiner and Balassa.

From: Jack L. Lowther (Secretary)

Subject: Meeting of the Economics Department Research Committee

1. You are invited to attend a meeting of the Research Committee on July 29, 1969, at 9.30 a.m. in Room D 556. The purpose of the meeting is to discuss the Economics of Industrialization Division research program for fiscal year 1970. A copy of the proposed program is attached.
2. Your advice on the scope and direction of the proposed program is solicited. Comments on the Development Strategies in Semi-Industrial Countries study by Bela Belassa (see paragraph 4 of attachment) and the Industry Branch Studies (see paragraphs 8 to 11 of the attachment) would be especially appreciated.
3. If you cannot attend the meeting please call me on extension 2285.

Attachment:

cc: Mr. Kalmanoff (without attachment)

JLLowther:rf

OFFICE MEMORANDUM

To: Mr. Alexander Stevenson

July 14, 1969

From: George Kalmanoff

Subject: Research Program of Economics of Industrialization Division

1. The professional complement of the Economics of Industrialization Division for the fiscal year 1969/70 consists of a Chief and 7 staff members. Of the 8 slots, 7 are at present filled; an employment offer for the one vacant slot is now in negotiation, and it is expected that the vacant slot will be filled by the latter part of calendar year 1969. Approximately 40 percent of the resources is devoted to research, and 60 percent to the staffing of Area Department country economic missions to cover the industrial sector. The allocation of 40 percent of present resources to research represents our judgment of the appropriate balance between research and country mission work, after taking into account high priority requirements of the latter.

2. Additional resources for research besides full-time staff consist of most of the time of one permanent half-time consultant (Mr. Balassa), and a monetary allocation for the use of consultants on an ad-hoc basis.

3. The resources available for research thus consist of 3-4 man-years of permanent professional staff plus some use of ad-hoc consultants. It has therefore been necessary to establish priorities in the wide array of possible subjects for research.

Principal New Proposal

4. Besides certain on-going studies which will be brought to completion, as indicated below, the principal new research proposal to be brought to the attention of the Committee is for a study of Development Strategies in Semi-Industrial Countries. This proposal has been formulated by Mr. Balassa, who would be the project director. A detailed statement of the proposal is presented herewith as Annex A.

5. The study will be undertaken during fiscal year 1969/70; provision has been made for it in the current budget. The work would be carried out over a period of 2-3 years. This study would be a natural sequel to the study of the Structure of Protection in Developing Countries, which has been in process over the last several years, also under Mr. Balassa's direction. The Structure of Protection study is now close to completion; it is expected that a full draft will be completed during this summer or shortly thereafter.

6. Attention of the Committee should be drawn particularly to the choice of countries for inclusion in the study. It is suggested that the 6 countries to be included be selected from the following: Argentina, Brazil,

Chile, and Mexico, in Latin America; Ireland, Portugal, and Spain, in Western Europe; and Singapore, and Taiwan, in Asia.

Research on Industrialization in Southeast Asia

7. A staff member of the Division (Mrs. Hughes) who joined the Bank in September 1968 had previously completed a substantial part of a book, based largely on original field research, on the industrialization experience of 9 countries in Southeast Asia (Burma, Cambodia, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand, and Vietnam). It would be a most desirable investment for this work to be completed under Bank auspices. It could be completed by the end of calendar year 1969. The coverage in the book would be as follows:

- Chapter 1 Introductory
- Chapter 2 Southeast Asian Perspectives
- Chapter 3 Primary Product Processing Industries
- Chapter 4 Non-durable Consumer Goods Industries
- Chapter 5 Durable Consumer Goods and Producer Goods
 Industries
- Chapter 6 The Economic Structure of Manufacturing
 in Southeast Asia
- Chapter 7 Entrepreneurs and Enterprise
- Chapter 8 Labor and the Choice of Techniques
- Chapter 9 Capital and Investment
- Chapter 10 Government Plans and Policies
- Chapter 11 Southeast Asian Industrialization in the
 World Economy
- Chapter 12 Conclusions

Industry Branch Studies

8. The preparation of studies of the economics of selected industry branches with particular reference to the IDCs has hitherto represented a large part of the research activities of the Division. Work was undertaken several years ago on three capital goods branches - heavy electrical equipment, automotive industries, and heavy mechanical equipment - to determine the extent of IDC competitiveness in the capital goods area as general back-

ground in connection with the margin-of-preference issue under Bank international competitive bidding procedures. Studies of the heavy electrical equipment and automotive industries have been completed. Work is continuing on heavy mechanical equipment, in which difficulties have been encountered in completing the study in as comprehensive a fashion as originally envisaged; effort is being directed to early completion of at least part of the study of this branch.

9. Another industry branch study which has been completed and issued is on the problems of food processing industries in IDCs.

10. Two other industry branch studies which have been in process in the Division for some time are on investment costs in nitrogenous fertilizer manufacture in IDCs, and on the pulp and paper industry. The fertilizer study represents an initial effort on one aspect of the fertilizer branch, which is receiving priority attention in Bank Group operations in industry. A preliminary draft is expected in the near future. There should be continuing work on other aspects of this industry branch because of its high priority in Bank Group operations. It is not certain yet in what form a pulp and paper study may be issued; a draft which has been produced is in need of revision.

11. A general question for consideration by the Committee is whether we should in the future devote a substantial proportion of the resources of the Division to work on industry branch studies. The record of past discussions with staff members of IFC and of Bank Area Departments indicates that they did consider such studies useful. But they are apt to be time-consuming and it would be helpful to know more specifically how they are actually used, and to which branches priority should be given. Besides fertilizers, such studies could include non-durable consumer goods (e.g., textiles, apparel), consumer durables (e.g., electrical appliances), producer goods (e.g., selected chemicals, steel).

Other Areas of New Research

12. Other areas in which it is planned to carry out new research, though in some cases not as yet defined very specifically, consist of the following:

Economic Evaluation of Industrial Projects - At the present time, the function of industrial project appraisal for financing by the Bank is carried out by the IFC. This function will be transferred to a new Industrial Projects Department to be organized in the Bank, as recently announced by the management. In addition to specific industrial project financing, the Bank provides finance for industry through national development finance companies, which are appraised by the Development Finance Companies Department. The latter indeed account for the larger part of Bank industrial financing. The subject of evaluation of the economic aspects of industrial projects (in addition to the technical, financial, and management

July 14, 1969

aspects) is of great importance both for specific industrial projects for Bank financing and for projects for which Bank loans are relet by development finance companies. Methodologies for the economic evaluation of industrial projects would be a subject of continuing concern for the Economics of Industrialization Division. Some work has already been begun in this field - in connection with a request for assistance concerning appropriate methodologies received from the Turkish Development Bank, and with a seminar on shadow pricing with the participation of Prof. Ian Little of Oxford and Prof. Richard Weckstein of Brandeis University^{1/}, among others, recently organized by the Sector and Projects Studies Division. The latter Division is generally concerned with the subject of project appraisal. This work in the Industrialization Division will be resumed in cooperation with the Sector and Projects Studies Division in the fall of 1969, in an attempt to develop guidelines for practical application in industrial project appraisal.

Exports of Manufactured Goods from LDCs - This subject, which it is now generally agreed is of great importance, could be the focus of a research project. It would include: studies of impediments to exports of manufactured goods in cases of LDCs with a considerable degree of industrial development, studies of "success stories" in export of manufactures to be found among certain LDCs, and consideration of marketing problems and prospects in the developed countries for such exports from LDCs.

13. Other areas of importance on which research could be conducted, subject to other priorities and availability of resources, are: mechanisms for assistance to small-scale industry, the problems of public-sector industry, and regional market arrangements for industrialization.

Other On-Going Studies to be Completed

14. Besides the industry branch studies mentioned above, work is continuing to bring the following studies to completion:

Classification of Developing Countries by Degree of Industrial Development - Initial work toward this end resulted in the issuance of Economics Department Working Paper No. 45, Statistical Indicators of Levels of Industrial Development, May 19, 1969. Further work is now being done to yield a classification of countries by degree of industrial development. The groupings should be a useful guide to future studies of the process of industrialization and development strategies in different types of countries.

^{1/} Prof. Little is the principal author of a volume entitled "Manual of Industrial Project Analysis, Vol. II: Social Cost Benefit Analysis", 1969, which is available in preliminary form in Research Files. Prof. Weckstein's essay on "Shadow Prices for Project Evaluation in Less Developed Countries" has been issued as Economics Department Working Paper No. 47, June 20, 1969.

Mr. Alexander Stevenson

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July 14, 1969

Consumer Spending Patterns and Income Elasticities of Demand - This is intended to provide data relevant to projections of possible industrial growth in the consumer goods field. Work on the study has been going on for some time, having been interrupted by higher priority activities. The usefulness of the product and the nature of further work will be determined on the completion of the first draft.

ANNEX A

Development Strategies in Semi-Industrial Countries

A Research Proposal

Bela Balassa

1. In recent years, the tasks of the Bank have been extended from project appraisal to the evaluation of economic policies in developing countries, and the Bank has come to play an increasingly important role in advising these countries on their long-term policies. But while project appraisal is based on some general principles which have evolved in the course of the operational work of the Projects Department, the same cannot be said of the Bank's policy-advising activities. There are no firm guidelines for these activities and the policy advice given to individual countries often reflects differences between - and even within - Area Departments.

2. The lack of guidelines is in large part explained by the fact that we know little of the effectiveness of the economic policies followed by the developing countries. During much of the postwar period while Prebisch's doctrine of import substitution held sway, manufacturing industry was benefited at the expense of agriculture, and production for domestic use was favored over exports. Now the pendulum seems to be swinging in the other direction, with agricultural development and export-oriented growth coming increasingly into favor. But both these approaches have responded to practical situations and their economic rationale has not been adequately explored. Nor has much attention been given to the implications that the particular characteristics of developing countries, such as the level of industrialization, size, geographical location, and resource endowment, have for the choice of development strategy.

3. Research on the development policies applied in individual countries would help to fill this lacuna. It would aim at evaluating the experience of these countries, with a view to suggesting improvements in their policies as well as indicating the applicability of the findings to other countries in a similar situation. The conclusions based on such research would be useful to the Bank in its policy advisory activities and would assist policy-makers in the developing countries themselves. At the same time, it would be advantageous to carry out this research under the Bank's auspices. Not only could the expertise accumulated at the Bank be utilized but the studies could be made to conform to the Bank's needs.

The Choice of Countries

4. Separate research projects should be undertaken to evaluate the experience of countries at similar levels of industrialization. Pending the outcome of the Balassa-Hughes study on the classification of countries according to the stage of their industrial development, three or four such research projects may ultimately be carried out. Each of these could include 4-6 countries which may be regarded as representative of a certain level of industrialization and for which the relevant data are available. In the choice of the countries, attention should be given to the Bank's operational needs, as evidenced by the orientation of the work of Area Departments.

5. Since the results of these projects could be utilized to advise countries on the same as well as on the next lower stage, it seems appropriate to start with a group of developing countries which belong to the semi-industrial category.^{1/} Within this group, the choice may be made among the following countries: Argentina, Brazil, Chile, and Mexico in Latin America; Ireland, Portugal, and Spain in Western Europe; and Singapore and Taiwan in Asia.

6. All these countries derive about 40-50 percent of value added in commodity production from manufacturing activities and thus can be considered semi-industrial. Taiwan, Brazil, and Ireland are at the lower end of the range while Argentina, Mexico, and Portugal have the highest share of manufacturing within the group.^{2/} But there are considerable differences among the countries in question in regard to the share of manufactured goods in exports, largely reflecting differences in the inward- or outward-looking character of the development policies applied during the postwar period. They also differ in size, geographical location, and market access, so that it should be possible to evaluate the effects of these characteristics on the choice of development strategy.^{3/}

^{1/} On this category, see my "Development Strategies in Semi-Industrial Countries", IERD Economics Department Working Paper No. 34.

^{2/} It should be noted, however, that due to high levels of protection and overvaluation of the currency, manufacturing output is overvalued, and agricultural production undervalued, in Argentina and Chile and to a lesser extent in Brazil, Mexico, and Spain.

^{3/} Some comments on the individual countries, together with a comparison of the proposed research project with studies under way at the Bank and the OECD Development Center, are given in Appendix 1. In turn, the personnel requirements of the project are shown in Appendix 2.

Methodology

7. To ensure the comparability of the findings, the studies should use a common methodology prepared by the project director. The methodology would deal with the various choices open to policy-makers, the implications of the particular characteristics of the country for the choice of the development strategy, and the policy instruments which can be used in implementing it. It should also provide instructions on statistical and econometric methods to be applied in the individual studies as well as guidelines for evaluating the experience of the countries in question.
8. Among the choices open to policy-makers, one may contrast outward-looking and inward-looking strategies, where the former aims at exploiting the benefits of the international division of labor while the latter relies chiefly on import substitution. A related question is the possible need to provide special advantages to manufacturing over primary production, or to individual activities within these sectors as against according equal treatment to each. There is also the choice between reliance on free markets and government planning in productive activities, and a position has to be taken concerning the desirability of foreign investment.
9. Attention needs further to be given to the implications for development strategy of the major characteristics of individual countries. Among these, market size is of principal importance; hence the need for examining the advantages of large markets in the methodology of the project. Other characteristics are geographical location, market access, natural resources, and the availability of human and physical capital. The political and social conditions prevailing in the countries in question, and the interactions of political, social, and economic factors, too, should be analyzed.
10. A variety of policy instruments can be used to carry out alternative strategies. These include tariffs and export subsidies, exchange rate policy, the tax system, credit policy, the treatment of foreign investment, educational policy, investments in infrastructure, the role of public enterprise in manufacturing, and regional policy. One should evaluate the actual use of these instruments in the individual countries and make recommendations on improvements in their application.
11. In the country studies use needs to be made of statistical and econometric techniques. Such techniques would be applied to evaluate the effects of various policy instruments on past performance and to appraise the sources of economic growth in individual countries on a sectoral basis. The investigation should consider the contribution of physical as well as human resources to growth.
12. The findings of the individual studies will enable us to provide a comparative evaluation of the experience of the countries in question, and to make recommendations on possible improvements in the policies followed. The implications of the experience of these countries included in the research project for those on the next level of development also needs to be indicated. Finally, the findings can be utilized to prepare position papers on various policy issues for the Bank's internal use.

APPENDIX 1

Relationships with Other Studies

1. The proposed research project can build on the results of the Structure of Protection in Developing Countries project which has been limited to an appraisal of the effects of protective measures on resource allocation. This project has been sponsored jointly by the World Bank and the Inter-American Development Bank. It has included studies on the structure of protection in Brazil, Chile, and Mexico in Latin America, Norway in Western Europe, as well as Malaysia, Pakistan, and the Philippines in Asia.
2. In turn, a research project sponsored by the OECD Development Center has examined the experience with industrialization in Brazil and Mexico in Latin America, as well as India, Pakistan, the Philippines, and Taiwan in Asia. In the absence of a common methodology, there are however considerable differences among the studies on the individual countries, and they greatly vary in quality. At any rate, the studies are by-and-large historical in character and they have not given emphasis to some of the major issues pertaining to the choice of development strategies.

The Choice of Countries

3. Argentina provides a classical example of inward-looking policies. Levels of protection are high and, despite a high share of manufacturing in commodity production, it exports hardly any manufactured goods. We originally planned to include Argentina in the Structure of Protection project but the lack of cooperation by the Planning Bureau and the long illness of our collaborator, Daniel Schydrowsky, have made this impossible. We can expect cooperation from the present head of the Planning Bureau, Dagnino Pastore, and Schydrowsky could undertake work on Argentina as a consultant to the Bank.
4. In terms of population, Brazil is by far the largest among the countries in question but it has one of the lowest average per capita incomes. At the same time, this average conceals substantial interregional differences in incomes between the industrial complexes of the Sao Paulo area and low income agriculture in the Northeast. Bergsman's study on Brazil for the OECD Development Center is rather weak, thus there is room for work on the economic policies of this country. But the statistical difficulties of carrying out such a study are formidable and the Brazilian case is not characteristic of developing countries in general, most of which have a much smaller population. Instead of including Brazil in the proposed research project, we may consider devoting a separate project to large developing countries, such as Brazil, India, Indonesia, and Pakistan.

5. Chile has followed inward-looking policies like Argentina and, given the differences in size, this may have involved greater economic cost for the former than for the latter. The country is included in our Structure of Protection project and the information collected on tariffs and other measures of protection can provide a starting point for an investigation of its economic policies. Marcello Sedlovsky, an assistant professor at Harvard and a Chilean citizen, will be teaching in Santiago for the next two years and we could contract him to carry out the study.
6. Mexico provides an interesting case since it has avoided the inflation characteristic of the other semi-industrial countries in Latin America and its policies have given emphasis to the development of new exports. We will have a good study on protection in Mexico by Gerardo Bueno and a workmanlike job has been done for the OECD by Timothy King. While the Bank has an interest in Mexico, a decision will have to be reached on whether its inclusion in the proposed project will appreciably add to our understanding of Mexican policies. If the answer is in the affirmative, Donald Keesing of Stanford would be an appropriate candidate for carrying out the study.
7. Until the early postwar period, Ireland relied chiefly on exports of foodstuffs. It has since developed several branches of manufacturing by the use of tax incentives and moderate protection, and has succeeded in raising to a considerable extent the share of manufactured products in commodity production as well as in exports. Its experience can be useful for countries which now produce and export mostly agricultural products. A graduate student at the Johns Hopkins University, an Irish national associated with the principal research institute, is writing a dissertation under my direction on the system of protection in this country. His results could serve as a basis for the investigation of the Irish case.
8. Portugal is of considerable interest because of the transformation of its industry from reliance on a highly protected market to an increasingly competitive structure. It is, however, a rather special case, as it enjoys free access to EFTA markets. There are also considerable difficulties due to the poor statistical data base which speaks against its inclusion in the proposed project.
9. Spain has also followed inward-looking economic policies but has nevertheless been able to expand exports of manufactured goods. The Bank has had considerable interest in the economic policy of Spain over the last decade and this provides an additional reason for its inclusion in the project. It should not be difficult to find a Spanish-speaking economist to undertake the study, possibly in collaboration with a research institute in Spain.
10. While Singapore appears to be a special case because of its small size, there are some twenty developing countries with an even smaller population. It could, therefore, be used as an example of overcoming the disadvantages of small size through exporting manufactured goods. Mrs. Hughes has recently completed a book on foreign investment in Singapore manufacturing

with the participation of the Economic Research Center at the University of Singapore. This book, as well as research under way at the Center, would greatly reduce the time and effort needed for a Singapore study.

11. Taiwan has applied outward-looking policies, attracted foreign investment and is one of the "success stories". It has been able to expand the production and exports of manufactured goods at a rapid rate over the last decade, and manufactures now account for 50 percent of total exports. Mrs. Hughes has an interest in problems of Southeast Asian countries and she could undertake the study with the collaboration of a research institute in Taiwan. It should be added that the study prepared for the OECD Development Center is of rather poor quality.

12. For sake of comparability, data for India and Pakistan have also been included in the enclosed table. The data indicate that neither of these countries can be considered semi-industrial and, at any rate, there are some good studies available on both these countries. Jagdish Bhagwati has done the best the limited Indian data permitted and Stephen Lewis has also written a useful study on Pakistan. Incidentally, the exports of manufactured goods from the two countries consist chiefly of jute and cotton textiles.

Comparative Data for Semi-Industrial Countries, 1965^{1/}

| | Share of manufacturing in commodity production | | Share of manufactured exports in total ex- ports | | GDP | GDP per Capita | Population | Growth of GDP 1950-1965 | Growth of Exports 1953-65 |
|----------------------|---|------------------|--|-----------------|-----------|-------------------|------------|-------------------------------|---------------------------------|
| | 1953 | percent 1965 | 1953 | percent 1965 | \$million | \$ | thousands | percent | percent |
| <u>Latin America</u> | | | | | | | | | |
| Argentina | 51 | 55 ^{2/} | 9 | 6 | 17,654 | 778 | 22,691 | 3.2 | 2.4 |
| Brazil | 26 | 37 | 1 | 7 | 19,712 | 237 | 83,175 | 5.4 | .3 |
| Chile | 44 | 45 | 3 | 5 | 4,504 | 513 | 8,750 | 4.0 | 4.4 |
| Mexico | 46 | 54 | 16 | 19 | 20,616 | 467 | 44,145 | 6.1 | 5.7 |
| <u>Europe</u> | | | | | | | | | |
| Spain | 41 | 47 | 12 | 31 | 20,461 | 642 | 31,871 | 5.8 | 5.9 |
| Ireland | 23 | 40 | 10 | 28 | 2,460 | 853 | 2,884 | 2.4 | 5.6 |
| Portugal | 38 | 54 | 33 | 62 | 3,575 | 383 | 9,335 | 4.7 | 8.4 |
| <u>Asia</u> | | | | | | | | | |
| Taiwan | 21 | 36 | 2 | 50 | 2,933 | 229 | 12,791 | 8.1 | 11.0 |
| Singapore | na | 49 | na | 28 | 1,087 | 568 | 1,914 | 5.3 | 2.7 ^{3/} |
| India | na | 22 | 34 | 47 | 45,380 | 91 | 498,680 | 3.5 | 3.5 |
| Pakistan | 9 | 17 ^{2/} | 1 | 45 | 10,296 | 88 | 117,000 | 3.6 | 1.6 |

Sources: United Nations, Commodity Trade Statistics, Yearbook of National Accounts Statistics, Yearbook of International Trade Statistics.

Notes: 1/ preliminary; 2/ 1964; 3/ 1953-1963

APPENDIX 2

Budget for Project on Development Strategies in Semi-Industrial Countries

In the following the budgetary requirements are shown separately for country studies undertaken by Bank personnel, by consultants residing in the country under study, and by consultants who would need to be "imported".

Study undertaken by Bank Personnel

- 1 man-year of staff
- $\frac{1}{2}$ man-year of research assistant
- $\frac{1}{2}$ man-year of research associate in the country under study

Travel costs, including per diem for a period of 4 to 6 months

Study undertaken by local consultants

- 1 man-year of consultant
- 1 man-year of research assistant

Studies undertaken by foreign consultants

- 1 man-year of consultant
- $\frac{1}{2}$ man-year of research assistant
- $\frac{1}{2}$ man-year of research associate in the country under study

Travel costs, including per diem for a period of 4 to 6 months.

I would assume that altogether six country studies would be carried out; two each by Bank staff, by local and by foreign consultants. The budget should further include the time spent by the project director on directing and supervising the project - approximately one man-year - and travel costs for a visit to each of the countries. There would also be travel costs for two meetings of the contributors as well as computer expenses. Finally, an allowance would need to be made for engaging consultants to advise on the implementation of the project (three man-months).

Org. Ec. Dept - Res.
Priv.

July 14, 1969

Dear Bob:

Thanks for your letter of July 8. We will look forward to seeing a proposal for a research project after you have had time to go over the available material and the several proposals we discussed. As for returning in September, I am informed by our front office that I can make no commitment at this time for the use of consultants as the entire budget for this purpose in the Department is under review. I will let you know as soon as I know what budget I will have in relation to my needs. In the meantime, we should be able to accomplish quite a bit through correspondence.

Everyone sends their regards.

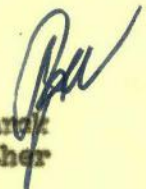
Sincerely,

Richard M. Westebbe
Chief, Economics of
Urbanization Division
Economics Department

Prof. Robert W. Oliver
California Institute of Technology
1201 East California Boulevard
Pasadena, California 91109

RMWestebbe:cc

cc: Messrs. Kamark
Lowther



7/14/69 11:22

cc: ^{Γραφείο} ~~Κατάσταση~~ ^{Κατάσταση}

1989 JUL 15 AM 11:55

Στατιστική

Επιχειρήσεις Οργανισμός
ΓΣΟΕ ΕΠΕΟ Οργανισμός Εργαζόμενων
Οργανισμός Προστασίας Οικ. Οικονομίας
Προβ. Εργασ. Η. Οργαν.

Επιχειρήσεις
Προστασίας Εργαζόμενων
Οργαν. Προστασίας Οικ.
Οικονομίας Η. Οργαν.

Επιχειρήσεις

Επιχειρήσεις Εργαζόμενων

Επιχειρήσεις
Επιχειρήσεις με προοπτική περαιτέρω ανάπτυξης στην Ελλάδα
Η οποία είναι ουσιαστικά η μείωση των λειτουργιών σε όλα τα επίπεδα
της δημόσιας διοίκησης. Η μείωση των λειτουργιών σε όλα τα επίπεδα
της δημόσιας διοίκησης είναι ουσιαστικά η μείωση των λειτουργιών
σε όλα τα επίπεδα της δημόσιας διοίκησης. Η μείωση των λειτουργιών
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των λειτουργιών σε όλα τα επίπεδα της δημόσιας διοίκησης.

Παράρτημα

Παράρτημα

Handwritten notes at the bottom right corner.

cc: Industry

OFFICE MEMORANDUM

To: Mr. Alexander Stevenson

July 14, 1969

From: George Kalmanoff

Subject: Research Program of Economics of Industrialization Division

1. The professional complement of the Economics of Industrialization Division for the fiscal year 1969/70 consists of a Chief and 7 staff members. Of the 8 slots, 7 are at present filled; an employment offer for the one vacant slot is now in negotiation, and it is expected that the vacant slot will be filled by the latter part of calendar year 1969. Approximately 40 percent of the resources is devoted to research, and 60 percent to the staffing of Area Department country economic missions to cover the industrial sector. The allocation of 40 percent of present resources to research represents our judgment of the appropriate balance between research and country mission work, after taking into account high priority requirements of the latter.

2. Additional resources for research besides full-time staff consist of most of the time of one permanent half-time consultant (Mr. Balassa), and a monetary allocation for the use of consultants on an ad-hoc basis.

3. The resources available for research thus consist of 3-4 man-years of permanent professional staff plus some use of ad-hoc consultants. It has therefore been necessary to establish priorities in the wide array of possible subjects for research.

Principal New Proposal

4. Besides certain on-going studies which will be brought to completion, as indicated below, the principal new research proposal to be brought to the attention of the Committee is for a study of Development Strategies in Semi-Industrial Countries. This proposal has been formulated by Mr. Balassa, who would be the project director. A detailed statement of the proposal is presented herewith as Annex A.

5. The study will be undertaken during fiscal year 1969/70; provision has been made for it in the current budget. The work would be carried out over a period of 2-3 years. This study would be a natural sequel to the study of the Structure of Protection in Developing Countries, which has been in process over the last several years, also under Mr. Balassa's direction. The Structure of Protection study is now close to completion; it is expected that a full draft will be completed during this summer or shortly thereafter.

6. Attention of the Committee should be drawn particularly to the choice of countries for inclusion in the study. It is suggested that the 6 countries to be included be selected from the following: Argentina, Brazil,

Chile, and Mexico, in Latin America; Ireland, Portugal, and Spain, in Western Europe; and Singapore, and Taiwan, in Asia.

Research on Industrialization in Southeast Asia

7. A staff member of the Division (Mrs. Hughes) who joined the Bank in September 1968 had previously completed a substantial part of a book, based largely on original field research, on the industrialization experience of 9 countries in Southeast Asia (Burma, Cambodia, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand, and Vietnam). It would be a most desirable investment for this work to be completed under Bank auspices. It could be completed by the end of calendar year 1969. The coverage in the book would be as follows:

- Chapter 1 Introductory
- Chapter 2 Southeast Asian Perspectives
- Chapter 3 Primary Product Processing Industries
- Chapter 4 Non-durable Consumer Goods Industries
- Chapter 5 Durable Consumer Goods and Producer Goods Industries
- Chapter 6 The Economic Structure of Manufacturing in Southeast Asia
- Chapter 7 Entrepreneurs and Enterprise
- Chapter 8 Labor and the Choice of Techniques
- Chapter 9 Capital and Investment
- Chapter 10 Government Plans and Policies
- Chapter 11 Southeast Asian Industrialization in the World Economy
- Chapter 12 Conclusions

Industry Branch Studies

8. The preparation of studies of the economics of selected industry branches with particular reference to the LDCs has hitherto represented a large part of the research activities of the Division. Work was undertaken several years ago on three capital goods branches - heavy electrical equipment, automotive industries, and heavy mechanical equipment - to determine the extent of LDC competitiveness in the capital goods area as general back-

July 14, 1969

ground in connection with the margin-of-preference issue under Bank international competitive bidding procedures. Studies of the heavy electrical equipment and automotive industries have been completed. Work is continuing on heavy mechanical equipment, in which difficulties have been encountered in completing the study in as comprehensive a fashion as originally envisaged; effort is being directed to early completion of at least part of the study of this branch.

9. Another industry branch study which has been completed and issued is on the problems of food processing industries in IDCs.

10. Two other industry branch studies which have been in process in the Division for some time are on investment costs in nitrogenous fertilizer manufacture in IDCs, and on the pulp and paper industry. The fertilizer study represents an initial effort on one aspect of the fertilizer branch, which is receiving priority attention in Bank Group operations in industry. A preliminary draft is expected in the near future. There should be continuing work on other aspects of this industry branch because of its high priority in Bank Group operations. It is not certain yet in what form a pulp and paper study may be issued; a draft which has been produced is in need of revision.

11. A general question for consideration by the Committee is whether we should in the future devote a substantial proportion of the resources of the Division to work on industry branch studies. The record of past discussions with staff members of IFC and of Bank Area Departments indicates that they did consider such studies useful. But they are apt to be time-consuming and it would be helpful to know more specifically how they are actually used, and to which branches priority should be given. Besides fertilizers, such studies could include non-durable consumer goods (e.g., textiles, apparel), consumer durables (e.g., electrical appliances), producer goods (e.g., selected chemicals, steel).

Other Areas of New Research

12. Other areas in which it is planned to carry out new research, though in some cases not as yet defined very specifically, consist of the following:

Economic Evaluation of Industrial Projects - At the present time, the function of industrial project appraisal for financing by the Bank is carried out by the IFC. This function will be transferred to a new Industrial Projects Department to be organized in the Bank, as recently announced by the management. In addition to specific industrial project financing, the Bank provides finance for industry through national development finance companies, which are appraised by the Development Finance Companies Department. The latter indeed account for the larger part of Bank industrial financing. The subject of evaluation of the economic aspects of industrial projects (in addition to the technical, financial, and management

July 14, 1969

aspects) is of great importance both for specific industrial projects for Bank financing and for projects for which Bank loans are relet by development finance companies. Methodologies for the economic evaluation of industrial projects would be a subject of continuing concern for the Economics of Industrialization Division. Some work has already been begun in this field - in connection with a request for assistance concerning appropriate methodologies received from the Turkish Development Bank, and with a seminar on shadow pricing with the participation of Prof. Ian Little of Oxford and Prof. Richard Weckstein of Brandeis University^{1/}, among others, recently organized by the Sector and Projects Studies Division. The latter Division is generally concerned with the subject of project appraisal. This work in the Industrialization Division will be resumed in cooperation with the Sector and Projects Studies Division in the fall of 1969, in an attempt to develop guidelines for practical application in industrial project appraisal.

Exports of Manufactured Goods from IDCs - This subject, which it is now generally agreed is of great importance, could be the focus of a research project. It would include: studies of impediments to exports of manufactured goods in cases of IDCs with a considerable degree of industrial development, studies of "success stories" in export of manufactures to be found among certain IDCs, and consideration of marketing problems and prospects in the developed countries for such exports from IDCs.

13. Other areas of importance on which research could be conducted, subject to other priorities and availability of resources, are: mechanisms for assistance to small-scale industry, the problems of public-sector industry, and regional market arrangements for industrialization.

Other On-Going Studies to be Completed

14. Besides the industry branch studies mentioned above, work is continuing to bring the following studies to completion:

Classification of Developing Countries by Degree of Industrial Development - Initial work toward this end resulted in the issuance of Economics Department Working Paper No. 45, Statistical Indicators of Levels of Industrial Development, May 19, 1969. Further work is now being done to yield a classification of countries by degree of industrial development. The groupings should be a useful guide to future studies of the process of industrialization and development strategies in different types of countries.

^{1/} Prof. Little is the principal author of a volume entitled "Manual of Industrial Project Analysis, Vol. II: Social Cost Benefit Analysis", 1969, which is available in preliminary form in Research Files. Prof. Weckstein's essay on "Shadow Prices for Project Evaluation in Less Developed Countries" has been issued as Economics Department Working Paper No. 47, June 20, 1969.

Mr. Alexander Stevenson

-5-

July 14, 1969

Consumer Spending Patterns and Income Elasticities of Demand - This is intended to provide data relevant to projections of possible industrial growth in the consumer goods field. Work on the study has been going on for some time, having been interrupted by higher priority activities. The usefulness of the product and the nature of further work will be determined on the completion of the first draft.

ANNEX A

Development Strategies in Semi-Industrial Countries

A Research Proposal

Bela Balassa

1. In recent years, the tasks of the Bank have been extended from project appraisal to the evaluation of economic policies in developing countries, and the Bank has come to play an increasingly important role in advising these countries on their long-term policies. But while project appraisal is based on some general principles which have evolved in the course of the operational work of the Projects Department, the same cannot be said of the Bank's policy-advising activities. There are no firm guidelines for these activities and the policy advice given to individual countries often reflects differences between - and even within - Area Departments.

2. The lack of guidelines is in large part explained by the fact that we know little of the effectiveness of the economic policies followed by the developing countries. During much of the postwar period while Prebisch's doctrine of import substitution held sway, manufacturing industry was benefited at the expense of agriculture, and production for domestic use was favored over exports. Now the pendulum seems to be swinging in the other direction, with agricultural development and export-oriented growth coming increasingly into favor. But both these approaches have responded to practical situations and their economic rationale has not been adequately explored. Nor has much attention been given to the implications that the particular characteristics of developing countries, such as the level of industrialization, size, geographical location, and resource endowment, have for the choice of development strategy.

3. Research on the development policies applied in individual countries would help to fill this lacuna. It would aim at evaluating the experience of these countries, with a view to suggesting improvements in their policies as well as indicating the applicability of the findings to other countries in a similar situation. The conclusions based on such research would be useful to the Bank in its policy advisory activities and would assist policy-makers in the developing countries themselves. At the same time, it would be advantageous to carry out this research under the Bank's auspices. Not only could the expertise accumulated at the Bank be utilized but the studies could be made to conform to the Bank's needs.

The Choice of Countries

4. Separate research projects should be undertaken to evaluate the experience of countries at similar levels of industrialization. Pending the outcome of the Balassa-Hughes study on the classification of countries according to the stage of their industrial development, three or four such research projects may ultimately be carried out. Each of these could include 4-6 countries which may be regarded as representative of a certain level of industrialization and for which the relevant data are available. In the choice of the countries, attention should be given to the Bank's operational needs, as evidenced by the orientation of the work of Area Departments.

5. Since the results of these projects could be utilized to advise countries on the same as well as on the next lower stage, it seems appropriate to start with a group of developing countries which belong to the semi-industrial category.^{1/} Within this group, the choice may be made among the following countries: Argentina, Brazil, Chile, and Mexico in Latin America; Ireland, Portugal, and Spain in Western Europe; and Singapore and Taiwan in Asia.

6. All these countries derive about 40-50 percent of value added in commodity production from manufacturing activities and thus can be considered semi-industrial. Taiwan, Brazil, and Ireland are at the lower end of the range while Argentina, Mexico, and Portugal have the highest share of manufacturing within the group.^{2/} But there are considerable differences among the countries in question in regard to the share of manufactured goods in exports, largely reflecting differences in the inward- or outward-looking character of the development policies applied during the postwar period. They also differ in size, geographical location, and market access, so that it should be possible to evaluate the effects of these characteristics on the choice of development strategy.^{3/}

^{1/} On this category, see my "Development Strategies in Semi-Industrial Countries", IERD Economics Department Working Paper No. 34.

^{2/} It should be noted, however, that due to high levels of protection and overvaluation of the currency, manufacturing output is overvalued, and agricultural production undervalued, in Argentina and Chile and to a lesser extent in Brazil, Mexico, and Spain.

^{3/} Some comments on the individual countries, together with a comparison of the proposed research project with studies under way at the Bank and the OECD Development Center, are given in Appendix 1. In turn, the personnel requirements of the project are shown in Appendix 2.

Methodology

7. To ensure the comparability of the findings, the studies should use a common methodology prepared by the project director. The methodology would deal with the various choices open to policy-makers, the implications of the particular characteristics of the country for the choice of the development strategy, and the policy instruments which can be used in implementing it. It should also provide instructions on statistical and econometric methods to be applied in the individual studies as well as guidelines for evaluating the experience of the countries in question.
8. Among the choices open to policy-makers, one may contrast outward-looking and inward-looking strategies, where the former aims at exploiting the benefits of the international division of labor while the latter relies chiefly on import substitution. A related question is the possible need to provide special advantages to manufacturing over primary production, or to individual activities within these sectors as against according equal treatment to each. There is also the choice between reliance on free markets and government planning in productive activities, and a position has to be taken concerning the desirability of foreign investment.
9. Attention needs further to be given to the implications for development strategy of the major characteristics of individual countries. Among these, market size is of principal importance; hence the need for examining the advantages of large markets in the methodology of the project. Other characteristics are geographical location, market access, natural resources, and the availability of human and physical capital. The political and social conditions prevailing in the countries in question, and the interactions of political, social, and economic factors, too, should be analyzed.
10. A variety of policy instruments can be used to carry out alternative strategies. These include tariffs and export subsidies, exchange rate policy, the tax system, credit policy, the treatment of foreign investment, educational policy, investments in infrastructure, the role of public enterprise in manufacturing, and regional policy. One should evaluate the actual use of these instruments in the individual countries and make recommendations on improvements in their application.
11. In the country studies use needs to be made of statistical and econometric techniques. Such techniques would be applied to evaluate the effects of various policy instruments on past performance and to appraise the sources of economic growth in individual countries on a sectoral basis. The investigation should consider the contribution of physical as well as human resources to growth.
12. The findings of the individual studies will enable us to provide a comparative evaluation of the experience of the countries in question, and to make recommendations on possible improvements in the policies followed. The implications of the experience of these countries included in the research project for those on the next level of development also needs to be indicated. Finally, the findings can be utilized to prepare position papers on various policy issues for the Bank's internal use.

APPENDIX 1

Relationships with Other Studies

1. The proposed research project can build on the results of the Structure of Protection in Developing Countries project which has been limited to an appraisal of the effects of protective measures on resource allocation. This project has been sponsored jointly by the World Bank and the Inter-American Development Bank. It has included studies on the structure of protection in Brazil, Chile, and Mexico in Latin America, Norway in Western Europe, as well as Malaysia, Pakistan, and the Philippines in Asia.
2. In turn, a research project sponsored by the OECD Development Center has examined the experience with industrialization in Brazil and Mexico in Latin America, as well as India, Pakistan, the Philippines, and Taiwan in Asia. In the absence of a common methodology, there are however considerable differences among the studies on the individual countries, and they greatly vary in quality. At any rate, the studies are by-and-large historical in character and they have not given emphasis to some of the major issues pertaining to the choice of development strategies.

The Choice of Countries

3. Argentina provides a classical example of inward-looking policies. Levels of protection are high and, despite a high share of manufacturing in commodity production, it exports hardly any manufactured goods. We originally planned to include Argentina in the Structure of Protection project but the lack of cooperation by the Planning Bureau and the long illness of our collaborator, Daniel Schydrowsky, have made this impossible. We can expect cooperation from the present head of the Planning Bureau, Dagnino Pastore, and Schydrowsky could undertake work on Argentina as a consultant to the Bank.
4. In terms of population, Brazil is by far the largest among the countries in question but it has one of the lowest average per capita incomes. At the same time, this average conceals substantial interregional differences in incomes between the industrial complexes of the Sao Paulo area and low income agriculture in the Northeast. Bergsman's study on Brazil for the OECD Development Center is rather weak, thus there is room for work on the economic policies of this country. But the statistical difficulties of carrying out such a study are formidable and the Brazilian case is not characteristic of developing countries in general, most of which have a much smaller population. Instead of including Brazil in the proposed research project, we may consider devoting a separate project to large developing countries, such as Brazil, India, Indonesia, and Pakistan.

5. Chile has followed inward-looking policies like Argentina and, given the differences in size, this may have involved greater economic cost for the former than for the latter. The country is included in our Structure of Protection project and the information collected on tariffs and other measures of protection can provide a starting point for an investigation of its economic policies. Marcello Sedlovsky, an assistant professor at Harvard and a Chilean citizen, will be teaching in Santiago for the next two years and we could contract him to carry out the study.
6. Mexico provides an interesting case since it has avoided the inflation characteristic of the other semi-industrial countries in Latin America and its policies have given emphasis to the development of new exports. We will have a good study on protection in Mexico by Gerardo Bueno and a workmanlike job has been done for the OECD by Timothy King. While the Bank has an interest in Mexico, a decision will have to be reached on whether its inclusion in the proposed project will appreciably add to our understanding of Mexican policies. If the answer is in the affirmative, Donald Keesing of Stanford would be an appropriate candidate for carrying out the study.
7. Until the early postwar period, Ireland relied chiefly on exports of foodstuffs. It has since developed several branches of manufacturing by the use of tax incentives and moderate protection, and has succeeded in raising to a considerable extent the share of manufactured products in commodity production as well as in exports. Its experience can be useful for countries which now produce and export mostly agricultural products. A graduate student at the Johns Hopkins University, an Irish national associated with the principal research institute, is writing a dissertation under my direction on the system of protection in this country. His results could serve as a basis for the investigation of the Irish case.
8. Portugal is of considerable interest because of the transformation of its industry from reliance on a highly protected market to an increasingly competitive structure. It is, however, a rather special case, as it enjoys free access to EFTA markets. There are also considerable difficulties due to the poor statistical data base which speaks against its inclusion in the proposed project.
9. Spain has also followed inward-looking economic policies but has nevertheless been able to expand exports of manufactured goods. The Bank has had considerable interest in the economic policy of Spain over the last decade and this provides an additional reason for its inclusion in the project. It should not be difficult to find a Spanish-speaking economist to undertake the study, possibly in collaboration with a research institute in Spain.
10. While Singapore appears to be a special case because of its small size, there are some twenty developing countries with an even smaller population. It could, therefore, be used as an example of overcoming the disadvantages of small size through exporting manufactured goods. Mrs. Hughes has recently completed a book on foreign investment in Singapore manufacturing

with the participation of the Economic Research Center at the University of Singapore. This book, as well as research under way at the Center, would greatly reduce the time and effort needed for a Singapore study.

11. Taiwan has applied outward-looking policies, attracted foreign investment and is one of the "success stories". It has been able to expand the production and exports of manufactured goods at a rapid rate over the last decade, and manufactures now account for 50 percent of total exports. Mrs. Hughes has an interest in problems of Southeast Asian countries and she could undertake the study with the collaboration of a research institute in Taiwan. It should be added that the study prepared for the OECD Development Center is of rather poor quality.

12. For sake of comparability, data for India and Pakistan have also been included in the enclosed table. The data indicate that neither of these countries can be considered semi-industrial and, at any rate, there are some good studies available on both these countries. Jagdish Bhagwati has done the best the limited Indian data permitted and Stephen Lewis has also written a useful study on Pakistan. Incidentally, the exports of manufactured goods from the two countries consist chiefly of jute and cotton textiles.

Comparative Data for Semi-Industrial Countries, 1965^{1/}

| | Share of manufacturing in commodity production | | Share of manufactured exports in total ex- ports | | GDP | GDP per Capita | Population | Growth of GDP 1950-1965 | Growth of Exports 1953-65 |
|----------------------|---|------------------|--|-----------------|-----------|-------------------|------------|-------------------------------|---------------------------------|
| | 1953 | percent 1965 | 1953 | percent 1965 | \$million | \$ | thousands | percent | percent |
| <u>Latin America</u> | | | | | | | | | |
| Argentina | 51 | 55 ^{2/} | 9 | 6 | 17,654 | 778 | 22,691 | 3.2 | 2.4 |
| Brazil | 26 | 37 | 1 | 7 | 19,712 | 237 | 83,175 | 5.4 | .3 |
| Chile | 44 | 45 | 3 | 5 | 4,504 | 513 | 8,750 | 4.0 | 4.4 |
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| Portugal | 38 | 54 | 33 | 62 | 3,575 | 383 | 9,335 | 4.7 | 8.4 |
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| Singapore | na | 49 | na | 28 | 1,087 | 568 | 1,914 | 5.3 | 2.7 ^{3/} |
| India | na | 22 | 34 | 47 | 45,380 | 91 | 498,680 | 3.5 | 3.5 |
| Pakistan | 9 | 17 ^{2/} | 1 | 45 | 10,296 | 88 | 117,000 | 3.6 | 1.6 |

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Notes: 1/ preliminary; 2/ 1964; 3/ 1953-1963

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July 9, 1969

Mr. Joseph Riley
B. F. Goodyear Co.
Goodyear Tire Manufacturers
500 S Main St.
Akron, Ohio

Dear Mr. Riley:

The World Bank is engaged in a study program on vehicle operating cost. We are interested to know if any research has been successfully carried out with respect to tires tread wear caused by forced deceleration on the highway.

Mr. Kiegen, of Rubber Manufacturer Association, mentioned your name as the one person, if any, who would be able to answer our question.

Sincerely,

Iona Isaac
Sector and Projects Studies Division
Economics Department

Org-Ec. Dept - Res
Proj.

INCOMING CABLE

DATE AND TIME OF CABLE: **JULY 6, 1969** **1025**

LOG NO.: **ITT 5/7**

TO: **INTBAFRAD**

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INFORMATIONAL

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INCOMING CABLE

DATE AND TIME OF CABLE: **JULY 3, 1969** **1045**

LOG NO.: **WU 16/3**

TO: **INTBAFRAD**

FROM: **ZOMBA**

| ROUTING | |
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| ACTION COPY: | MR. STEVENSON |
| INFORMATION COPY: | |
| DECODED BY: | |

TEXT:

FOR STEVENSON

PLEASE CABLE ELZ REQUESTING HIM TO CABLE HIS ARRIVAL DATE

FLIGHT NUMBER TO ME CARE OF BARNES TELEPHONE ZOMBA 229

EDELMAN

MPB

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JUL 3 10 23 AM 1969

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JUL 3 10 53 AM 1969
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FOR INFORMATION

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FROM: SAC
TO: DIRECTOR
FCC NO: 44-1987
RE: JUL 3 1969

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| CLASS: | |
| EXTENSION: | |
| ACTION DATE: | JUL 3 1969 |
| COMMUNICATIONS SECTION | |

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Org - Ec Dept - Res Proj.

Form No. 27
(7-61)
INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: EDELMAN
C/O BARNES
TELEPHONE ZOMBA 229
ZOMBA

DATE: JULY 3, 1969

CLASS OF
SERVICE: FR

COUNTRY: MALAWI

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TEXT:
Cable No.: *ONE*
neurcab ELZ ARRIVES BLANTYRE JULY FIFTH EAST AFRICA FLIGHT 893
AT 10:35 AM

STEVENSON

NOT TO BE TRANSMITTED

MESSAGE AUTHORIZED BY:

NAME A. STEVENSON

DEPT. Economics

SIGNATURE *Alexander Stevenson*
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

AStevenson:js

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REFERENCE: 78

(SIGNATURE OF INDIVIDUAL AUTHORIZED TO ANSWER)

SIGNATURE

DEPT

ECONOMICS

NAME

A. STEVENSON

MESSAGE AUTHORIZED BY

Checked for Release:

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STEVENSON

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REPLY TO: 32 VI

COPY NO: 1

COPY NO: 1

TO: ECONOMICS
ATTENTION: STEVENSON
C/O FINANCE
EDITION

DATE: 7/3/69

DATE: 7/3/69

OUTGOING MESSAGE

ASSOCIATION

INTERNATIONAL DEVELOPMENT

REGISTRATION AND DELEGATION

INTERNATIONAL BANK FOR

COOPERATION

INTERNATIONAL FINANCE

Org. Ec. Dept. - Res. Proj.
cc: AF - Gen. Negs.

Mr. Robert S. McNamara

July 2, 1969

Roger Chaufoournier *R*

Financing of Agricultural Research in the Savannah Zone of Western Africa

In his memorandum to you of July 1, 1969 Mr. Friedman proposes that the Bank Group help to finance "several centers of applied agricultural research in the countries of the Savannah zone." At the same time he reported his understanding that I "reacted very favorably to this proposal."

I would like to make it clear that I did not endorse the above proposal. In conversations with Mr. Goreux both I and members of my staff did react favorably to a proposal that the Basic Research Unit carry out two case studies in the Ivory Coast - one in the forest zone, the other in the Savannah area. The study in the Savannah zone would be designed to determine whether income opportunities in this area could be sufficiently increased to make agriculture commercially attractive to school-leavers. It would examine in particular the agronomic potentialities and the socio-economic and technological constraints which now limit the realization of these potentialities.

If the case study in the Ivory Coast yields useful results, I believe we can consider the desirability of promoting similar studies elsewhere in the Savannah zone where ecological and socio-economic conditions are different from those in the Ivory Coast area where the proposed study would be undertaken. However, until the results of the first study are known, I think it would be unwise to commit ourselves to others or to take a decision that permanent "research centers" are necessary to carry out such studies. Research of this character will employ scarce personnel and its utility will eventually have to be judged by the results achieved in comparison with those that might be obtained through the employment of such personnel on alternative tasks.

CC: Mr. Irving S. Friedman

J.C.de Wilde:eob

ROUTING SLIP

Date
July 1 1969

OFFICE OF THE PRESIDENT

Name

Room No.

Mr. ~~Chaufournier~~

F1236

Mr de Weert

719

To Handle

Note and File

Appropriate Disposition

Note and Return

Approval

Prepare Reply

Comment

Per Our Conversation

Full Report

Recommendation

Information

Signature

Initial

Send On

Remarks

F

Irving S. Friedman

✓ Org. Ec. Dept - Research
JSL 1 1969
logged

OFFICE MEMORANDUM

cc: AF - Gen. Negs.

TO: Mr. Robert S. McNamara

DATE: July 1, 1969

FROM: Irving S. Friedman

SUBJECT: Proposal for financing agricultural research according to paragraph (f) of Decision 1 of the Executive Directors' Report on Stabilization of Prices of Primary Products

1. Following a visit to Ivory Coast and Paris, Mr. Goreux has proposed that the Bank participate in financing applied agricultural research for the countries of the Savannah zone in West Africa.
2. Most of the applied agricultural research in Western Africa has been devoted to export crops (coffee, cocoa, pineapple, palm oil, groundnuts, cotton, ...). In the forest zone, this research has led to a rapid expansion of agricultural output and income. However, in the Savannah zone where production potentialities are much more limited due to lower rainfall, the impact of this research has been much smaller and agricultural income remains very low. This disparity induces large labor migrations. These might lead to social and political unrest if no remedial action were taken.
3. There are at present few possibilities for correcting this income disparity, not only due to the lack of capital but also to the fact that a fully satisfactory solution to agricultural development in this area has yet to be devised. It is, however, believed that substantial improvements might be achieved by conducting systematic research.
4. The proposal would be for the World Bank Group to participate through IDA credits in the financing of several centers of applied agricultural research in the countries of the Savannah zone. Such research could be carried out by mixed teams of agronomists, agricultural economists and anthropologists who could be supplied by the ORSTOM and other specialized institutions.
5. This proposal appears to fall within the Executive Directors' recommendations on Stabilization ^{1/}. The main emphasis in the research would be placed on the promotion of food crops and cattle; most of the increased output would be consumed in Western Africa. Such a project

^{1/} "... the Bank Group, while applying its normal lending standards and procedures, will be prepared to: ...
(f) Participate in financing agricultural and other research having high priority in developing countries, as much as possible in cooperation with other national and international institutions."
Report of the Executive Directors on Stabilization of Prices of Primary Products: Decision 1, page 3, IBRD, June 24, 1969.

July 1, 1969

would help African countries in their diversification efforts, since cotton and groundnuts, which at present are the two main cash crops of the Savannah zone, face unfavorable prospects on world markets.

6. I personally feel that it would be very worthwhile for the Bank Group to invest resources in agricultural research along these lines. Moreover, I think that such a proposal is very timely, since it would be of interest to a large number of those countries which originated the Rio Resolution.

7. I understand that Mr. Chaufourmier reacted very favorably to this proposal. I may add, in case you would wish to contact him, that he is going on home leave tomorrow night.

*Org. - Ec Dept - Research
Proj.*

OUTGOING WIRE

TO: E. THORBECKE
DEVELOPPECONOMIE
PARIS

DATE: JULY 1, 1969

CLASS OF SERVICE: LT

wol

COUNTRY: FRANCE

TEXT: NEED COMPLETING JULY SEVENTH FOR PRESIDENT FIVE PAGE NOTE ON
Cable No.: PROBLEMS UNEMPLOYMENT AND DEVELOPMENT STOP SEND 4201 CATHEDRAL
RELEVANT MATERIAL ADDITIONAL MY LAST VISIT TO YUDELMAN THANKS

GOREUX

NOT TO BE TRANSMITTED

MESSAGE AUTHORIZED BY:

NAME Louis M. Goreux

DEPT. Basic Research Center

SIGNATURE *[Signature]*
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

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(IMPORTANT: See Secretaries Guide for preparing form)

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JUL 1 6 10 PM 1969

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[unclear] [unclear]

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TO:

B. [unclear]

TO:

CLASS OF [unclear]

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DATE: [unclear]

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DATE

Mr. R. Sadove

June 30, 1969

Louis M. Goreux

Relations between the Abouasso case study (Research Project II)
and the appraisal of feeder roads

1. The Abouasso case study for Research Project II (see memo attached) would be carried out in connection with a survey of the Abouasso area (about 130 square kilometers) conducted by the ENTED. This survey (see paragraphs 5, 6, 7, 8 and 10 of the Annex to the memorandum) originated in a request of the SODEPALM (Bank project signed in June 1969) for an improvement of feeder roads in the oil palm area. However, the "Ministere du Plan" would be interested in extending the scope of the survey to the general socioeconomic development of the area.
2. Regarding ways of assessing economic returns to feeder road projects, such a survey might be of interest. I would like to know whether you feel that this might fit within the scope of your program.
3. I have discussed the research proposal outlined in my memo of June 24 with Chauffournier and de Wilde. I would greatly appreciate it, if I could have your reaction before Mr. Chauffournier's departure for Abidjan on July 3.

Attachment

LMGoreux:pmh
cc: Messrs. van der Tak
Israel

Mr. Louis Goreux

June 13, 1969

Bela Balassa

Charles Frank's Study

I saw Charles Frank on June 10 and we also talked with Colin Bruce. Frank further visited Shourie who is engaged in work on a long-term model for Kenya.

I discussed with Frank the choice between a study of a petrochemical fertilizer complex and that of food-processing industries in East Africa. We both feel that, from the point of view of your project No.1, the first alternative would offer greater interest than the second. The latter would essentially entail appraising the situation in individual industries with a consideration of the related expansion in agriculture. At the same time, there are no economies of scale of appreciable magnitude in agriculture while in the case of the petrochemical fertilizer complex, economies of scale can be obtained in several interrelated industries, offering thereby an interesting case study of external economies. One could also indicate the implications of the establishment of this complex for agriculture and estimate the benefits of its joint development in the three countries as against expansion in each of them taken individually.

We discussed with Colin Bruce the possible receptiveness of the three governments to the project. It was felt that Frank would not have the difficulties Irma Adelman has encountered in Kenya. He knows the key people in the country and his project should be of interest to the government of Kenya and probably also to the other two governments.

Frank promised to write a paper for next week's meetings on the objectives of the study and methodology to be used. He is now leaving for Bangkok and can be reached there at the address of ECAFE. He would go to East Africa in late August at the time when Colin Bruce is likely to be there. Let me add that due to resistance on the part of two of the governments my mission to East Africa has been cancelled for the time being. Nevertheless I maintain an interest in the problems of the area.

cc. Messrs. Bruce
Frank

B
BBalassa:alj

June 10, 1969

Professor T.W. Schultz
Department of Economics
University of Chicago
Chicago, Illinois 60637

Dear Professor Schultz:

Thank you for your letter of May 24. Mr. Goreux
is on a mission and will not be returning to Washington until
June 16. On his return he will be glad to deal with the
matters raised in your letter.

Yours truly,

Secretary to Mr. Goreux

SA: JIN ST. ROBERT

Org-Ec. Dept - Res. Proj.

INCOMING CABLE

DATE AND TIME
OF CABLE:

MAY 26, 1969

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LOG NO.:

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TO:

KHUTHOF INDEVAS

FROM:

ZOMBA

TEXT:

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RE MCNAMARAS LETTER PRESIDENT BANDAS AND EL EMARYS LETTER MINISTER
FINANCE. PRESIDENT BANDAS HAS REPLIED AGREEING PROPOSED VISIT
EDELMAN 23RD JUNE. GRATEFUL ADVISE EARLIEST DOCUMENTATION YOU
REQUIRE. ALSO ADVISE WHETHER MISSION WISHES REMAIN BLANTYRE ZOMBA
OR VISIT OTHER PARTS COUNTRY. REGARDS

BARNES FINANCE ZOMBA MALAWI

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ACTION COPY:

MR. KHUTHOF

INFORMATION
COPY:

DECODED BY:

MESSRS. EL EMARY/WILLIAMS

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INCOMING CABLE

ROUTING

DATE AND TIME OF CABLE

1969

MAY 26, 1969

FOR NO.

MR. KATHY

123 45

TO:

INFORMATION
DIVISION

NEW YORK

FROM:

MRS. J. B. BROWN

1234

1234

IN REPLY TO YOUR TELETYPE MESSAGE OF MAY 25, 1969, AT NEW YORK, NY, CONCERNING THE MATTER REFERRED TO IN YOUR TELETYPE MESSAGE OF MAY 24, 1969, AT NEW YORK, NY. THE MATTER IS BEING HANDLED BY THE APPROPRIATE DEPARTMENT AND YOU WILL BE KEPT ADVISED OF THE RESULTS.

PLEASE ADVISE US OF ANY DEVELOPMENTS.

GENERAL FILES
COMMUNICATIONS

MAY 26 11 13 AM 1969

*Ec. Dept - Research
Proj.*

OUTGOING WIRE

TO: MRS. I. ADELMAN
HOTEL IVOIRE
ABIDJAN

DATE: MAY 23, 1969

CLASS OF SERVICE: FR

COUNTRY: IVORY COAST

RCA

TEXT:
Cable No.:

ARRIVING THIS SATURDAY EVENING STOP HOPE TO DISCUSS PROJECT
WITH YOU SUNDAY AND HAVE WORD WITH LUTOLF

GOREUX

NOT TO BE TRANSMITTED

MESSAGE AUTHORIZED BY:

NAME L.M. Goreux

DEPT. Basic Research Center

SIGNATURE *L. Goreux*
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

LMGoreux:pmh

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MAY 23 5 30 PM 1969

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MRS. I. YDETHN 10'

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CLASS OF: BB
DATE: MAY 23 1969

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*Org - Ec Dept Research
Proj.*

OUTGOING WIRE

TO: VAURS
EXPORT UNIDO
BP 674
COMMISSARIAT AU PLAN
TANANARIVE

DATE: MAY 22, 1969

CLASS OF SERVICE: FR

COUNTRY: MADAGASCAR

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TELEGRAMME AUTORISATION VOYAGE SUBSISTENCE

GOREUX

NOT TO BE TRANSMITTED

MESSAGE AUTHORIZED BY:

NAME Louis M. Goreux
DEPT. Basic Research Center

SIGNATURE *L. Goreux*
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

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cc: Mr. D.W. Jeffries

IMGoreux:pmh

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OUTGOING WIRE

TO: LUIS DE AZCARATE
HOTEL DU BENIN
LOME

DATE: MAY 20, 1969

CLASS OF SERVICE: LT

COUNTRY: TOGO

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TEXT:
Cable No.: 4

FOLLOWING CABLE SENT PMWA TODAY QUOTE YOUR CABLE 110 REF ECONOMIC WORK
MISSION INCLUDING RESEARCH PROJECT STOP GOREUX WILL ARRIVE ABIDJAN MAY
24 STOP MISS ADELMAN SCHEDULED ARRIVE FROM ACCRA MAY 23

BAZIN

NOT TO BE TRANSMITTED

MESSAGE AUTHORIZED BY:

NAME

Marc L. Bazin

Marc L. Bazin

DEPT.

Western Africa, A

SIGNATURE

(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

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cc. Mr. Goreux

MLBazin:mh

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Checked for Dispatch: *[Signature]*

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INTERNATIONAL FINANCE
CORPORATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT
ASSOCIATION

OUTGOING WIRE

DATE: MAY 20, 1969

CLASS OF
SERVICE

TO: IUTS DE AGARATE
HOTEL DE BENIN
LOME

COUNTRY: TOGO

TEXT:
Cable No:

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MESSAGE AUTHORIZED BY

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Proj

BOOK OF 2

OUTGOING WIRE

TO: ~~HOTEL INHOTELCOR~~
① ~~CONTINENTAL~~ HARVARD ADVISORY GROUP
ACCRA ② ACCRA

DATE: MAY 19, 1969

CLASS OF
SERVICE: LT

COUNTRY: GHANA

WUI

TEXT: FOR MRS ADELMAN

Cable No.:

PLAN ARRIVING ABIDJAN SATURDAY 24TH SR254 REMAINING TILL 30TH

GOREUX

NOT TO BE TRANSMITTED

MESSAGE AUTHORIZED BY:

NAME Louis M. Goreux

DEPT. Basic Research Center

SIGNATURE [Signature]
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

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SECTION
MAY 19 1969

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Checked for Dispatch: [Signature]

OUTGOING WIRE

Book # 8

TO: TO HARVARD ADVISORY GROUP (5) ACCRA
 DATE: MAY 19, 1969
 CLASS OF SERVICE: LT

COUNTRY: GHANA

TEXT: FOR MRS. ABIDJAN

PLAN ARRIVING ABIDJAN SATURDAY WITH BRUSH REMAINING TILL 30TH

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NOT TO BE TRANSMITTED

COMMUNICATIONS
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 MAY 19 6 32 PM 1969

DISPATCHED

NAME: Louis M. Gorenz (AKA)

DEPT: Basic Research Dept.

SIGNATURE: [Signature]

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Form No. 27
(7-61)

INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: PROFESSEUR MAROIS
Tf 0 33 9520
PARIS

DATE: MAY 19, 1969

CLASS OF SERVICE: LT

WUI

COUNTRY: FRANCE

TEXT: VOYAGE RETARDE STOP ARRIVERAI ORLY 8:35 SAMEDI VINGTQUATRE STOP
Cable No.: PARTIRAI SAMEDI MIDI POUR ABIDJAN STOP REVIENDRAI PARIS VERS
JUN SIX STOP PASSERAI BRUXELLES STOP QUITTERAI PARIS JUN
TREIZE POUR MEXICO

LOUIS GOREUX

NOT TO BE TRANSMITTED

MESSAGE AUTHORIZED BY:

NAME L.M. Goreux

DEPT. Basic Research Center

SIGNATURE *L.M. Goreux*
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

LMGoreux:pmh

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Org. Ec. Dept. Res. Proj.

May 16, 1969

Dear Professor Kornai:

As you will see from the note attached, Research Project No. I is based on the application of multi-level planning, a technique in which you have been a pioneer. Professors Manne, Kurs, Viatorisz, Westphal, Lissak and Frank are presently working on this project, and all of us would be very glad if you could join your efforts with ours.

We shall have a seminar on this project from June 16 to June 27, and we would greatly appreciate it, if you could be with us in Washington for these two weeks. I hope that you will be able to stay for some time after the seminar to discuss in sufficient detail the nature of our future collaboration.

Professor Viatorisz will be able to explain in detail our research project to you. I hope that, despite the short time available, we shall be able to deal with the administrative arrangements, from our side, for your trip.

Yours sincerely,

Louis M. Goreux
Director
Basic Research Center

Attachment

LG. LMGoreux:pmh

Professor Janos Kornai
Economic Research Institute
Hungarian Academy of Sciences
V Nador U. 5-7
Budapest, Hungary

Org - Ec Dept - Research Proj.

Form No. 27
(7-61)

INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: MRS ADELMAN
KENYA CLUB HOTEL
NAIROBI

DATE: MAY 16, 1969

CLASS OF SERVICE: LT

ReA

COUNTRY: KENYA

TEXT:
Cable No.:

REFERENCE CABLE MAY FIFTEENTH STOP MY ARRIVAL ABIDJAN UNLIKELY
DUE PERSONAL PROBLEM

GOREUX

NOT TO BE TRANSMITTED

MESSAGE AUTHORIZED BY:

NAME L.M. Goreux

DEPT. Basic Research Center

SIGNATURE *L.M. Goreux*
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

LMGoreux:pmh
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OUTGOING WIRE

TO: HENRY OJUR HOTEL
 NAIROBI
 COUNTRY: KENYA
 TEXT: [unclear]
 CLASS OF SERVICE: [unclear]
 DATE: [unclear]
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INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: VAURS
EXPORT UNIDO
BP 674
TANANARIVE

DATE: MAY 16, 1969

CLASS OF SERVICE: LT

COUNTRY: MADAGASCAR

RCB

TEXT:
Cable No.:

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PAR VOTRE CANDIDATURE ET ESPERE VOUS POURRIEZ VENIR AOUT STOP
ADELMAN SERA ABIDJAN 23 AU 30 MAI STOP CRAINS DE NE POUVOIR VENIR
MOIMEME ABIDJAN STOP TELEGRAPHIERAI DETAILS MAI 20

GOREUX

NOT TO BE TRANSMITTED

MESSAGE AUTHORIZED BY:

NAME L.M. Goreux

DEPT. Basic Research Center

SIGNATURE *L.M. Goreux*
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

LMGoreux:pmh
IBRD

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(IMPORTANT: See Secretaries Guide for preparing form)

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MAY 16 2 32 PM 1969

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Checked for Dispatch: 5

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MAY 16 5 35 PM 1969
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CONFIDENTIAL

RECEIVED BY THE DIRECTOR OF THE FBI ON MAY 16 1969 AT 5 35 PM
FROM THE SAC, NEW YORK (100-100000) (P)
SUBJECT: [Illegible]

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Org. Ec. Dept - Res Proj

Form No. 27
(7-61)

INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: ~~AMSTERDAM~~
INTBAFRAD
NAIROBI

DATE: MAY 15, 1969

CLASS OF SERVICE: FR

RCA

COUNTRY: KENYA

TEXT:
Cable No.:

FOR ADELMAN
GOREUX PLANNING ARRIVING ABIDJAN THURSDAY MAY TWENTYSECOND
FIVE PM UT 1831

GOREAUX

NOT TO BE TRANSMITTED

MESSAGE AUTHORIZED BY:

NAME L.M. Goreux

DEPT. Basic Research Center

SIGNATURE L.M. Goreux
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

LMGoreux:pmh

ORIGINAL (File Copy)

(IMPORTANT: See Secretaries Guide for preparing form)

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TO: [redacted]

DATE: MAY 12 1969

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Org. Ec. Dept. - Research Proj.

Form No. 27
(7-61)
INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: ADELMAN
INTBAFRAD
NAIROBI

DATE: MAY 12, 1969

CLASS OF SERVICE: LT

COUNTRY: KENYA

RCA

TEXT:
Cable No.:

May 10.

RECEIVED CABLE 110 FROM LUTOLF QUOTE STILL UNABLE MEET BEDIE
BUT DIAWARA VERY ENTHUSIASTIC GOREUX AND ADELMAN MISSION STOP
EXPECT MISSION ARRIVAL ABIDJAN ABOUT MAY TWENTYTHIRD

GOREUX

NOT TO BE TRANSMITTED

MESSAGE AUTHORIZED BY: ~~Louis M. Goreux~~
NAME: Louis M. Goreux
DEPT.: Basic Research Center
SIGNATURE: *Bernard Dury*
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

CLEARANCES AND COPY DISTRIBUTION:

COMMUNICATIONS
MAY 15 15 51 LN 1823

LMGoreux:pmh

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Checked for Dispatch: _____

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FORM NO. 10

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DATE MAY 15 1969

OUTSIDE WIRE

RECORDS AND INFORMATION
COMMUNICATIONS DIVISION
COMMUNICATIONS DIVISION

Mr. F. Lutolf

May 12, 1969

André B. Gué

Goreux/Adelman Visit

No. 166 ✓

1. Please find attached (a) curriculum vitae of Dr. Adelman;
(b) her itinerary;
(c) french text of research project.
2. We would appreciate your passing it on to the Ivorian Government.



ARGué: mh



Record Removal Notice

| | | | | |
|---|-------------------------------------|--|--------------------------------|------------------------------|
| File Title Bank Administration and Policy - Economics Department - Research Program - 1969 / 1971 Correspondence - Volume 1 | | Barcode No. 1064717 | | |
| Document Date c. 1969 | Document Type CV / Resumé | | | |
| Correspondents / Participants | | | | |
| Subject / Title CV of Dr. Irma Adelman | | | | |
| Exception(s) Personal Information | | | | |
| Additional Comments | | The item(s) identified above has/have been removed in accordance with The World Bank Policy on Access to Information or other disclosure policies of the World Bank Group. | | |
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| Withdrawn by Ann May | Date July 25, 2022 | | | |

PROPOSED ITINERARY

TRAVELER IRMA ADELMAN

HOME PHONE _____

TITLE AND DEPT. ESG - CONSULTANT

ROOM NO. G-1041 1068
EXT. _____

| DATE | DAY | CITY | AIRLINE FLT. & NO. | CLASS | TIME | STATUS | HOTEL STOPS |
|--------|-----|---------------------|-----------------------|-------|------|--------|----------------|
| Apr 30 | Wed | LV. Chicago-O'Hare | BA 568 | F | 1830 | | |
| May 1 | Thu | AR. London | | | 0915 | | PARK LANE |
| May 4 | Sun | LV. London | BE 338 | F | 1000 | | |
| May 4 | Sun | AR. Paris-Orly | | | 1055 | | ROYAL MONCEAU |
| May 8 | Thu | LV. Paris-Orly | AZ 321 | F | 2000 | | |
| May 8 | Thu | AR. Rome | | | 2140 | | HASSLER |
| May 10 | Sat | LV. Rome | AZ 844 | F | 2255 | | |
| May 11 | Sun | AR. Addis Ababa | | | 0855 | | GHION |
| May 13 | Tue | LV. Addis Ababa | ET 785 | F | 0910 | | |
| May 13 | Tue | AR. Nairobi | | | 1050 | | KENYA CLUB |
| May 17 | Sat | LV. Nairobi | PA 151 | F | 1340 | | |
| May 17 | Sat | AR. Accra | | | 1805 | | CONTINENTAL |
| May 23 | Fri | LV. Accra | RK 529 | F | 0900 | | |
| May 23 | Fri | AR. Abidjan | | | 0950 | | IVOIRE |
| May 30 | Fri | LV. Abidjan | RK 26 | F | 0740 | | |
| May 30 | Fri | AR. Paris-LeBourget | | | 1750 | | ROYAL MONCEAU |
| Jun 3 | Tue | LV. Paris-Orly | AF 031 | F | 1030 | | |
| Jun 3 | Tue | AR. Chicago-O'Hare | | | 1515 | | |
| | | LV. | | | | | |
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REMARKS: TRAVEL OFFICE
MR. JOHN BLAKE EXTENSION 2275
April 14, 1969.

APPROVED: _____
DATE _____

Dualisme et Développement

1. Le Problème

On observe dans de nombreux pays, en voie de développement un dualisme marqué entre secteurs modernes et traditionnels. Dans quelques pays la croissance du produit intérieur brut s'est accompagnée d'une accentuation de ce dualisme se traduisant par une aggravation de la disparité des revenus, la transformation d'un sous-emploi déguisé en chômage réel, et l'apparition de problèmes politiques et sociaux. Dans d'autres pays, la croissance du produit intérieur brut fût mieux distribuée parmi la population et les différents secteurs de l'économie mieux intégrés les uns aux autres.

Le mode de développement dépend largement de facteurs exogènes tels que la dotation du pays en ressources naturelles, la situation des marchés mondiaux et l'afflux des capitaux étrangers. Néanmoins, ce mode de développement peut être influencé dans une mesure substantielle par les politiques nationales, notamment la politique de répartition des investissements publics entre les secteurs modernes et traditionnels, la politique des prix, la politique monétaire et la politique commerciale. L'objet de cette étude est d'évaluer les effets de différentes politiques sur le développement du pays et sur le dualisme de l'économie (sur la taille du gâteau et sur sa distribution). L'étude se propose d'analyser la nature des interactions entre croissance et dualisme dans une perspective à court et à long terme. Ainsi un accroissement des ressources d'investissement pourrait être distribué de trois façons. La première pourrait consister à affecter la totalité des ressources additionnelles

au secteur moderne; la seconde à diluer ces investissements dans le secteur traditionnel; la troisième à les concentrer sur quelques pôles de croissance en vue de transformer certaines parties seulement du secteur traditionnel.

2. L'approche considérée

On se propose d'effectuer une analyse en profondeur dans deux ou trois pays en combinant, les approches macro et micro économiques.

a) Approche macro-économique

Cette approche consisterait à analyser le processus de développement dans sa perspective historique et à établir un cadre de projections permettant de simuler l'effet de différentes politiques.

L'approche historique devrait permettre de répondre à des questions du type suivant: Quel a été le transfert réel de ressources du secteur rural au secteur urbain, tenant compte des politiques fiscales, des taxes à l'exportation, de la répartition des investissements publics entre chaque secteur, etc? Les niveaux relatifs des revenus par tête utilisés dans les Comptes Nationaux fournissent-ils un indicateur non-biaisé des niveaux de vie relatifs parmi les populations rurales traditionnelles, rurales commerciales et urbaines? Dans quelle mesure les disparités de revenus sont-elles associées aux migrations? Les agrégats économiques, tel que PIB, fournissent-ils un indicateur satisfaisant de la croissance? Quel est le rendement des investissements publics dans les secteurs rural-traditionnel, rural-commercial et moderne? L'accélération du taux de croissance implique-t-elle une distribution plus inégale du revenu et une aggravation du sous-emploi?

Le modèle de projection pourrait être composé d'un nombre limité de secteurs, certains de ces secteurs étant eux même décomposés en sous-secteurs afin de refléter l'aspect dualistique de l'appareil de production. Ainsi le secteur agricole pourrait être divisé en trois sous-secteurs (traditionnel, exportation, et commercial orienté vers la satisfaction des besoins intérieurs); industrie (avec deux ou trois sous-secteurs). A cette décomposition sectorielle devrait correspondre une décomposition entre rural et urbain, rural étant si nécessaire décomposé entre rural-traditionnel et rural commercial. Une telle décomposition serait nécessaire pour étudier les modes de distribution des revenus, le mécanisme des migrations et l'évolution de la consommation.

Le modèle envisagé serait basé sur les études de projection existantes prenant en considération les investissements en cours et les possibilités de production. Le modèle devrait permettre d'établir une perspective de croissance probable à partir de laquelle il serait possible de simuler un certain nombre de variantes réduisant ou accroissant le dualisme de l'économie. Pour une telle analyse, les hypothèses clefs devraient être testées par une micro-analyse basée sur les résultats d'enquêtes comme indiqué ci-dessous.

b) Micro-approche

L'analyse des compartements sera basée sur les résultats d'enquêtes existantes; il sera néanmoins nécessaire de compléter les informations existantes par une observation directe sur le terrain.

L'analyse des données pourra être basée en première instance sur une analyse de regression multiple utilisant les techniques de covariance. Ainsi, certains facteurs institutionnels pourront être introduits sous forme de variables entières. La population étudiée pourra également être stratifiée sur la base de considérations institutionnelles qualitatives afin d'évaluer l'influence de ces facteurs institutionnels sur les relations de comportement.

Une autre méthode consistera à établir un programme d'optimisation pour une communauté donnée. Dans un tel modèle, l'influence des facteurs socio-institutionnels pourra être traduite sous forme d'un certain nombre de contraintes, (par exemple la division traditionnelle du travail selon l'age et le sexe). L'optimisation pourrait consister à minimiser le risque en introduisant comme contrainte un pallier de revenu ou à maximiser le revenu en introduisant comme contrainte un plafond quant au niveau du risque. Les activités correspondraient à un mode de culture donné pour un produit donné. Le relachement de certaines des contraintes ou de groupes de contraintes permettrait d'évaluer l'influence des facteurs institutionnels. L'expérience pourrait être conduite avec un nombre limité d'activités reflétant un état donné de la technologie ou en introduisant de nouvelles activités. Le modèle (integer programming) pourrait aussi être utilisé pour étudier l'influence d'un ensemble d'activités non divisible, tel introduction d'industries de transformation des produits agricoles.

Cette microanalyse serait partiellement basée sur des études anthropologiques. Toutefois, contrairement à certaines monographies

antropologiques, cette étude devrait conduire à certaines généralisations afin que les résultats puissent s'intégrer à l'analyse macroéconomique décrite plus haut.

Mr. Irving S. Friedman

May 12, 1969

Louis M. Goreux

Travel proposal May and June 1969

Project II: May 22 - June 9. Abidjan, Rome, Paris, Brussels, London

1. I expect to leave Washington about May 22 for Abidjan where I shall meet Mrs. Adelman and discuss Project II with the Ivory Coast government. Mr. Diawara, Minister of Planning, has been contacted by Chauffournier through Lutolf. In a cable to Chauffournier, Mr. Lutolf wrote that "Diawara is very enthusiastic about Goreux's and Adelman's project ... and expects mission's arrival about May 23." We expect to meet also Bedie (Minister of Finance, and Bank Governor) and to remain one week in Ivory Coast. On my way back to Washington, I shall stop in Rome, Paris, Brussels and London to make contacts in relation to Project II in particular, and to the Center in general.

Project I: June 11 - 14. Mexico

2. I will meet A. Manne and R. Lissak in Mexico for four days before a two-week seminar to be held in Washington from June 16 to June 27 with the main contributors to Project I.

LMGoreux:pmh

*Org. - Ec. Dept - Research
Proj.*
MAY 12 1969

INCOMING CABLE

cc: IVC - Oil Palm.

DATE AND TIME
OF CABLE:

MAY 10, 1969

2040

ROUTING

LOG NO.:

RC 3/12

ACTION COPY: MR. CHAUFOURNIER

TO:

CHAUFOURNIER INTBAFRAD

INFORMATION COPY: MR. MCIVOR

FROM:

ABIDJAN

DECODED BY:

TEXT:

110 ✓

PRIMO

YOURCAB 130 AND YOURLET 143 STILL UNABLE MEET BEDIE
BUT DIAWARA VERY ENTHUSIASTIC GOREAUX AND EDELMAN
MISSION. PLEASE AIRMAIL FRENCH TEXT RESEARCH PROJECT.
EXPECT MISSION ARRIVAL ABIDJAN ABOUT MAY 23.

SECUNDO

GRATEFUL YOU CABLE RESULT SODEPALM BOARD MEETING NEXT
THURSDAY

LUTOLF

MPB

COMMUNICATIONS
MAY 15 8 13 AM 1969

1969

TYPED

MAY 12 8 13 AM 1969
COMMUNICATIONS

MEM

TO: [Illegible]

FROM: [Illegible]

RE: [Illegible]
SUBJECT: [Illegible]
[Illegible text follows]

RE: [Illegible]

TO: [Illegible]
FROM: [Illegible]
DATE: [Illegible]

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| DATE: | [Illegible] |

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COMMUNICATIONS [Illegible]

*Org - Ec. Dept - Research
Prgr.*

OUTGOING WIRE

TO: LUIS DE AZCARATE
HOTEL PLACE
COTONOU

DATE: May 8, 1969

CLASS OF SERVICE: LT

COUNTRY: DAHOMEY

TEXT:
Cable No.:

REF GOREUX ADELMAN NO INFORMATION RECEIVED FROM LUTOLF YET

GUE

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MESSAGE AUTHORIZED BY:

NAME

DEPT.

SIGNATURE _____
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

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v Org - Ec Dept - Research
Proj.
cc. Li-VN-ECA.

May 1, 1969

Mr. Robert Gardner
Executive Secretary for U.N. Economic
Commission for Africa
Africa Hall
P. O. Box 3001
Addis Ababa, Ethiopia

Dear Mr. Gardner:

The Basic Research Center of the World Bank is undertaking a research project on the problem of growth and dualism, an outline of which is attached. The purpose of such a study is to gain a better insight into the problems of development, in particular from the experience of Kenya, Ivory Coast and Ghana. The results of such a project will be used to provide additional guidance to the World Bank in formulating its development policy in Africa.

In connection with this project, Dr. Irma Adelman, a consultant to the Basic Research Center, is going to conduct preliminary investigations in Kenya, Ivory Coast and Ghana. However, prior to her arrival in these countries it was felt that she should first come to the Economic Commission for Africa in order to consult with you on the availability of information on these countries for such a study, and to coordinate her research on this problem with that of ECA. I would, therefore, be very grateful if you could see Dr. Adelman on Monday, May 12, 1969 to discuss some aspects of this study, since I know that she would profit greatly from your wide experience on the subject. I would also appreciate it if you could put her in contact with other members of your organization, such as Mr. Arthur Mullier, Director of Research and Statistics, with whom it might also be useful for her to discuss the problem. Furthermore, any additional assistance which you might be able to render Dr. Adelman would be greatly appreciated.

If it is acceptable to you, Dr. Adelman will contact your secretary on Monday, May 12 at the opening of business to find out her appointment schedule. Many thanks for your assistance.

Sincerely yours,

Louis M. Goreux
Director
Basic Research Center

Attachments (3)
cc: Dr. I. Adelman
Messrs. Friedman
Demuth
Collier

LMGoreux:pmh

4

Org - Ec. Dept. - Research Proj.

INCOMING CABLE

DATE AND TIME
OF CABLE:

APRIL 30, 1969

707PM

LOG NO.:

WU TELEX/30

TO:

INTBAFRAD

FROM:

ROME

ROUTING

ACTION COPY:

MR. GOREAUX

INFORMATION
COPY:

DECODED BY:

TEXT:

ATT. GOREAUX ✓

REURLET 22 APRIL PLEASE ASK MRS ADELMAN CONTACT MY OFFICE

MORNING 9 MAY

WELLS FOODAGRI ROME

MPB

Org - Ec Dept - Research Proj

orig - IFC - Gen. Mags.

INCOMING CABLE

DATE AND TIME
OF CABLE:

APRIL 29, 1969

1640

LOG NO.:

RC 10/30

TO:

CHAUFOURNIER INTBAFRAD

FROM:

ABIDJAN

ROUTING

ACTION COPY:

MR. CHAUFOURNIER

INFORMATION
COPY:

MR. MCIVOR

DECODED BY:

TEXT:

101 ✓

✓ Apr. 25

**YURCAB 130 SHALL SEE BEDIA BEFORE END WEEK. DIAWARA OUT OF
COUNTRY FOR ANOTHER 12 DAYS. SHALL CONTACT HIM IMMEDIATELY
UPON RETURN.**

LUTOLF

MPB

COMMUNICATIONS
APR 30 8 30 AM 1969

APR 30 8 30 AM 1969
COMMUNICATIONS

158

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FOR INFORMATION RECORDING
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FOR INFORMATION RECORDING
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| FOR INFO | |

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INCOMING CABLE

DATE AND TIME
OF CABLE:

APRIL 29, 1969

1020

LOG NO.:

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TO:

INTBAFRAD

FROM:

NAIROBI

ROUTING

| | |
|-------------------|----------------|
| ACTION COPY: | MR. WILLIAMS ① |
| INFORMATION COPY: | MR. EL EMARI ② |
| | MR. TOLLEY ③ |
| DECODED BY: | |

TEXT:

to Collins to see r
handy

✓
80 FOR WILLIAMS

REURTEL 112 GOVERNMENT AGREES PROPOSED STUDY.

GORDON

FCA

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MAY 28 1969

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APR 29 1969

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BY: [Name]
DATE: [Date]

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| SERIALIZED | FILED |
| APR 29 1969 | |
| FBI - NEW YORK | |

ENCLOSURE

100-100000

April 30, 1969

✓
Letter No. 247

Dear Dave,

Having received your cable informing us that the Kenya Government has no objection to the "Dualism and Growth" study, I am following up by sending you an outline of the study and a curriculum vitae of Dr. Adelman. Her present plan is to arrive in Nairobi on the morning of Tuesday, May 13, by ET 785 from Addis Ababa, which she is visiting in order to discuss her study with EGA. She will probably leave on May 17 but Louis Goreux told me yesterday that she might decide to stay a little longer, if necessary. Could you fix up some suitable initial appointments for her? She is booked to stay at the Kenya Club.

Best regards,

Yours sincerely,



J. H. Collier

Enclosure

Mr. David Gordon
IBRD-FMEA
P.O. Box 30577
Nairobi
Kenya

JHCollier:ck

cc: Mr. Louis Goreux

April 28, 1969

Mr. Franz Lutolf
International Bank for
Reconstruction and Development
B.P. 1850
Abidjan, Ivory Coast

No. 143

Dear Franz,

With reference to my cable No. 130 of April 25, I would like to inform you that the Basic Research Center of the World Bank is undertaking a research project on the problem of growth and dualism, an outline of which is enclosed. The purpose of such a study is to gain a better insight into the problems of development, and we would like in particular to include the Ivory Coast in the study. Dr. Irma Adelman, a consultant to the Basic Research Center, will be mainly responsible for the project.

An important consideration in the selection of the countries to be included in the study is the receptivity of the local authorities to the research project. We, therefore, consider that it would be useful if Louis Goreux and Mrs. Adelman could have the opportunity of meeting with Ministers Diawara and Bedié for very preliminary talks on the subject. Their visit is planned for May 23 and until the 30st. I think, however, that the most appropriate approach would be for you to contact the Ministers and get their preliminary reaction before arranging any direct meeting with Mr. Goreux and Mrs. Adelman. If the reaction appears favorable we would send you copies of all Dr. Adelman's correspondence for appointments in Ivory Coast. It would also be of great help if all Dr. Adelman's appointments could be centralized through your office, and incidentally, Dr. Adelman has a good working knowledge of French, and would not require an interpreter for such appointments.

As you can see, the idea of the research project links up rather well with the remarks from Mr. Diawara that you conveyed to us in your memorandum to Files of April 17 on development planning.

Since Azcarate is scheduled to be in Abidjan on May 26, we think that it would be both practicable and useful to combine a visit by him to Mr. Bedié and Mr. Diawara with that by Mr. Goreux and Mrs. Adelman. This could permit a broad discussion with Mr. Diawara not only on the aims and scope of our forthcoming economic mission but also on longer-term aspects of our economic work.

RECEIVED
MAY 1 1969
E.C. DEPT.

April 28, 1969

M. Frans Antolf
International Bank for
Reconstruction and Development
B.P. 1850
Abidjan, Ivory Coast
No. 143

Dear Frans,

With reference to my cable No. 130 of April 25, I would like to inform you that the Basic Research Center of the World Bank is undertaking a research project on the problem of growth and dualism, an outline of which is enclosed. The purpose of such a study is to gain a better insight into the problems of development, and we would like in particular to include the Ivory Coast in the study. Dr. Irma Adelman, a consultant to the Basic Research Center, will be mainly responsible for the project.

An important consideration in the selection of the countries to be included in the study is the receptivity of the local authorities to the research project. We, therefore, consider that it would be useful if Louis Gorenz and Mrs. Adelman could have the opportunity of meeting with Ministers Diawara and Bedie for very preliminary talks on the subject. Their visit is planned for May 23 and until the 30th. I think, however, that the most appropriate approach would be for you to contact the Ministers and get their preliminary reaction before arranging any direct meeting with Mr. Gorenz and Mrs. Adelman. If the reaction appears favorable we would send you copies of all Dr. Adelman's correspondence for appointments in Ivory Coast. It would also be of great help if all Dr. Adelman's appointments could be centralized through your office, and incidentally, Dr. Adelman has a good working knowledge of French, and would not require an interpreter for such appointments.

As you can see, the idea of the research project links up rather well with the remarks from Mr. Diawara that you conveyed to us in your memorandum to Paris of April 17 on development planning.

Since Accra is scheduled to be in Abidjan on May 26, we think that it would be both practicable and useful to combine a visit by him to Mr. Bedie and Mr. Diawara with that by Mr. Gorenz and Mrs. Adelman. This could permit a broad discussion with Mr. Diawara on the aims and scope of our forthcoming economic mission but also on longer-term aspects of our economic work.

COMMUNICATIONS
GENERAL FILES
RECEIVED

1969 APR 29 11:00 AM

cc: Mr. De. Negro
1969

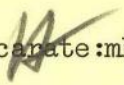
If you find the Ministers responsive, please let us know as soon as possible so that we can make the appropriate travel arrangements. Mrs. Adelman will first go to Kenya, then to Ghana (but in this latter case she would only be there on a private basis to consult with the Harvard Advisory Group) and then to Abidjan (or to Abidjan first if Messrs. Bedié and Diawara are available before May 23 only). If the response is favorable, we would send you a few copies in French of the research project outline for communication to Messrs. Bedié and Diawara.

Sincerely yours,



Roger Chauffournier
Director
Western Africa Department

cc. Mr. Goreux

LdeAzcarate: mh

INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

*IC. Gen. Dir.
Org. - Ec. Dept. -
Research Proj.*

OUTGOING WIRE

Wg: IVC - Gen. Dir.

TO: LUTOLF
INTBAFRAD
ABIDJAN

DATE: APRIL 25, 1969

CLASS OF SERVICE: LT

COUNTRY: IVORY COAST

Rea

TEXT: ✓
Cable No.: 130

PLEASE CABLE SOONEST WHETHER MINISTERS BEDIE AND DIAWARA IN ABIDJAN BETWEEN
MAY 23 AND 29 COMMA IN VIEW INTENDED VISIT BY GOREUX COMMA IRMA ADELMAN CONSULTANT
AND AZCARATE TO DISCUSS WITH BOTH MINISTERS FUTURE BANK ECONOMIC WORK INCLUDING
RESEARCH PROJECT STOP AZCARATE WILL BE ABIDJAN MAY 26 ANY CASE STOP OTHERS
DEPENDING ON AVAILABILITY MINISTERS STOP GOREUX ADELMAN COULD IF NECESSARY BE ABIDJAN
MAY 17 STOP LETTER FOLLOWS STOP REGARDS


CHAUFOURNIER

NOT TO BE TRANSMITTED

MESSAGE AUTHORIZED BY:

NAME .. Mr. Roger Chaufournier, Director

DEPT. .. Western Africa

SIGNATURE 
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

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cleared with & cc. to Mr. Goreux

IdeAzcarate:mh

Ack Apr 27

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*Organization - Econ Dept
Lissard Project*

OUTGOING WIRE

TO: GORDON
INTBAFRAD
NAIROBI

DATE: APRIL 25, 1969

CLASS OF SERVICE: LT

COUNTRY: KENYA

Rea

TEXT:
Cable No.: ~~ONE HUNDRED TWELVE~~ *112*

BANKS NEW BASIC RESEARCH CENTER DIRECTOR GOREUX WISHES UNDERTAKE CASE STUDY ON QUOTE DUALISM AND GROWTH UNQUOTE AND WISHES INCLUDE KENYA STOP BRUCE FAMILIAR WITH DETAILS STOP GOREUX PROPOSES CONSULTANT DR IFMA ADELMAN VISIT NAIROBI MAY THIRTEEN TO MAY SEVENTEEN FOR PRELIMINARY DISCUSSIONS STOP PLEASE CONSULT APPROPRIATE OFFICIALS TO SEE WHETHER ANY OBJECTION THEIR SIDE STOP WOULD BE HAPPY IF THEY WISH COOPERATE BUT STRESS THIS STUDY UNCONNECTED CURRENT OPERATIONS SINCE I WISH AVOID GIVING KENYA IMPRESSION THEIR REPLY WOULD INFLUENCE OUR GENERAL ATTITUDE STOP PLEASE CABLE REACTION ~~SOON~~ ~~AS~~ ~~POSSIBLE~~ SINCE ADELMAN PLANS LEAVE US APRIL THIRTY REGARDS WILLIAMS

NOT TO BE TRANSMITTED

MESSAGE AUTHORIZED BY:

NAME JHWilliams

DEPT. Eastern Africa

SIGNATURE *JHWilliams*
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

JHCollier:vmc *vmc*

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Mr. Goreux

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Service (if different):

DATE OF ISSUE

For use by recipient's Director

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DEPT: FEDERAL RESERVE

APR 25 6 07 PM 1969

NAME: DIRECTOR

FEDERAL RESERVE COMMUNICATIONS

NO. 100000

REGULATED AUTHORITY: FEDERAL RESERVE BOARD

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TO: DIRECTOR, FEDERAL RESERVE BOARD
 FROM: DIRECTOR, FEDERAL RESERVE BOARD
 SUBJECT: [Illegible]

[The following text is extremely faint and largely illegible, appearing to be a memorandum or report.]

DATE: APR 25 1969

BY: [Illegible]

FOR THE DIRECTOR

CLASS OF: [Illegible]
DATE: APR 25 1969

OUTGOING MESSAGE

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| ASSOCIATION INTERNATIONAL DEVELOPMENT | RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL BANK FOR | CORPORATION INTERNATIONAL BANKING |
|--|--|--------------------------------------|

April 25, 1969

Professor Irma Adelman
Department of Economics
Northwestern University
Evanston, Illinois 60201

Dear Professor Adelman:

Your letter of April 15 has been received during Mr. de Wilde's absence from the Bank. I shall bring your letter and its enclosures to his attention upon his return.

Sincerely yours,

EOB

(Mrs.) Edith O. Burkett
Secretary to Mr. de Wilde

Enclosures from Professor Adelman:

Performance Criteria for Evaluating Economic Development
Potential: An Operational Approach
A Factor Analysis of the Interrelationship Between Social
and Political Variables and Per Capita Gross National Product
An Econometric Model of Socio-Economic and Political Change
in Underdeveloped Countries

Mr. R. Chaufourmier

April 24, 1969

24

Louis M. Goreux

Prof. Adelman's visit to Ivory Coast and Ghana

1. Irma Adelman and I had a thogough discussion with de Wilde before his departure. It was agreed that the best way to proceed was to undertake a preliminary investigation in three African countries, of which no more than two will be selected for the study itself. Out of the three countries investigated, (Kenya, Ivory Coast and Ghana) two are in your Department. After discussing with several members of the two African Departments, it seems that Ivory Coast will probably be selected and that either Kenya or Ghana will be.

2. Regarding Ivory Coast, I have prepared and attached three draft letters which are to go out under your signature, (to Lutolf, Diawara and Bedie). J.C. Dumoulin will see Berthelot with Mrs. Adelman in Paris on May 5. This will facilitate the meeting with Diawara, since Berthelot has been working closely with Diawara on the \$8 million socioeconomic survey conducted in Ivory Coast from 1962 to 1966. I had also a talk with Kochman who was very helpful and proposed to send from his side a personal letter to Diawara and Bedie with reference to your letter. I have discussed with Kochman the nature of the reference to be made in your letter to his participation in the study. I am conscious of the need for some diplomacy in dealing with Diawara and Bedie respectively. I expect to be in Paris in the second part of May and I think that it might be useful if I were to join Prof. Adelman in Ivory Coast. I would appreciate your advice on this point. In case I would go to Ivory Coast, the letters would obviously have to be adjusted accordingly.

3. Regarding Ghana, I propose to follow a more cautious approach. The letter to Omaboe does not ask for an appointment with the Minister (who may be on his way to Paris anyway). It is mainly a letter of information for facilitating contacts at the working level.

4. To each letter will be joined a set of attachments; only one set is joined to this memo. The letters to Diawara and Bedie will be written in French, as well as the set of attachments. (A French translation of the letter to Diawara is attached).

LMGoreux:pmh
Attachments (6)

cc: Mrs. I. Adelman

Mr. J. H. Collier

April 23, 1969

L. M. Goreux

Mrs. Adelman's visit to ECA and Kenya

1. As agreed, I have prepared three drafts letters: One to Gardner, one to the Nairobi office and one to the government of Kenya. After consultation with Demuth's office, it was agreed that all three letters will be signed by your Department, with copy to Demuth.
2. I believe that it is desirable to send a letter to a Minister in Kenya, but you should decide which one. If you feel that it is preferable, Mrs. Adelman could see the Minister, together with Bruce, so as to avoid any misunderstandings. This may be specified in the letter, if you wish.
3. As soon as you have corrected the drafts, my secretary will pick them up, retype them and hand them to you for signature.

LG
LMGoreux:vak
Attachments: (3)
cc: Mrs. I. Adelman

April 25, 1969

Dr. Irma Adelman
805 Central Street
Evanston, Ill.

Dear Dr. Adelman:

Re: Research Project No. II
Dualism and Development

Pursuant to this project, Mr. Goreux has asked me to look into possible sources of information pertaining to Ivory Coast, and in connection with it I studied your articles of May and December 1968 with great interest, albeit with a good number of question marks. With respect to the indicators used in these papers, I have, inasmuch as Ivory Coast is concerned, attempted to assemble possible sources of information, though with only limited success.

It seems to me however that the extent of dualism and intermediate mix, in agriculture and in industry, are fairly well depicted in Samir Amin's book entitled Le Developpement du Capitalisme en Cote d'Ivoire, published in 1967, a review of which appeared in the AER December 1968 issue (photocopy appended herewith). The book includes a fairly comprehensive bibliography on Ivory Coast's social structures and customs, legislation, fiscal system, household budgets, land tenure patterns (problemes fonciers) and land ownership surveys. A photocopy of this bibliography is also appended to this letter for your convenience. I should indicate that it does not go beyond 1966 and that it overlaps for the years prior to 1964 with a more complete bibliography published in 1964 by the OECD Development Center in Paris from which I have only extracted and appended here a copy of Annex 4 which gives a comprehensive list of French organizations, agencies and institutes operating or having operated in the past in Ivory Coast.

In addition, it occurs to me that you may find useful data on the breaking down of government expenditures in several African countries in the Bank Economics Department Working Paper No. 21, which I am also forwarding to you. Unfortunately, due to my lack of personal exposure to Ivory Coast and to the short time available before your trip, it has been difficult to assemble more information. I am hopeful nevertheless that a glance at this few documents may somehow assist in your queries, and I am confident that you will get ample guidance during your stop-over in Paris.

Dr. Irma Adelman

-2-

April 25, 1969

Let me only add that in Abidjan, you might usefully contact the Chambre d'agriculture et d'industrie. These chambers were fairly active in former years and may still be. It would not be a surprise to me if the Abidjan chamber was able to give you access to interesting unpublished archives on agriculture, both traditional and modern.

I wish you a pleasant trip and experience and I will be looking forward to seeing you upon your next visit with us at the Bank.

Kind regards,

Yours sincerely,

Bernard Oury
Economist

ks
BOury/vak
Enclosures (4)

Mr. J. Reamy, Mr. D. Jeffries

April 23, 1969

24

Louis M. Goreux

Visit of R. Lissak and T. Vietorisz
to Washington - May 1-2 Project No. I

Within the frame of the contracts made, Mr. R. Lissak will come to Washington on May 1 and 2 and Mr. Vietorisz on May 1 only. During this time they will consult with Messrs. Fuchs (IFC), Sheehan (Power Div.) Kalmanoff (Eco) and other members of their staffs.

cc: Mr. Friedman

April 23, 1969

Mrs. Irma G. Adelman
805 Central Street
Evanston, Ill. 60201

Dear Irma:

You will find attached copies of a first set of letters I have sent under my signature, as well as the copies of my memos to Collier and Chaufournier for the other two sets.

Sincerely yours,

Louis M. Goreux

Attachments: (7)

LMGoreux: vak

April 23, 1969

Mr. Henry Ergas
Director
Joint IBRD/FAO Program
FAO
Via delle Terme di Caracalla
Rome, Italy

Dear Henry:

You probably know of Irma Adelman who will stop over in Rome on her way to Africa to conduct preliminary investigation on Research Project No. II. I am sure that you could provide her with very useful information and I believe that you will enjoy talking with her.

Therefore, I am sending you an attached copy of my letter to Wells with some background material.

Thanking you for your help and hoping to see you soon.

Yours sincerely,

Louis M. Goreux
Director
Basic Research Center

49 LMGoreux:vak
Attachments: (4)
cc: Mrs. I. Adelman

*Org - Ec. Dept - Research
Proj.*

OUTGOING WIRE

TO: DR IRMA ADELMAN

DATE: APRIL 23, 1969

DEPARTMENT OF ECONOMICS NORTHWESTERN UNIVERSITY

CLASS OF LT

805 CENTRAL STREET

SERVICE:

COUNTRY: EVANSTON

W W

TEXT: ILLINOIS

Cable No.:

HAVE CABLED \$1,050 ~~TRAVEL~~ AMERICAN EXPRESS TRAVELERS CHEQUES
THROUGH NATIONAL BANK OF NORTH EVANSTON 2951 CENTRAL STREET
EVANSTON

INTBAFRAD

NOT TO BE TRANSMITTED

jep
MESSAGE AUTHORIZED BY:

NAME *Raymond E. Deely*

DEPT. *Treasurer's*

SIGNATURE *Raymond E. Deely*
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

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Number for routing

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NOTES: THIS MESSAGE IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY MANNER

(SIGNATURE OF INDIVIDUAL AUTHORIZED TO SIGN)

SIGNATURE

Handwritten signature

APR 23 6 01 PM 1969

DEPT: J. LEVANTZ, S.

GENERAL LES COMMUNICATIONS

NAME: J. LEVANTZ, S.

CONFIDENTIAL AND COPY DISTRIBUTION

MESSAGE AUTHORIZED BY:

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INTERVIEW

SAVINGS

THROUGH NATIONAL BANK OF MICHIGAN SAVINGS SOCIETY GENERAL BANK

HAVE CASHED \$1,000.00 MICHIGAN EXPRESS SAVINGS CHECKS

FORM NO. 1

TEXT: INTERVIEW

CONTENT: SAVINGS

Handwritten initials

FOR GENERAL BANK

DEPARTMENT OF ECONOMIC DEVELOPMENT AND COMMUNITY SERVICES SERVICE CLASS OF PL

TO: BY: J. LEVANTZ, S.

DATE: APR 23 1969

OUTGOING WIRE

ASSOCIATION INTERNATIONAL DEVELOPMENT

RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL BANK FOR

COOPERATION INTERNATIONAL FINANCE

Handwritten notes at bottom right

April 22, 1969

Mr. Oris Wells
Deputy Director General
Food and Agriculture Organization
of the United Nations
Via delle Terme di Caracalla
Rome 00100, Italy

Dear Mr. Wells:

On April 10, we discussed briefly with Irma Adelman a research project on "Dualism and Development". This project (draft outline attached) is related to the process of transforming traditional agriculture; it would therefore be very useful for Mrs. Adelman to be fully informed of the FAO studies in this field, particularly those relating to Kenya, Ghana and Ivory Coast, the three countries she will visit in May (travel schedule attached).

I thought that Irma Adelman might like to meet with Eregas, Quaix, Gerda Elau and someone in Rural Institutions Division, but I am not fully aware of what FAO has done recently in this field. I would therefore be most grateful if you could ask someone in your office to arrange for appointments with those whom you believe Dr. Adelman should meet. She will arrive in Rome on Thursday evening, May 8 and will be available for appointments the whole day Friday, May 9. I believe that the easiest way would be for Mrs. Adelman to contact your secretary at 9 a.m. on Friday regarding her appointment schedule.

I was very glad to see you in Washington and want to thank you for your help in this research project. I hope to go to Rome toward the end of May and look forward to seeing you then.

With my best regards.

Yours sincerely,

Louis M. Coreux
Director
Basic Research Center

Attachments (2)

LMCoreux:pmh
cc: Mr. L. Evans
Mr. R. Demuth
Dr. I. Adelman

1202 MAY 53 6N P: 21

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DR. I. V. V. V. V.
DR. H. V. V. V. V.
OO: DR. G. V. V. V. V.
Гидрометеорологический
университет (5)

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1969 APR 23 PM 4:51

Университетский центр
Гидромет
Университет

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Org-Ec. Dept - Res
Proj.

April 22, 1969

Dear Mr. Chatenay:

This is to introduce to you Dr. Irma Adelman, professor of Economics at Northwestern University. In addition to her academic position, Dr. Adelman is also a consultant with the Basic Research Center of the World Bank. In connection with her activities in this latter position, Dr. Adelman is presently undertaking a preliminary investigation in regard to Research Project No. II, an outline of which is enclosed.

Dr. Adelman will be in Paris from Sunday, May 4 to Thursday, May 8, 1969 during which time she will contact you. Any assistance which you may be able to render, such as providing her with secretarial facilities and allowing her appointments to be made through your office would be greatly appreciated. If this is agreeable to you, Mrs. Adelman could call your secretary at 9:30 a.m. on Monday, May 5 to check whether any appointments have been transmitted to your office.

Sincerely yours,

Louis M. Goreux
Director
Basic Research Center

Enclosures: (3)

Mr. L. Peter Chatenay
Chief of Administration
Paris Office

⁴⁹
LMGoreux:pmh

cc: Dr. I. Adelman
Mr. R. Demuth

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Генеральный секретарь
22

Управление
Секретариат
№. 1. 1969

Копии: (3)

Управление
Секретариат
№. 1. 1969

Управление

решения принимаются по линии управления.
В 1969 г. на основании приказа № 2 по вопросу управления и координации работы
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необходимостью проведения работы по линии управления секретариата по вопросу
работы секретариата на основании приказа № 2 по вопросу управления секретариата
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№ 2. В связи с необходимостью проведения работы по линии управления секретариата

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приказом № 2 по вопросу управления секретариата.

Управление

Управление № 2

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April 21, 1969

Dear Miss Reade:

This is to introduce to you Dr. Irma Adelman, professor of Economics at Northwestern University. In addition to her academic position, Dr. Adelman is also a consultant with the Basic Research Center of the World Bank. In connection with her activities in this latter position, Dr. Adelman is presently undertaking a preliminary investigation in regard to Research Project No. II, an outline of which is enclosed.

As part of her investigation Dr. Adelman will be in London on Thursday, May 1 through Sunday, May 4, 1969, during which time she will contact you. Any assistance which you may be able to render her would be greatly appreciated. Many thanks in advance.

Sincerely yours,

Louis M. Goreux *LG*
Basic Research Center

Enclosures (3)

Miss Nora Reade
LONDON OFFICE

LMGoreux:pmh

1288 WBB S3 BMS: 12

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1969 APR 23 PM 12:19

Генеральный штаб

LONDON OFFICE
МГВР Москва Москва

Уведомление (3)

Уведомление о смерти
Генерал Н. Соловьев

Уведомление о смерти

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Москва Москва Москва

Уведомление о смерти

Mr. Irving S. Friedman

April 11, 1969

Louis M. Goreux ¹⁴

Program and Budget of the Basic Research Center

I - Review of Fiscal Year 1969 (Past five months and anticipations
for the next three months)

1. The Center was established on November 1, 1968 with 7 professional positions. In view of the shortage of staff in the departments with operational responsibilities, management's policy was not to allow for any staff transfers to the Center. Apart from the Director of the Center, the entire professional staff had therefore to be recruited from outside. Since the 7 positions provided for in the 1969 fiscal year were committed in March 1969, the recruitment process had to be stopped pending decisions on the 1970 fiscal year budget.

2. In view of time-lags in the recruitment procedure, none of the new permanent staff members have yet reported for duty, although several consultants started their work in February and March 1969. During the first five months of the Center's life, the Director was therefore the only permanent staff member^{1/} and more than half^{2/} of his time had to be devoted to the "Commodity Stabilization Study". The remaining time was used for organization, recruitment and launching of two research projects.

3. The first research project^{3/} is now on the rails. It consists of a study of the "Relationships between the project and the country's approaches" and is based on four case studies. Arrangements are made with the countries studied to insure their involvement in the study. Thus, for the case study on Mexico, a three-man team has been set up from the Mexican side. A two-week seminar with all the main contributors to Research Project No. I will be held in Washington June 16 to 27.

^{1/} Two professional Bank staff members have been shown against the Center's budget during the 1969 fiscal year for administrative convenience although they are not members of the Center.

^{2/} This included the preparation of two working papers presented to the Board and participation in all policy discussions and review of technical papers.

^{3/} See annex.

April 11, 1969

4. The second research project^{1/} on "Dualism and Development" has been broadly defined. A five-weeks' field investigation is now under way and the outline of the research project should be finalized in June 1969. Regarding staffing arrangements, negotiations have been initiated but no long-term contract could be completed due to the fiscal year 1969 budgetary constraint.

5. The third research project is not yet formalized; negotiations on staffing have remained very informal in view of the present budgetary constraint.

II - Proposals for Fiscal Year 1970

6. The program and budget for next year are summarized in Tables 1 and 2. They follow the broad lines given in the description of the Center issued on December 13, 1968. These lines may be summarized under the following three headings:

(a) Teamwork on given research themes

7. Each research project is conducted within a team composed of approximately three permanent staff members and the equivalent of three full-time consultants. The exact size will not be identical in all research projects. But, on the average, this size appears large enough to permit cross-fertilization of ideas and to create the potential for basic contributions within a reasonable period (two to three years), while it still remains small enough to be manageable.

(b) Within each team, mix between University consultants and permanent staff of the Center

8. The fact is that, with present recruitment practices, first-class scholars can be attracted on a consulting basis, but not on a permanent basis because in the latter case they would have to give up their university career. Thus, within a few months, several economists of top international reputation in their field have been attracted on a consulting basis; none of them would have joined the Bank on a permanent basis. Such an arrangement (consultants on a five-month a year basis or on a sabbatical year) may provide the most efficient way of building a bridge between research conducted in

^{1/} See annex.

April 11, 1969

universities and Bank research; this was one of the objectives pursued in the establishment of the Center.

9. To insure enough unity in the research projects and to transmit the specialized knowledge of the consultants to the permanent staff (learning process), the consultant task force has to be matched by a nucleus of permanent staff members. The budget proposals provide for an equal balance between these two groups.

(c) Within the Center, need for conducting three research projects simultaneously

10. It would be inadvisable to concentrate all the resources of the Bank Research Center on a single project. By nature, basic research cannot always be successful. On the basis of a single experiment, the Bank could not, therefore, be in a position to judge whether there is a need for a Research Center in the Bank.

11. As I understood it, one of the major objectives of the management in establishing this Center was to test whether a Bank Research Center could constitute a pole of attraction stimulating, outside the Bank, research which would ultimately help the World Bank in promoting development. Clearly, the Bank Research Center cannot be expected to have such an impact if it does not reach a "critical mass". When I was approached in September 1965, at the time the Center was conceived, I emphasized that it was worth trying only if it were clearly understood that by 1970 the Center should reach a manpower equivalent to 20 economists full-time. I wish to re-emphasize this concept in presenting the budget for the 1970 fiscal year.

12. The figures shown in Table 1A reflect the total commitments which should be made before the end of fiscal year 1970. Due to time-lags in recruitment, actual expenditure during that year may be only two-thirds of total commitments as shown in Table 1B. It is clear that these recruitment objectives can be easily fulfilled within the next 12 months. Without any transfer within the Bank, while the Director of the Center was alone and had to devote half of his time to another task, the recruitment ceiling given for the fiscal year 1969 has been reached in less than five months. The program proposed can be implemented and it represents a minimum below which the Center cannot reach the "critical mass" required to make an impact.

Attachments

LMGoreux:pmh

cc: Mr. J. Adler

Mr. D. Jeffries

Table 1: Professional Positions, Fiscal Year 1970

1A: Commitments to be made within the next twelve months

| | Permanent | Consultants* (full-time equivalent) | Total |
|------------------------|-----------|--|-----------|
| Office of the Director | | | |
| Director | 1 | | 1 |
| Economist | 1 | | 1 |
| Project I | 3 | 3 | 6 |
| Project IIA | 3 | 3 | 6 |
| Project IIB** | 1 | | 1 |
| Project III | 3 | 3 | 6 |
| Total | 12 | 9 | 21 |

* Consultants will generally be employed less than six months a year.

** Research project to be conducted jointly with the Industrialization Division and headed by B. Balassa. The Basic Research Center was asked to provide an economist full-time starting in November 1969.

1B: Positions occupied on a full-time basis taking into account the likely time lag in recruitment

| | Permanent | Consultants (full-time equivalent) | Total |
|------------------------|------------|---------------------------------------|-------------|
| Office of the Director | | | |
| Director | 1.0 | | 1.0 |
| Economist | .5 | | .5 |
| Project I | 2.4 | 3.0 | 5.4 |
| Project IIA | 1.5 | 2.7 | 4.2 |
| Project IIB | .7 | | .7 |
| Project III | 1.2 | 1.5 | 2.7 |
| Total | 7.3 | 7.2 | 14.5 |

Table 2: Non-professional Positions
Fiscal Year 1970

| | A | B |
|---------------------|-------------|--------------------|
| | Commitments | Positions Occupied |
| Secretaries | 6 | 4.2 |
| Research Assistants | 5 | 3.5 |

Table 3: Others

The budget should include provisions for contracts, when pieces of research can be conducted more efficiently outside than inside the Bank. It is proposed to set aside a \$50,000 provision for the FY 1970. It should also include adequate provisions for travel and overtime. It is visualized that one full time programmer will be needed from November 1969 and two from the Spring of 1970.

ANNEX: The Research Projects

In the note of December 13 outlining the program of the Center, three main approaches were described. The budget proposal consists of undertaking a research project for each of these three approaches. An outline is attached for the first two research projects which have been discussed with the Divisions concerned in the Bank.

For the first research project, the main consultants with whom contracts have been signed are:

- A. Manne, Prof. - Stanford University
- T. Vietorisz, Prof. - New School of Economics, N.Y.
- C. Frank, Assoc. Prof. - Princeton
- L. Westfall, Assist. Prof. - Princeton

For the second research project, two main consultants have been selected^{1/} at this stage:

- I. Adelman, Prof. - North Western University
- B. Thorbecke, Prof. - Iowa University

The first two research projects are devoted to the problem of optimization within a country. This may be reached by using suboptimization models relating to a small sector of the economy and analyzing the interactions with the rest of the economy through multi-stage models. The third research project could be devoted to the analysis of interactions between countries through the international flow of goods and capital. It could investigate under which conditions the difference between suboptimization for individual countries and optimization for groups of countries may have implications for the policy of an International Development Agency.

^{1/} No long-term contract could be signed due to the budget constraint.

April 4, 1969

Professor Joel Bergsman
University of California
Brazil Development Assistance Program
2600 Dwight Way
Berkeley, California 94720

Dear Professor Bergsman:

You will find attached a copy of the draft outlines of the two research projects. Regarding the first one, work has started in Mexico, where we have a three-man team from the Mexican side. I would appreciate receiving your comments.

Yours sincerely,

Louis M. Goreux *LMG*

Attachments

LMGoreux:pmh

April 4, 1969

Mr. Apostolos Condos
Duke University
Department of Economics
Durham, North Carolina

Dear Mr. Condos:

I am sending you, for information, a copy of the draft outline of the two research projects presently being undertaken. I would be glad to receive your comments.

Looking forward to seeing you,

Yours sincerely,

Louis M. Goreux ^{LG}
Director
Basic Research Center

Attachments

LMGoreux:pmh

Mr. Donald W. Jeffries

April 3, 1969

Louis M. Goreux ^{LG}

Contract with Irma Adelman during the fiscal year 1968-69

1. Objective

The attached note on Research Project No. II provides the research theme. The task ahead is first, to conduct a preliminary investigation with a view to selecting the countries most appropriate as case studies and second, to rewrite an outline of the Research Project No. II, focussed on the problems of the countries selected. The proposed contract has no budgetary implications regarding the 1969-70 fiscal year. It is understood that the decision to go ahead or not in 1969-70 will depend on the interest aroused in the project and on budgetary considerations.

2. Work schedule: April 9 through June 30, 1969

2.1 Summary

- One month's travel to Western Europe, Western and Eastern Africa.
- Up to 5 working days in Washington, with two round trips Chicago-Washington-Chicago.
- Up to 7 working days in North-Western University.

2.2 Schedule and terms of reference

April 1969: Preparation of the field trip.

A two-day visit (April 9 and 10) to Washington for discussion with the country's officers concerned. Up to two days in North-Western University to collect information.

May 1969: (One month) Field trip (London, Paris, Ivory Coast, Cameroon, Kenya).

The schedule should be finalized on April 10. The main objective is to survey data available and assess to what extent the national agencies concerned are interested and are willing to be involved in the study.

June 1969: Report

Up to 5 days in North-Western University to prepare a report of the trip and proposals for the outline of the research project. Two or three days will be spent in Washington to finalize the outline of the Research Project.

c.c. Mr. I.S. Friedman
J. Adler

Attachment

LMGoreux:pmh

RESEARCH PROJECT NO. IIDualism and Development1. The problem

In a number of countries at an early stage of development, there is a strong dualism between modern and traditional sectors. In some countries, the growth of GDP was accompanied by an accentuation of the dualism of the economy resulting in larger income disparities, transformation of disguised into open unemployment, and actual or potential social and political unrest. In other countries, the growth of GDP was more evenly spread over the population and the economy became more closely integrated.

The pattern of development is largely dependent on exogenous factors such as the country's natural endowment, the state of world markets and the inflow of foreign capital. Nevertheless, this pattern may be substantially influenced by national policies such as the allocation of resources between the modern and the traditional sectors and the price, monetary and trade policies. The object of the study is to assess the impact of alternative strategies on the growth of the country and on the dualism of the economy (e.g. on the size of the pie and on its distribution). The study should investigate the nature of the trade-off, if any, between growth and dualism both in a short term and in a long term perspective. This could be illustrated by simulating

three different ways of allocating additional resources. The first could consist of allocating the additional resources exclusively to the modern sector; the second in spreading these resources thinly within the traditional sector; the third in concentrating them on some spear-head zones with a view to transforming parts of the traditional sector.

2. The approach

The analysis will be based on case studies in two or three countries using simultaneously economy-wide and micro approaches.

2.1 Economy-wide approach

This approach would consist of analyzing historical developments and setting a projection frame from which the impact of alternative strategies could be assessed.

The historical approach should shed some light on questions of the following type: - What was the actual transfer of resources from the rural to the urban sectors, or vice versa, taking into account fiscal policies, export taxes, distribution of public expenditures between each sector, etc.? - Do the relative per caput income levels used in the economic account provide an unbiased indicator of the relative welfare among the rural-traditional, rural-commercial and urban population? - How closely are these relative income levels associated with migrations? - Do economic aggregates, such as GDP, provide a satisfactory indicator of growth? - What was the return on public investments in the rural-traditional, rural-commercial and modern sectors? - What was the trade-off between growth and dualism (e.g. between the size of the pie and the

evenness of its distribution), between growth and unemployment ?

The projection frame might be presented in the form of a model disaggregated in a limited number of sectors and subsectors reflecting the dualistic patterns of production. Thus, agriculture might be divided into three subsectors (e.g. traditional, export and commercial for domestic consumption); industry (with two or three subsectors); and services (with government as one subsector). It would be necessary to devise ways of converting this sectorial breakdown into a rural-urban breakdown, possibly with a distinction between rural-traditional and rural-commercial. Such a breakdown would be required for studying income distribution, migrations and consumption patterns. This projection frame should only be an elaboration of existing projection studies based on investments under way and surveys of production possibilities. Such a frame should serve in providing a likely pattern of growth and identifying as variants from this likely projection alternative development strategies which would differ by their relative impacts on the dualism of the economy. The heart of the problem would consist of assessing the impact of these alternative strategies. For such an assessment, the most sensitive hypotheses could be identified; such hypotheses would be tested from a micro-analysis based on survey data as outlined in the following section.

2.2 Micro approach

This approach might concentrate on the analysis of behavioral relationships in subsistence and in commercial agriculture. The data would be derived from existing socioeconomic surveys supplemented

by ad hoc enquiries.

One method of analysis would consist of introducing institutional factors or dummy variables or integer variables in the regression analysis. Another method would consist of stratifying the sample on the basis of institutional factors, for example, the extent of the tribal authority; and testing the impact of such institutional factors on the behavioral relationships by covariance analysis.

A more powerful tool may consist of establishing an optimizing programming model for a given community. In such a model, the socio-cultural influences could be taken as constraints, for example the traditional division of labor between age and sex. The optimization could consist in minimizing risk subject to an income constraint or, alternatively, in maximizing profit subject to a risk constraint. The activities would be expressed in terms of specific crops grown under given technologies. The model would be used to investigate the impact of releasing particular constraints or sets of constraints, as well as the introduction of new activities. In cases of lumpy investments, such as the establishment of an agricultural processing complex in a given community, integer programming might have to be used.

The micro-analysis would differ from an anthropological study aiming only at describing the behavior of a particular community.

The selection of the case studies should be made in such a way as to allow some degree of generalization since the objective is to throw some light on the validity of the hypotheses underlying an assessment of the relative merits of the alternative development strategies referred to in the previous section.

The micro-analysis will constitute the more expensive and more time-consuming part of the study. However, this analysis, if successful, will contribute to increasing our knowledge of the basic factors of development.

3. Selection of Countries

The basic considerations dictating the choice of countries are: a) sharply defined dualistic structures which could be handled within a small number of sectors and existence of a problem as to alternative development strategies; b) availability of information at the sectoral and micro levels; c) cooperation and receptivity of relevant agencies in the selected countries, in particular as regards the analysis of survey data; and d) interest of the Bank in the countries concerned.

It is proposed to start by a preliminary investigation of six or eight countries, among which only two or three might be selected for the research project. Some very preliminary notes are attached regarding Peru and Guatemala. It is proposed that Professor Adelman proceed to a field investigation during the month of May 1969 covering, possibly, the Ivory Coast, Cameroon,

Kenya and Zambia. She would concentrate her attention on the availability of survey data for the micro studies and on the possibility of cooperation with the relevant agencies concerning the analysis of the data already collected and the possibility of collecting additional data. An outline of the research project would be prepared in June 1969. This outline should focus on the specific problems to be investigated in the selected countries.

GUATEMALA
Erik Thorbecke

The Highlands of Guatemala represent the traditional agricultural subsector. Per capita output in eight Highlands departments making out the traditional subsector declined from 90 dollars in 1950 to 52 dollars in 1966 according to official national income statistics. This phenomenon took place even though some migration occurred. The share of population in the above subsistence sector to total population fell from about 40 per cent to 38 per cent over the same time period. The proportion of unemployed (both overt and disguised) has grown considerably both nationally and within traditional agriculture. The income distribution - as is implied by the fall in per capita output in the subsistence sector - has become much more unequal.

The overall growth rate of gross domestic product (GDP) amounted to about 4.3 per cent annually over the period 1950-1966 - i.e., slightly more than one per cent per capita. Prices remained almost completely stable and balance of payments equilibrium was maintained because of the growth of agricultural exports (mainly coffee and cotton) and a sizable net inflow of foreign investment. Thus Guatemala can be described as a typical dual economy whose performance in the post WWII period can be characterized as economic stability (internal and external) without growth nor development.

The capacity of commercial agriculture (mainly export-oriented) or the industrial sector to provide the stimulus to growth and employment-creation is very limited. Export prospects are fairly bleak with demand limitations prevailing for coffee and cotton. On the other hand, there is some evidence that the supply response to simple technological improvements (e.g., fertilizer application) may be high in the subsistence sector - particularly for corn.

The basic hypothesis to be tested empirically would therefore be whether the economic development of Guatemala (or one exhibiting similar characteristics) could not be furthered by increasing the share of resources both public and private going to traditional agriculture. Given the limited prospects faced by agricultural exports and the market constraints - both internal and within the Central American Common Market - for industrial growth, it would appear that a strategy of concentrating more on traditional agriculture would be con-

sistent with furthering economic development. It is clear that economic development is a multidimensional process consisting not only in an increase in the rate of growth of GDP (aggregate and per capita) but also of a more equal income distribution (personal and regional), employment creation, relative price stability and balance of payments equilibrium. Some of these objectives are mutually complementary and some are mutually conflicting. Thus, in the light of limited exports demand prospects, concentration on the traditional agricultural subsector may not lead to more than a small loss in output (as compared to applying resources to the commercial and industrial sectors), while improving the income distribution, employment creation and social and nutritional goals. A framework would be devised to test the above proposition empirically at both the micro and economy-wide levels.

A thorough examination of data conducted over a six months period indicates that the above project is feasible. National income accounts are available at current and constant prices from 1950 on by aggregates, by sectors and by departments. Agencies of the Ministry of Agriculture have gathered data on output by crops and by departments which permit the yield effect to be separated from the acreage effect. Two agricultural census are available (1950 and 1964). Likewise detailed information on population size, distribution by age group and by department and on labor force by sector and by department are available as a result of the 1950 and 1964 population census.

Experimental data are also available on the impact of improved technologies (e.g., fertilizer application on corn) in the subsistence sector. A number of surveys dealing with labor migration, behavior of campesinos and other economic and socio-cultural phenomena has been completed. Additional surveys could be generated on a selective basis to answer specific questions.

PERU

Erik Thorbecke

Many of the conditions depicted with respect to Guatemala above are also found in Peru. Peru is another prototype of a dual economy. However, the nature of dualism is more complicated than is Guatemala. There are three natural regions: the Coast, the Sierra and the Selva. The Coast embraces commercial agriculture (cotton, sugar) as well as the modern industrial sector around Lima-Callao. The Sierra includes the large traditional sector (about 5 million Indians out of a total population of about 11 million) producing mainly for domestic consumption and a few mining enclaves which have very limited backward linkages. The Selva, finally, is the jungle region which is still almost completely undeveloped and unpopulated.

The performance of the economy since 1950 reveals a relatively high rate of growth of GDP, a strong balance of payments situation until 1965, a considerable worsening in the income distribution (particularly as between the Sierra and the Coast), increasing unemployment and a relatively stable price level until about 1967 (8.5 per cent growth annually over 1950-1966). Peru's performance could be characterized as growth without development. The export sector was clearly the dynamic, leading sector. Growth was export-led as some of the empirical work (including my own) has shown. Private investment responded to export earnings and the terms-of-trade and aggregate output was, thus, causally related to export performance. As long as exports prospered, overall income would grow, resulting however, in very limited backward linkages (fishmeal is the only export commodity to have had more than marginal linkages). The income distribution between the Coast and the Sierra became more unequal, the unemployment problem more serious in the light of the high rate of population growth and the capital-intensive technology prevailing in the export sector and the domestic industrial sector.

From approximately 1967 on export prospects worsened as a result of demand limitations for cotton and sugar, and supply limitations for fishmeal and mining products. As in the case of Guatemala it is conceivable that the output trade-off of allocating more resources in traditional agriculture in the Sierra might be small compared to allocating these resources to the Coast. On the other hand,

such a strategy would improve income distribution and employment creation and further economic development. A framework would be devised at both the micro and economy-wide levels to test empirically the wisdom of the above strategy.

The data situation is reasonably good. The Central Bank has spent much time and resources improving the quality of its national income accounts. The Ministry of Agriculture under the impetus of the Iowa State University Mission has helped gather detailed production and consumption data by crops and by regions. Iowa State University has had a team of macro and agricultural economists in Peru ever since 1962. A large number of studies have been undertaken by this team and a fairly thorough knowledge of the structure of the economy (and of the subsistence sector) has been gained. My own personal evaluation based on a seven year involvement in Peru is that the above hypothesis could indeed be empirically tested in Peru.

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Mr. D. W. Jeffries

April 3, 1969

L. M. Goreux 14

Contract with G. Ranis during the Fiscal Year 1968-69

Scope

1. Up to 8 working days and up to 3 trips, Yale-Washington-Yale. First visit scheduled on April 11, 1969. No commitment for the 1969-70 fiscal year.

Purpose

2. Discussions regarding research cooperation between the Bank and the Yale Growth Center were initiated between Messrs. Friedman and Ranis in September 1968. It was agreed that from the Bank's point of view, the best way would be initially to hire G. Ranis as a consultant to investigate research problems in which the Yale Center had acquired particular expertise.

Labor unemployment and investment policies is the topic proposed for investigation.

3. Population control has now been introduced as one feature of the Bank's policy. However, the impact of such a policy on the size of the labor force will not begin to be felt before at least 15 years. The population explosion of the last 15 years will be reflected by an explosion of the labor force during the next fifteen years, and its social impact aggravated in cases of rapid urbanization. It is therefore visualized that the problem of unemployment will become of increasing concern in the '70s, thus raising problems regarding the optimum nature of the Bank's investment policies. Due to the length of the gestation period of basic research, it may be wise to start research today on problems which may become critical in five years from now.

G. Ranis, Professor in Yale University, and Director of the Economic Growth Center, replaced H. Chenery for two years in the U.S. AID. He is a member of the Advisory Committee on Manpower Problems in the LDC in the OECD Research Center. His personal history form is in the Personnel files.

LMGoreux:pmh
cc: Mr. I.S. Friedman
Mr. J. Adler

March 28, 1969

Mr. Remy Freire, Chief
Agricultural Economics Unit
Department of Economic Affairs
Pan American Union
Washington 6, D. C.

Dear Mr. Freire:

This is to acknowledge receipt of your letter of March 24,
and to thank you for mailing me another copy of Mr. Rowe's study
on crop insurance in Latin America.

The article on the subject, of which I sent you a draft on a
personal basis, is scheduled to appear in the June issue of the
Bank-Fund review and if there is any follow up, I will not fail to
contact you.

I thank you very much in advance for your cooperation and for
making your files available to us when time comes.

Best regards.

Sincerely yours,

Bernard Oury
Basic Research Center

BOury: *hak*

cc: Messrs. Friedman
Kamarck
Weiner
Evans
Wapenhans
Takahashi

(All through and cleared with Mr. Goreux)

March 26, 1969

Professor Alan S. Manne
Department of Operations Research
Stanford University
Stanford, California 94305

Dear Alan:

Mr. Ross, on his return to Washington, told me that he would be glad if you could join the mission for four days, as suggested in my memorandum to Weiner, a copy of which is attached. Mr. Ross would prefer if you could come from April 22 to April 26. By then, Nick Carter would have had time to study the input-output matrix which Mr. Ross would like to discuss with you.

For room reservations, you should call Mr. Ross at Alameda Hotel. For your air ticket, we will send you an open ticket for a San Francisco-Mexico round trip.

Good luck.

Yours sincerely,

Louis M. Coreux *ly*

Attachment

LMCoreux:pmh
cc: Mr. I. Friedman
Mr. M. Weiner
Mr. M. Ross
Mr. D. Jeffries

March 25, 1969

Dr. A. M. Huq
Operations Research and Economics Division
Research Triangle Institute
Post Office Box 490
Durham, North Carolina

Dear Dr. Huq:

While sorting some papers lately, I came across a copy of the RTI proposal for research on "A Research Project to Determine the Relationship of Agricultural Development to Total Economic Growth", about which we have been in touch in the Spring of 1966.

Time has gone by since, but it just occurred to me that the subject is of some relevance to our work here at the Bank. Hence, I am writing today to inquire of what has happened to the project and to ask if you have any related papers that you could mail to me.

I thank you very much in advance.

Yours sincerely,

Bernard Oury
Basic Research Center

^{Bo}
BOury:vak
cc: Mr. Goreux

Mr. Jochen Kraske

March 20, 1969

Louis Goreux LG

Possibility of Larry Westphal's visit to Taiwan

1. When Westphal was in Washington for our Research Project No. I, he visited on February 20 Mr. Shu Chen Young. I understood from Westphal that Chen asked him whether he would eventually be free to go from Korea to Taiwan for about a week. Mr. Young is now in Guinea and will be back in about a month. The object of the mission would be to discuss whether the methodology used by Westphal in Korea could be applied in Taiwan, now facing a similar problem, i.e. the establishment of a petrochemical complex.
2. If you decide that Westphal's visit to Taiwan would be useful from your point of view, such a visit is perfectly all right on my side. We are now arranging for a contract with Westphal, not including a visit to Korea. If such a visit is later deemed necessary by you, a new contract will have to be made for this purpose and the cost would, I assume, be covered by your Division.

LMGoreux:vak

cc: Mr. Jeffries

Mr. Donald W. Jeffries

March 20, 1969

Louis M. Goreux 29.

W.C.F. Bussink

As previously agreed with Mr. Geli, Mr. Bussink should be reimbursed for expenses incurred during a two-day trip from Boston to Washington. The amount is indicated in the letter attached.

Attachments

LMGoreux:pmh

le 20 mars 1969

Monsieur Jacques Drèze
Research Director
Center for Operations Research &
Econometrics
Universite Catholique de Louvain
Heverlee, Belgium

Cher Jacques:

Je m'excuse de ne pas t'avoir répondu plus tôt. J'ai constaté en recevant une lettre de Dupriez que tu avais répondu la bonne parole puisque Dupriez me suggère les noms de MM. Bregentzer et Briffaux. Je voudrais te demander ton opinion sur ces deux candidats.

Pour te donner une idée de ce que nous faisons, je t'envoie une note sur le premier projet que nous avons commencé. Le second se rapporte à des pays à un niveau de développement très rudimentaire, type pays africain au sud du Sahara. I. Adelman et B. Thorbecke participent à ce projet de ce côté de l'atlantique.

J'espère me rendre en Europe d'ici un mois ou deux.

A bientôt j'espère.

Louis M. Goreux

LG
LMGoreux:pmh

Mr. Donald W. Jeffries

March 18, 1969

Louis M. Goreux 69

Consultants - March 25-29, Research Project No.II

Professors E. Thorbecke and I. Adelman will be coming to Washington for five working days (Tuesday through Saturday) to write an outline of Research Project No.II referred to in paragraph 8 of the attached draft memo.

2. Thorbecke's file is already with Personnel, Mrs. Adelman's file is attached. In view of her well-known qualifications, I do not feel that it is necessary to ask for references.

3. Mr. S. Singh, who has accepted our offer for permanent employment, will also be coming to this meeting.

4. The work will start on Tuesday morning, March 25 and may end on Saturday evening, March 29. However, if more rapid progress is made, it could be completed on Friday evening, March 28.

Attachments

LMGoreux:pmh
cc: Mr. I.S. Friedman

Mr. Mervyn L. Weiner

March 18, 1969

Louis M. Goreux 29

Possibility of Manne's visit to Mexico during
the Bank's mission

1. Background information on this research project is given in the attached documents:
 - a. Outline of the project
 - b. Note on a coordination committee in Mexico
 - c. Program of the Center

2. The Mexico study was briefly discussed with Mr. Ross on February 17, with Mr. Nelson on February 19 (or 18), and with yourself on February 20. As you recall, it was felt that if A. Manne were to go to Mexico for a few days during the time of the Bank's mission, it might serve two purposes. First, it would help in clearing possible misunderstandings in the minds of Mexican officials as to the relation between your major study and our case study. Second, it would ensure a greater complementarity between the two studies.

3. A. Manne told me that, from his side, the first best timing would be to arrive in Mexico on the evening of April 15, and to leave on the 19th or 20th, and the second best would be one week later, from April 22 to 26th or 27th. I would be grateful to receive your reaction to this proposal.

Attachments

LMGoreux:vak

cc: Messrs. I. Friedman
M. Ross
R. Nelson
D. Jeffries

Program of the Center

I. The broad characteristics

1. The difference between the research conducted in the Center and the research conducted in other Bank units is reflected by (a) the emphasis placed on the development of new methodology; (b) the length of the gestation period (three years may elapse between the conception of the project and the publication of the findings); (c) the mix between the contribution of the permanent staff of the Center and that of consultants attached to universities and outside research centers.

2. The emphasis placed initially on consultants is due to the following considerations: (a) at this stage, this is the only way to insure the participation of the top-level economists needed to establish the position of the Center; (b) it is a way of building a bridge between research conducted in the Bank and in universities; (c) it is a way for the Bank to reduce the risk attached to the pursuit of a new type of activity.

3. Since the Center is neither a servicing nor an operational unit, the program has to be visualized in the form of specific research projects which are briefly outlined below.

II. The research projects

4. In the description of the Center dated December 13, a distinction was made between three approaches. For each approach a research project is being initiated.

5. First approach: Relation between the project and the country's

approach^{1/}. A description of the research project is given in Annex _____. It is proposed to complete the project by December 1970 and to publish the findings in the form of a book in 1971. The first part will discuss the methodological problems and summarize the findings. The second part will present four case studies relating to Mexico, West Pakistan, South Korea and East Africa. The chapters will be presented in the form of signed contributions. Particular findings will be presented in the form of short articles in professional journals.

6. The work will be conducted partly in Washington by permanent members of the Center, partly by the consultants in their respective universities, and partly in the countries concerned. To insure adequate coordination between the various case studies, a two-week working session with all consultants will be held in Washington twice a year. The next session will be held from June 16 to June 27, 1969.

7. Second approach: Comparative study of the impact of national policies on growth in selected countries^{2/}. Two research projects will be conducted.

8. The first will deal with about six countries at an early stage of development. The main objective would be to develop a growth model adapted to the socioeconomic conditions of countries characterized by strong dualities between the traditional and the modern parts of the economy. It will be attempted to introduce explicitly institutional and political factors in the growth model.

1/ Basic Research Center, para. 3, December 13, 1968

2/ Basic Research Center, para. 4, December 13, 1968

9. The second research project dealing with developing countries having reached an advanced stage of industrialization will be conducted in collaboration with the industrialization division.

10. Third approach^{1/}: Analysis of international policies in the field of trade and investments. While in the previous cases emphasis was placed on the analysis of interactions within the economy of a country, in this case the emphasis is on the analysis of interactions between countries through the international flow of goods and capital. Some of the research initiated for the Commodity Study under the Rio Resolution will provide a starting point. The research work will deal with the problem of optimization seen from the point of view of groups of countries and with the techniques for optimizing.

^{1/} Basic Research Center, para. 5, December 13, 1968

PROGRAMA PRELIMINAR PARA EL TRABAJO

BIRF - IMP - B de M - CFE

Se propone hacer un trabajo de metodología basado en el borrador de Manne - Vietorisz (febrero 21 de 1969), concentrando los esfuerzos en la interacción Sector Eléctrico - Energéticos y utilizando los modelos insumo-producto del Banco de México para analizar la interacción con otros sectores. No se considera conveniente formalizar el punto que se refiere a los análisis de fabricación de equipo eléctrico en México.

El trabajo será efectuado por un grupo de tres investigadores por lo menos (nombrados por B de M, IMP y CFE), bajo la dirección de Alan Manne y con la participación de un comité integrado por Manne, Solís, del Castillo y Eibenschutz.

Como primer paso el grupo se integrará con un ingeniero del Instituto Mexicano del Petróleo, un econometrista del Banco de México y un ingeniero de la Comisión Federal de Electricidad. Este grupo no trabajará tiempo completo, tendrá reuniones sistemáticas para definir, de acuerdo con Manne, el programa detallado de trabajo y el método preliminar. Cuando resulte conveniente, se complementará el grupo con un mínimo de tres investigadores de tiempo completo.

Se continuará con la colaboración de los grupos de planeación de IMP y CFE y la del grupo de investigación de B de M y se utilizarán los modelos existentes o en desarrollo en estas instituciones.

En el transcurso de la semana del 10 de marzo se tendrá la primera reunión de trabajo.

Marzo 4, 1969

PRELIMINARY PROGRAM FOR THE PROJECT

(BIRD - IMP - B de M- CFE)

We propose to do a project on the methodology based in the draft of Manne-Victorisz (February 21, 1969), concentrating on the efforts of the interaction of the Electric Energy Sector and utilizing the input-output models of the Bank of Mexico for analysing the production of electric equipment in Mexico.

This project will include a group of at least three investigators (name by the Bank of Mexico, the Petroleum Institute of Mexico and the Federal Commission of Electricity) under the direction of Alan Manne and the participation of a committee composed of Manne, Solis, del Castillo and Eibenschutz.

The first step of this group will be to meet with an engineer from the Petroleum Institute of Mexico, an econometrician from the Bank of Mexico and an engineer from the Federal Commission of Electricity. This group will not work full time, they will hold periodic meetings to define according to Manne, the detailed program for this project and the preliminary methodology. If the need arises there will be added to this group a minimum of three investigators on a full time basis.

With the help of the planning group from the Petroleum Institute of Mexico, the Federal Commission of Electricity and the investigating group from the Bank of Mexico, this group will utilize the existing models or the developing ones of these institutions.

During the week starting the 10th of March there will be the first meeting for this project.

March 4, 1969

Mr. A. M. Kamarok

March 5, 1969

H. G. van der Tak

Sector and Projects Studies Division Research Program for 1969/70

I attach the research program of the Sector and Projects Studies Division for the two-year period 1969-70. It is divided into four parts:

- A. Ongoing studies to be completed during the first semester of 1969;
- B. Ongoing studies which will continue into the next twelve months (fiscal 1969/70);
- C. New studies to be started during the first semester of 1969;
- D. New studies to be started during the next twelve months (fiscal 1969/70)

The program areas refer to the areas listed in the Sector and Projects Studies Division, Work Program - Major Research Areas (December 5, 1968). The present priority program reflects, and is in general agreement with, subsequent discussions held with the Projects Departments and with the Economics Department Research Committee. Draft terms of reference are to be prepared for each major study outlining their scope, staffing, timing and costs.

Apart from ongoing studies, new efforts in the immediate future will focus on the studies listed under C. The start of studies scheduled to be taken up during fiscal 1969/70, and listed under D, is contingent upon the division meeting the recruitment targets outlined in its draft budget for fiscal 1969/70.

I intend to prepare similar documents summarizing the research program for the following 18-24 months at regular six-monthly intervals, on January 1 and July 1 of each year. Subsequent issues will incorporate necessary changes in the priority program arising from additional pressing demands for studies, progress made in implementing the program, and staff developments.

W5
HGvanderTak:smc

cc: Mr. Baum
Mr. Stevenson

SECTOR AND PROJECTS STUDIES DIVISION
RESEARCH PROGRAM 1969-70

A. Ongoing Studies to be Completed during January - July 1969

| <u>Program Area</u> | <u>Title of Study</u> | <u>Brief Description</u> | <u>Principal Staff</u> |
|---------------------|--|--|------------------------------------|
| 1 | a. Evaluation of Ongoing Irrigation Projects | Brief summary and evaluation of experience with 15 irrigation projects concerning costs and timing of construction and impact on return | Otten Reutlinger |
| 2 | a. Use of Computer Simulation for Project Appraisal | Non-technical general briefing paper of features application of computer models in project appraisal | Reutlinger |
| 4 | a. Risk Analysis of Transport Projects | Description and evaluation of application of probability analysis to port and highway projects | Pouliquen ^{1/} |
| | b. Project Evaluation in Inflationary Conditions | Analysis of financial and allocation problems caused by inflation | Lall ^{2/} (Reutlinger) |
| | c. Criteria for determining project benefits | Definition and analysis of various criteria relating to national income approach, consumer and producer surpluses, multiplier effects, and indirect and secondary benefits | Masse ^{**} |
| | d. Problems in Use of Shadow Prices for Project Analysis | Discussion of conceptual and measurement problems relating to second-best situations | Weckstein * |
| | e. Optimum Timing of Investments | Analysis of criteria for deciding when investments should be undertaken | de Weille |
| 7 | a. Agricultural Production and Supply Response | A review of objectives and approaches in research on production and supply response | Seagraves * (Reutlinger) |

^{1/} Currently with Transportation Projects Department.

^{2/} Resigned from Bank.

^{**/} Young Professional.

^{*/} Consultant.

| <u>Program Area</u> | <u>Title of Study</u> | <u>Brief Description</u> | <u>Principal Staff</u> |
|---------------------|--|--|---|
| 9 | a. Analysis and simulation of Livestock Projects | Construction, analysis and documentation of computer models for various livestock projects (will provide basis for subsequent risk analysis, cf. B-2a below) | Husain (with Agriculture Projects Dept.) |
| 14 | a. Kenya Case Study in Educational Planning | Case study on Kenya to test the feasibility of cost-benefit analysis in educational planning | Thias Carnoy* |
| 20 | a. The Optimum Depth of Ports | Methodological study of suitable criteria, including collection and analysis of available data | Ray |

* Consultant.

B. Ongoing Studies to Continue into 1969/70

| <u>Program Area</u> | <u>Title of Study</u> | <u>Brief Description</u> | <u>Principal Staff</u> |
|---------------------|--|---|---|
| 2 | a. Risk Analysis of Live-stock Projects | Case study of application of risk analysis to a live-stock project (cf. A-9a above) | Husain |
| 17 | a. Transport Planning Models Study | Inventory, analysis, adaptation and evaluation of existing transport models, especially the so-called Harvard Transport Model | de Weille, Miller, and others (interdepartmental) |
| 19 | a. Road Transport Regulation in Developing Countries | Discussion of objectives and instruments of road transport regulation | Oort * (van der Tak) |

* Consultant.

C. New Studies, to be Started During January-July 1969

| <u>Program Area</u> | <u>Title of Study</u> | <u>Brief Description</u> | <u>Principal Staff</u> |
|---------------------|---|---|--|
| 1 | a. Reevaluation of Mexican Irrigation Projects | Terms of reference to be prepared | Manning ? |
| | b. Reevaluation of Feeder Road Projects in ? | Terms of reference to be prepared (cf. C-20a) | Israel ? |
| | c. Reevaluation of Education Projects in Tunisia or Tanzania(?) | Terms of reference to be prepared | Thias ? |
| | d. Organization of Systematic Project Data Reporting | To provide cost and benefit indicators for (i) monitoring progress of projects and (ii) limited comparative analysis of project aspects (cf. memo van der Tak to Baum dated December 24, 1968) | ? |
| 5 | a. Agricultural Sector Planning Models | To provide analytical basis for identifying optimal sets of policies and investment decisions in agricultural sectors; initial stage to be carried out in conjunction with agricultural sector study in Portugal; terms of reference to be prepared | Egbert Ablasser ? Other ? |
| 9 | a. Grain Storage Projects | To provide analytical framework for economic evaluation of storage projects; terms of reference to be prepared | Reutlinger |
| | b. Feeder Road Projects | See C-20a below | |
| 18 | a. Economics of Highway Design Standards | To provide guidelines for design standards and timing or staging of road improvements, especially for low-traffic roads, taking account of the inter-relationship between design characteristics, road maintenance costs, and actual operating costs in varying climatic and terrain conditions (preliminary terms of reference available, but scope, manpower and phasing of study to be determined) | de Weille MIT ? Road Research Lab. ? |

| <u>Program Area</u> | <u>Title of Study</u> | <u>Brief Description</u> | <u>Principal Staff</u> |
|---------------------|-------------------------|--|---------------------------|
| 20 | a. Feeder Road Projects | To provide analytical framework and data base for practicable method of determining economic benefits of feeder roads (terms of reference to be prepared - cf. C-1b above) | Israel ? |
| | b. Railline Closure | To provide economic criteria for deciding whether and when existing rail lines should be closed; terms of reference to be prepared | Consultant (de Weille) |

D. New Studies, to be Started During 1969/70

| <u>Program Area</u> | <u>Title of Study</u> | <u>Brief Description</u> | <u>Principal Staff</u> |
|---------------------|---|---|--|
| 1 | a.) b.) /c/) Project Reevaluation Studies | ? | ? |
| | d. Ex-post Evaluation of Power Demand Proj- ections | Comparison of sample of power demand projections in appraisal reports with actual development of demand for power | ? |
| 3 | /a/ Public Utility Pricing | ? | ? |
| 6 | a. Irrigation Planning Models | Review of available water resources planning models, using systems simulation and linear programming, and their suitability for various purposes and in different circumstances; should con- solidate methodological experience gained in Bank from past efforts and pro- vide expertise for reviewing and/or guiding future water resources (river basin) development studies; terms of reference to be prepared | Reutlinger Husain Manning (?) ? |
| 10-13 | Education Studies | Preliminary review of exist- ing studies and research to determine priority areas for future work | ? |
| 14 | Education Planning Models | Comparative study of available planning models and submodels for education: initial focus on simple and partial models, e.g., simulation of pupil flows, optimum location and size of schools, projections of finan- cial requirements; cost-benefit analysis, etc.; terms of reference to be prepared | ? |

| <u>Program Area</u> | <u>Title of Study</u> | <u>Brief Description</u> | <u>Principal Staff</u> |
|---------------------|---------------------------|--|------------------------|
| 15 | a. Financing of Education | Study of pros and cons of fee/grant/scholarship systems and its impact on demand for education, social mobility, government budget, etc. Terms of reference to be prepared | ? |
| 21 | a. Power Planning Models | Comparative study of available planning models, both simulation and L.P. models, and their uses, advantages, and disadvantages for different purposes and power systems. Terms of reference to be prepared | Anderson ? |

FEB 27 1969

OFFICE MEMORANDUM

TO: Mr. Roger Chaufournier

Thubn

DATE: February 26, 1969

FROM: John C. de Wilde

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o/r

SUBJECT: February 28 Meeting of the Economic Department Research Committee

I have looked over the proposed work program of the "Sector and Projects Studies Division." In general this appears to me to be an excessively ambitious program. I think it would be better to concentrate on carrying out a few research projects on an adequate scale than to dissipate the available research talent over so many projects, including a number which seem to me to have little prospect of yielding meaningful conclusions in terms of the Bank's work.

I am very much in favor of Project 1 entitled "Follow-up of Projects." When I was head of Economic Staff I became convinced that something of this sort was necessary and that it should be undertaken on an adequate scale. I think "intensive reappraisal studies of selected projects" should not only yield some improvements in our techniques of project analysis but should give us a much better idea than we have now of the impact which Bank-financed projects have had on development in various countries. This type of research will alone probably require even more staff than is now envisaged.

Another research project that in my opinion should have high priority is No. 4, "General Problems of Project Analysis and Investment Criteria." So many problems fall under this heading that I think it is somewhat unfortunate that the proposed research program envisages only the employment of some ad hoc staff to analyze them. I think, for example, that the whole problem of the employment of shadow prices in relation to rates of return requires detailed analysis. I think there ought to be a general review of the extent to which the Bank has employed shadow pricing in its project analysis for the proper determination of opportunity costs of the various factors of production. We ought to work out some specific guidelines, for example, for determining the opportunity costs of labor under various sets of circumstances. I think this can only be done by examining specific situations. If opportunity costs of production are properly reflected in project analysis, I suppose we could adopt a standard minimum rate of return to which all projects in all LDC's should conform. There is another question, however, what this minimum rate of return should be. Apart from the problems listed under 4, I suggest some attention be paid to the feasibility of working out guidelines for economists in determining appropriate sector allocations of resources. It is also important to determine how taxes and subsidies should be treated in project analysis and how this treatment ought to differ from the standpoint of financial analysis and economic analysis. Still another question is the extent to which the cost of certain general government services, such as agricultural extension services, should be included or excluded from the costs of a project.

I have no views on the utility of many of the research projects, included in the list. I am, however, skeptical of the usefulness of quite a few of the model studies proposed. On this ground I am doubtful about projects 5, 7, 8, and 9 in particular. I think it is very difficult to develop general or model approaches to the problems alluded to in these research projects. Certainly in our countries there are such wide variations in conditions which make it necessary to devise an approach tailored to the particular problems encountered.

I endorse Project 11 on Rural Education, but only provided one starts by analyzing on the basis of certain case studies the experience with such new approaches to rural education as have been tried. Here again, of course, the approach to the problem of rural education must take into account the special problems that emerge from the analysis of the rural sector in each country.

I have one final comment on No. 16, "Economic Aspects of Health Planning." Here also I doubt that "standard **measures** of the efficiency of investments in health" can be readily devised. What I think is more important is to identify particular cases where poor health conditions appear prima facie to affect production adversely. In my study "Experiences with Agricultural Development in Tropical Africa" I mentioned the impressions that I got from visits to various parts of Africa that there are areas where the prevalence of particular diseases seriously affects the necessary supply of labor at critical times of the agricultural season. We need, however, more thorough analysis on the impact of poor health in such cases and of the cost and benefits of remedial measures.

JCW:eob

Research Project No. 1

Feb. 21/69

IBRD - BASIC RESEARCH CENTER

RESEARCH PROJECT NO. 1

Relation between the Project and the Country's Approaches

Preliminary Notes

The evolution of a common theme

Mexico

Korea

West Pakistan

East Africa

Multi-level planning approach

The Evolution of a Common Theme

Alan S. Manne, Thomas Vietorisz and Larry E. Westphal

The proposed studies are designed around a common theme: the interdependence of investment decisions - and the art of arriving at sensible decisions without allowing for all conceivable secondary effects.

When the Government of Pakistan requests a loan of \$895 million for an Indus Basin Development Fund, it is eminently worthwhile to check for the economic consequences with respect to cropping patterns, power generation, natural gas utilization, and a host of other factors. When a Pakistani district official requests a sanction to drill a single tube-well, it is an exercise in futility to ask whether he has considered all possible interindustry implications over time and space. The more we understand of interdependencies, the better we will recognize which of these can give rise to first-order effects, and which are likely to be negligible.

Some interactions are adequately handled through simple adjustments in conventional project appraisal criteria. (Example: a shadow price adjustment to the official foreign exchange rate.) In each of our case studies, we will identify situations in which the simple adjustments are adequate, and will establish criteria for deciding when more sophisticated modes of analysis are required.

The following appear to be the major distinguishable forms of interdependence which recur within the studies:

1. Indivisibilities, economies-of-scale, and learning

Within a given sector, these lead to marked interdependence with respect to the size, location and time-phasing of individual plants. Between sectors, indivisibilities give rise to "knapsack" effects. Protection to infant manufacturing industries is typically defended on the grounds of learn-by-doing.

Examples: The model of South Korea illustrates not only time-phasing, but also "knapsack" interdependence. That is, a single petrochemical project can absorb such a large quantity of resources that this cuts down the investment funds available for other sectors of the Korean economy - hence in turn reduces the domestic demand for petrochemicals. The electrical equipment study in Mexico will allow for learning effects - as well

as other forms of economies-of-scale.

2. Scale of demand

The scale of demand for a particular item may be linked to a macroeconomic indicator, or it may depend specifically on the product-mix.

Examples: For the analysis of polyethylene in Korea, it appears essential to allow in detail for the demands of specific downstream processing units. For the analysis of electricity demand in Mexico, by contrast, it appears sufficient to calculate the growth rate as 9 percent through multiplying the GNP growth rate of 6 percent by an income elasticity factor of 1.5 - provided that relative prices continue to change at the same rate in the future as in the past.

3. Relative prices of inputs and outputs

To the extent that there are limited natural resources or limited domestic markets, the scarcity value of these items will depend upon the particular mix of projects adopted. (Note: This effect will be more significant in the case of non-tradeables than for those items which can be imported or exported at constant international prices.)

Examples: Both in the case of Mexico and West Pakistan, natural gas supplies are limited. Hence the marginal cost of fossil fuel for power generation depends upon the magnitude of petrochemical demands for feedstock.

4. Externalities and public goods

Piecemeal decision-making is likely to be unsatisfactory in situations marked by externalities and public goods. Imaginative institutional devices may be needed here in order to avoid second- or third-best solutions.

Within a geographic region, each project contributes to the ability of that region to undertake future projects via: new skills, additional savings, higher productivities, and technological adaptations.

Given all the possibilities for interdependence, how does one ever arrive at a sensible decision on an individual project? Under what conditions can spillover effects be neglected? How can decentralization of information and decisions be achieved? Four research topics appear

promising:

1. The principle of average cost pricing can be viewed as one in which indivisibilities are treated as though they were, in fact, continuous variables. Market or administrative average cost pricing is justified when the change introduced by a lumpy decision is "relatively small", but not when it is "relatively large". The dividing line between these two is defined by a tradeoff between inefficiencies in resource allocation as against the many advantages of decentralized decisions.

When the error due to average-cost pricing becomes intolerably large, the lumpy decision has to be evaluated on an either-or (0-1) basis. In several of the models it is possible to measure the errors introduced by treating variables as though they were continuous. Our aim is to develop criteria identifying those kinds and sizes of indivisibilities - e.g. fixed investment costs - that can be safely treated as continuous, and those that cannot. For example, in averaging fixed costs for pricing purposes, what degree of capacity utilization should be assumed? Or, in pricing periodically slack capacities, how much of a cyclical price fluctuation should be allowed? For practical application, the apparent economic efficiency of rapidly changing prices must be balanced against the difficulties of adapting to short-run price fluctuations.

2. In the integer programming models for East Africa, South Korea, and the electrical equipment sector of Mexico, one could simulate the consequences of supposing that certain investment decisions are closely linked (e.g. the investment allocations to each project at a given point in time), and check for the departure from optimality that arises from piecemeal decision-making.
3. Sensitivity analysis for the individual case studies will suggest which interfaces with other sectors are significant, and which are not.

Example: The Mexican power study already suggests that the fossil fuel price is crucial to the choice between nuclear and fossil fuel generating units, but that plausible variations in the discount rate do not affect this choice.

4. Input-output matrices are available for countries at many different stages of development. These provide a general equilibrium framework - albeit a crude one. From these

empirical matrices, it should be possible to calculate the strength of interindustry linkages.

Example: One would expect strong backward linkages from electricity to fossil fuel in most stages of development, but from agriculture to fossil fuel only in highly mechanized economies. The measurement of linkage strength - the "distance" between industries - is a topic that has hitherto received little attention from econometricians, and yet is crucial to the issue of centralized versus decentralized decision-making.

Each of these four topics constitutes an area in which the Bank's studies can make a major contribution to basic research in economics.

Multi-level Planning Studies - Mexico

Alan S. Manne and Thomas Vietorisz

In the case of Mexico, it is proposed to make maximum use of three series of studies - undertaken respectively at Banco de Mexico, Comision Federal de Electricidad, and Instituto de Petroleo Mexicano.

The Banco de Mexico input-output studies provide the essential macroeconomic background needed for sectoral and project planning. The data base includes a 45-sector transactions matrix for the year 1960.

Within the electric power sector - in order to evaluate a nuclear plant to be constructed during the middle 1970's - the CFE has recently completed a series of investment planning studies. These analyses cover the interdependencies between individual generating projects to be undertaken in the Central-East-West systems over the planning horizon 1975-95. Simulation and linear programming techniques have both been employed.

Crucial to the economic choice between nuclear and fossil plants is the cost assigned to fossil fuel. This cost in turn depends upon the investment plan adopted by the fossil fuel producing sector - principally Pemex. Currently under way at the Instituto de Petroleo Mexicano is an energy survey and a model for planning investments within Pemex over the decade 1970-80. Hopefully, this energy survey will quantify the cross-elasticity of demand between electricity and fossil fuels (e.g., the tradeoffs between their use in the steel producing sector).

In Mexico during the 1970's there will be an unusual link between the power industry and the electrical machinery industry - the process of converting the Central System from 50 to 60 cycles. One of the chief advantages of unifying the frequencies within Mexico's power grid is that standardization will lower the cost of domestic electrical equipment. In turn, the lower the cost of this equipment, the more attractive it becomes to undertake long-distance energy transmission via wire rather than pipeline transport of oil and gas.

For Mexico then, the principal research task will be to observe the interdependencies between the macroeconomic and the sectoral planning efforts. By analyzing the flow of information and the implications of decentralized decision-making within these agencies and enterprises, we hope to shed light on the workings of a multi-level planning operation. The theoretical work will proceed somewhat along the lines that have already been proposed by Malinvaud in France and Kornai in Hungary.

The research tasks will include the macroeconomic work, sectoral studies for fuel and power based on existing data sources, and a sectoral study including some data gathering and cost-benefit analyses in the case of electrical equipment manufacturing. (The cooperation of Mexican firms and government agencies will be sought in order to obtain the release of detailed data on this industry.) This case study in equipment manufacturing could provide insights into the payoffs from selective import substitution and from complementarity arrangements for imports and exports with other LAFTA nations. Moreover, useful background information could be obtained with respect to the Bank's 15% preference policy on global tenders. As a starting point on electrical equipment manufacturing, we would utilize IBRD Report No. Ec-161, May 1968.

MULTI-LEVEL PLANNING STUDIES - KOREA

1. A multi-sectoral, economy-wide inter-temporal programming model for Korea already exists and has been used to examine the timing and scale of investment in an integrated steel mill and a petrochemicals complex.^{1/} The principal focus of the examination was on interdependence through indivisibilities and economies of scale. The model was formulated to deal specifically with what were the major investment choices during Korea's Second Five Year Plan (the steel and petrochemicals projects); remaining production, trade, and investment activity was treated in the detail that seemed necessary to capture the interrelations between sectors which would affect the basic investment decisions.

2. The research proposed here will be an extension of the existing multi-sectoral model to deal with the major investment choices which now appear for the Third Five Year Plan. The research will largely be based on Westphal's experience as a consultant to the Korean Economic Planning Board during 1969-70, and to this extent will be a report on the formulation and application of the model in the Third Five Year Plan's formulation.

3. The petrochemicals complex mentioned above is now under construction and is thus part of the data rather than a choice element. The present major choices are:

- (1) Timing of capacity increments in the large integrated and steel mill. (The Koreans have decided to construct a 3-million-ton capacity steel mill in phased increments. The first 600 thousand tons of capacity are now being installed.)
- (2) Selection, size and timing of projects pertaining to large scale investments in the metalworking industries (e.g., machine tools, shipbuilding, vehicles, consumer durables);
- (3) Profitability of further investment in the chemical industry.

^{1/} Westphal, Larry E., "Multi-sectoral Project Analysis Using Mixed Integer Programming," Report No. 101 (Revised), Project for Quantitative Research in Economic Development, Harvard University, and forthcoming in Adelman, Irma, Northwestern University Conference on Korean Planning Volume, (Johns Hopkins Press, June 1969).

4. There is a clear demand interdependence between the timing of additions to steel-mill capacity and investment in metalworking. In one phase of the study a separate and detailed sectoral model will be constructed to examine this and to evaluate alternative projects in metalworking

5. Because of indivisibilities in each sector, it is highly unlikely that Korea will be able to make a major simultaneous commitment of investment funds to both the chemical and metalworking sectors. Thus the interrelation between these two sectors consists in competition for investment funds within the multi-sectoral model.

6. In its applications the model will also fulfill the function of master program in a two-level planning model which we intend to formulate and in which separate second-level programs will describe the iron-and-steel, chemical and metalworking industries. (Some preliminary work can be done with the existing model.) The type of two-level model which we propose to use is novel in that it restricts the flow of information between the upper and lower levels by means of aggregation procedures. We shall refer to this as a "two-level model with limited information exchange", or a limited-information model in brief, to distinguish it from a "two-level decomposition model with full information exchange".

7. In the limited-information model the projects around which the model is centered (e.g., in the machine tool sector) will be specified at a high level of aggregation -- unlike the detailed specification in Kornai's full-information multi-level planning model. There will be iteration between two steps: (1) solving the economy-wide model, given a detailed specification (aggregated in the model) of major project alternatives and characteristics; and, (2) reformulating project choices and specifications based on learning from previous economy-wide solutions. In the iterations only limited information will be passed between the levels.

8. The proposed work with the limited-information model will be carried out in two stages which differ from each other in the degree to which the second-level programs for the sectors mentioned above are formalized. While Westphal is in Korea, attractive projects in the three sectors will be generated by an informal procedure in consultation with local engineers and others. The resource requirements of the projects so selected will then be aggregated and utilized to revise some of the technical coefficients of the formal economy-wide master program. In the second stage after Westphal's return from Korea, the sectoral models will be formalized in so far as possible.

9. One set of research questions will focus on the properties and use of limited-information multi-level planning models: how and what kind of information should be passed between the levels; how project respecification in the second step above should take place; how the simultaneous presence of several large projects should be handled; etc. Answers will be

sought through theoretical analysis and sensitivity testing with the numerical model. Comparisons will be made between the use of more and less formalized lower level models. Another related set of questions will be centered on the comparison of limited and full-information multi-level planning. In the full-information case the Dantzig-Wolfe decomposition algorithm will be used.

10. An important set of practical research questions will deal with the nature and extent of demand interdependence between steel and metalworking, as well as interdependence between metalworking and chemicals through indivisibilities, uncovered in the sectoral and economy-wide models.

WEST PAKISTAN

The Indus Basic Study provides detailed sectoral models for agriculture and for electric power. Economy wide models are now also available for West Pakistan. Combining the wealth of information contained in the Indus study, together with an economy-wide simulation or programming model, it is proposed to study how the technique of multi-level planning can be used for analyzing irrigation projects.

The problem of interdependence may materialize at different levels:

- (1) Interdependence between various cropping patterns and alternative techniques for producing water. This has been analyzed with a linear programming model prepared for the Indus study.
- (2) Interdependence between irrigation, fertilizers, extension services, transportation including feeder roads, marketing, processing, etc. The basic information is also provided in the Indus study.
- (3) Interdependence between the agricultural and the power sectors. Since a multi-purpose dam provides both irrigation water and electricity, the social profitability of the dam depends on the shadow price for electricity, and this in turn depends on the shadow price for gas. The linear programming model of the Indus basin provides a tool to measure this interdependence.
- (4) Interdependence through investments, savings and foreign exchange constraints, etc., which have to be analyzed through economy-wide programming.

It therefore seems that, with the material presently available, an interesting study of multi-level planning could be made for some well selected projects or packages of projects. The timing of implementation would also be considered in the study.

EAST AFRICA

The problem of interdependence will be analyzed on the one hand between projects and sectors, on the other between the three countries of the region.

Interdependence between sectors

The proposal described in the attached note by Ch. Frank consists in analyzing a phosphate-fertilizer-petrochemical complex. The interdependencies that would be studied are between the extraction of phosphate, the petrochemical industry and the fertilizer industry. The scale of the fertilizer plants would be limited by the absorptive capacity of the agricultural sector in each of the countries.

The scope of the analysis might be extended to cover selected agro-allied industries (such as processing or manufacturing of agricultural equipment). In such a case, the interdependence between the development of fertilizers and agro-allied industries on the one hand and the development of agricultural production on the other would become a primary objective of the research project. Such an extension would require the participation of a consultant familiarized with the studies conducted by the IBRD, the FAO and ECA in this field.

Interdependence between countries

Optimization could be undertaken for each of the three countries independently, for the three countries taken together as a single entity without constraints and with constraints as regards profits and losses in each of the three members of the Union. R. Norton will draft a proposal on the methodology proposed.

The Evolution of a Common Theme

Alan S. Manne, Thomas Vietorisz and Larry E. Westphal

The proposed studies are designed around a common theme: the interdependence of investment decisions - and the art of arriving at sensible decisions without allowing for all conceivable secondary effects.

When the Government of Pakistan requests a loan of \$895 million for an Indus Basin Development Fund, it is eminently worthwhile to check for the economic consequences with respect to cropping patterns, power generation, natural gas utilization, and a host of other factors. When a Pakistani district official requests a sanction to drill a single tube-well, it is an exercise in futility to ask whether he has considered all possible interindustry implications over time and space. The more we understand of interdependencies, the better we will recognize which of these can give rise to first-order effects, and which are likely to be negligible.

Some interactions are adequately handled through simple adjustments in conventional project appraisal criteria. (Example: a shadow price adjustment to the official foreign exchange rate.) In each of our case studies, we will identify situations in which the simple adjustments are adequate, and will establish criteria for deciding when more sophisticated modes of analysis are required.

The following appear to be the major distinguishable forms of interdependence which recur within the studies:

1. Indivisibilities, economies-of-scale, and learning

Within a given sector, these lead to marked interdependence with respect to the size, location and time-phasing of individual plants. Between sectors, indivisibilities give rise to "knapsack" effects. Protection to infant manufacturing industries is typically defended on the grounds of learn-by-doing.

Examples: The model of South Korea illustrates not only time-phasing, but also "knapsack" interdependence. That is, a single petrochemical project can absorb such a large quantity of resources that this cuts down the investment funds available for other sectors of the Korean economy - hence in turn reduces the domestic demand for petrochemicals. The electrical equipment study in Mexico will allow for learning effects - as well

as other forms of economies-of-scale.

2. Scale of demand

The scale of demand for a particular item may be linked to a macroeconomic indicator, or it may depend specifically on the product-mix.

Examples: For the analysis of polyethylene in Korea, it appears essential to allow in detail for the demands of specific downstream processing units. For the analysis of electricity demand in Mexico, by contrast, it appears sufficient to calculate the growth rate as 9 percent through multiplying the GNP growth rate of 6 percent by an income elasticity factor of 1.5 - provided that relative prices continue to change at the same rate in the future as in the past.

3. Relative prices of inputs and outputs

To the extent that there are limited natural resources or limited domestic markets, the scarcity value of these items will depend upon the particular mix of projects adopted. (Note: This effect will be more significant in the case of non-tradeables than for those items which can be imported or exported at constant international prices.)

Examples: Both in the case of Mexico and West Pakistan, natural gas supplies are limited. Hence the marginal cost of fossil fuel for power generation depends upon the magnitude of petrochemical demands for feedstock.

4. Externalities and public goods

Piecemeal decision-making is likely to be unsatisfactory in situations marked by externalities and public goods. Imaginative institutional devices may be needed here in order to avoid second- or third-best solutions.

Within a geographic region, each project contributes to the ability of that region to undertake future projects via: new skills, additional savings, higher productivities, and technological adaptations.

Given all the possibilities for interdependence, how does one ever arrive at a sensible decision on an individual project? Under what conditions can spillover effects be neglected? How can decentralization of information and decisions be achieved? Four research topics appear

promising:

1. The principle of average cost pricing can be viewed as one in which indivisibilities are treated as though they were, in fact, continuous variables. Market or administrative average cost pricing is justified when the change introduced by a lumpy decision is "relatively small", but not when it is "relatively large". The dividing line between these two is defined by a tradeoff between inefficiencies in resource allocation as against the many advantages of decentralized decisions.

When the error due to average-cost pricing becomes intolerably large, the lumpy decision has to be evaluated on an either-or (0-1) basis. In several of the models it is possible to measure the errors introduced by treating variables as though they were continuous. Our aim is to develop criteria identifying those kinds and sizes of indivisibilities - e.g. fixed investment costs - that can be safely treated as continuous, and those that cannot. For example, in averaging fixed costs for pricing purposes, what degree of capacity utilization should be assumed? Or, in pricing periodically slack capacities, how much of a cyclical price fluctuation should be allowed? For practical application, the apparent economic efficiency of rapidly changing prices must be balanced against the difficulties of adapting to short-run price fluctuations.

2. In the integer programming models for East Africa, South Korea, and the electrical equipment sector of Mexico, one could simulate the consequences of supposing that certain investment decisions are closely linked (e.g. the investment allocations to each project at a given point in time), and check for the departure from optimality that arises from piecemeal decision-making.
3. Sensitivity analysis for the individual case studies will suggest which interfaces with other sectors are significant, and which are not.

Example: The Mexican power study already suggests that the fossil fuel price is crucial to the choice between nuclear and fossil fuel generating units, but that plausible variations in the discount rate do not affect this choice.

4. Input-output matrices are available for countries at many different stages of development. These provide a general equilibrium framework - albeit a crude one. From these

empirical matrices, it should be possible to calculate the strength of interindustry linkages.

Example: One would expect strong backward linkages from electricity to fossil fuel in most stages of development, but from agriculture to fossil fuel only in highly mechanized economies. The measurement of linkage strength - the "distance" between industries - is a topic that has hitherto received little attention from econometricians, and yet is crucial to the issue of centralized versus decentralized decision-making.

Each of these four topics constitutes an area in which the Bank's studies can make a major contribution to basic research in economics.

Multi-level Planning Studies - Mexico

Alan S. Manne and Thomas Vietorisz

In the case of Mexico, it is proposed to make maximum use of three series of studies - undertaken respectively at Banco de Mexico, Comision Federal de Electricidad, and Instituto de Petroleo Mexicano.

The Banco de Mexico input-output studies provide the essential macroeconomic background needed for sectoral and project planning. The data base includes a 45-sector transactions matrix for the year 1960.

Within the electric power sector - in order to evaluate a nuclear plant to be constructed during the middle 1970's - the CFE has recently completed a series of investment planning studies. These analyses cover the interdependencies between individual generating projects to be undertaken in the Central-East-West systems over the planning horizon 1975-95. Simulation and linear programming techniques have both been employed.

Crucial to the economic choice between nuclear and fossil plants is the cost assigned to fossil fuel. This cost in turn depends upon the investment plan adopted by the fossil fuel producing sector - principally Pemex. Currently under way at the Instituto de Petroleo Mexicano is an energy survey and a model for planning investments within Pemex over the decade 1970-80. Hopefully, this energy survey will quantify the cross-elasticity of demand between electricity and fossil fuels (e.g., the tradeoffs between their use in the steel producing sector).

In Mexico during the 1970's there will be an unusual link between the power industry and the electrical machinery industry - the process of converting the Central System from 50 to 60 cycles. One of the chief advantages of unifying the frequencies within Mexico's power grid is that standardization will lower the cost of domestic electrical equipment. In turn, the lower the cost of this equipment, the more attractive it becomes to undertake long-distance energy transmission via wire rather than pipeline transport of oil and gas.

For Mexico then, the principal research task will be to observe the interdependencies between the macroeconomic and the sectoral planning efforts. By analyzing the flow of information and the implications of decentralized decision-making within these agencies and enterprises, we hope to shed light on the workings of a multi-level planning operation. The theoretical work will proceed somewhat along the lines that have already been proposed by Malinvaud in France and Kornai in Hungary.

The research tasks will include the macroeconomic work, sectoral studies for fuel and power based on existing data sources, and a sectoral study including some data gathering and cost-benefit analyses in the case of electrical equipment manufacturing. (The cooperation of Mexican firms and government agencies will be sought in order to obtain the release of detailed data on this industry.) This case study in equipment manufacturing could provide insights into the payoffs from selective import substitution and from complementarity arrangements for imports and exports with other LAFTA nations. Moreover, useful background information could be obtained with respect to the Bank's 15% preference policy on global tenders. As a starting point on electrical equipment manufacturing, we would utilize IBRD Report No. Ec-161, May 1968.

MULTI-LEVEL PLANNING STUDIES - KOREA

1. A multi-sectoral, economy-wide inter-temporal programming model for Korea already exists and has been used to examine the timing and scale of investment in an integrated steel mill and a petrochemicals complex.^{1/} The principal focus of the examination was on interdependence through indivisibilities and economies of scale. The model was formulated to deal specifically with what were the major investment choices during Korea's Second Five Year Plan (the steel and petrochemicals projects); remaining production, trade, and investment activity was treated in the detail that seemed necessary to capture the interrelations between sectors which would affect the basic investment decisions.

2. The research proposed here will be an extension of the existing multi-sectoral model to deal with the major investment choices which now appear for the Third Five Year Plan. The research will largely be based on Westphal's experience as a consultant to the Korean Economic Planning Board during 1969-70, and to this extent will be a report on the formulation and application of the model in the Third Five Year Plan's formulation.

3. The petrochemicals complex mentioned above is now under construction and is thus part of the data rather than a choice element. The present major choices are:

- (1) Timing of capacity increments in the large integrated and steel mill. (The Koreans have decided to construct a 3-million-ton capacity steel mill in phased increments. The first 600 thousand tons of capacity are now being installed.)
- (2) Selection, size and timing of projects pertaining to large scale investments in the metalworking industries (e.g., machine tools, shipbuilding, vehicles, consumer durables);
- (3) Profitability of further investment in the chemical industry.

^{1/} Westphal, Larry E., "Multi-sectoral Project Analysis Using Mixed Integer Programming," Report No. 101 (Revised), Project for Quantitative Research in Economic Development, Harvard University, and forthcoming in Adelman, Irma, Northwestern University Conference on Korean Planning Volume, (Johns Hopkins Press, June 1969).

4. There is a clear demand interdependence between the timing of additions to steel-mill capacity and investment in metalworking. In one phase of the study a separate and detailed sectoral model will be constructed to examine this and to evaluate alternative projects in metalworking

5. Because of indivisibilities in each sector, it is highly unlikely that Korea will be able to make a major simultaneous commitment of investment funds to both the chemical and metalworking sectors. Thus the interrelation between these two sectors consists in competition for investment funds within the multi-sectoral model.

6. In its applications the model will also fulfill the function of master program in a two-level planning model which we intend to formulate and in which separate second-level programs will describe the iron-and-steel, chemical and metalworking industries. (Some preliminary work can be done with the existing model.) The type of two-level model which we propose to use is novel in that it restricts the flow of information between the upper and lower levels by means of aggregation procedures. We shall refer to this as a "two-level model with limited information exchange", or a limited-information model in brief, to distinguish it from a "two-level decomposition model with full information exchange".

7. In the limited-information model the projects around which the model is centered (e.g., in the machine tool sector) will be specified at a high level of aggregation -- unlike the detailed specification in Kornai's full-information multi-level planning model. There will be iteration between two steps: (1) solving the economy-wide model, given a detailed specification (aggregated in the model) of major project alternatives and characteristics; and, (2) reformulating project choices and specifications based on learning from previous economy-wide solutions. In the iterations only limited information will be passed between the levels.

8. The proposed work with the limited-information model will be carried out in two stages which differ from each other in the degree to which the second-level programs for the sectors mentioned above are formalized. While Westphal is in Korea, attractive projects in the three sectors will be generated by an informal procedure in consultation with local engineers and others. The resource requirements of the projects so selected will then be aggregated and utilized to revise some of the technical coefficients of the formal economy-wide master program. In the second stage after Westphal's return from Korea, the sectoral models will be formalized in so far as possible.

9. One set of research questions will focus on the properties and use of limited-information multi-level planning models: how and what kind of information should be passed between the levels; how project respecification in the second step above should take place; how the simultaneous presence of several large projects should be handled; etc. Answers will be

sought through theoretical analysis and sensitivity testing with the numerical model. Comparisons will be made between the use of more and less formalized lower level models. Another related set of questions will be centered on the comparison of limited and full-information multi-level planning. In the full-information case the Dantzig-Wolfe decomposition algorithm will be used.

10. An important set of practical research questions will deal with the nature and extent of demand interdependence between steel and metalworking, as well as interdependence between metalworking and chemicals through indivisibilities, uncovered in the sectoral and economy-wide models.

WEST PAKISTAN

The Indus Basic Study provides detailed sectoral models for agriculture and for electric power. Economy wide models are now also available for West Pakistan. Combining the wealth of information contained in the Indus study, together with an economy-wide simulation or programming model, it is proposed to study how the technique of multi-level planning can be used for analyzing irrigation projects.

The problem of interdependence may materialize at different levels:

- (1) Interdependence between various cropping patterns and alternative techniques for producing water. This has been analyzed with a linear programming model prepared for the Indus study.
- (2) Interdependence between irrigation, fertilizers, extension services, transportation including feeder roads, marketing, processing, etc. The basic information is also provided in the Indus study.
- (3) Interdependence between the agricultural and the power sectors. Since a multi-purpose dam provides both irrigation water and electricity, the social profitability of the dam depends on the shadow price for electricity, and this in turn depends on the shadow price for gas. The linear programming model of the Indus basin provides a tool to measure this interdependence.
- (4) Interdependence through investments, savings and foreign exchange constraints, etc., which have to be analyzed through economy-wide programming.

It therefore seems that, with the material presently available, an interesting study of multi-level planning could be made for some well selected projects or packages of projects. The timing of implementation would also be considered in the study.

EAST AFRICA

The problem of interdependence will be analyzed on the one hand between projects and sectors, on the other between the three countries of the region.

Interdependence between sectors

The proposal described in the attached note by Ch. Frank consists in analyzing a phosphate-fertilizer-petrochemical complex. The interdependencies that would be studied are between the extraction of phosphate, the petrochemical industry and the fertilizer industry. The scale of the fertilizer plants would be limited by the absorptive capacity of the agricultural sector in each of the countries.

The scope of the analysis might be extended to cover selected agro-allied industries (such as processing or manufacturing of agricultural equipment). In such a case, the interdependence between the development of fertilizers and agro-allied industries on the one hand and the development of agricultural production on the other would become a primary objective of the research project. Such an extension would require the participation of a consultant familiarized with the studies conducted by the IBRD, the FAO and ECA in this field.

Interdependence between countries

Optimization could be undertaken for each of the three countries independently, for the three countries taken together as a single entity without constraints and with constraints as regards profits and losses in each of the three members of the Union. R. Norton will draft a proposal on the methodology proposed.

Multi-level Planning Approach

1. To assess the return of a project to the economy as a whole, three different approaches may be followed. The simplest method consists in defining, in the first step, adequate shadow prices from the study of the economy as a whole and in calculating, in the second step, the economic return of the project on the basis of the shadow prices established in the first step. In opposition to this simple method, which does not take into account any feedback from the second to the first step, the "full information" method would consist in establishing an economy-wide model sufficiently disaggregated to go down to the project level. With this "full information" method, the economic return of a given project would be calculated by solving the model for the entire economy of the country. All the feedbacks which can be translated algebraically would be taken into account, but the model may be so heavy as to become of little operational value. The "limited information" method lies between these two extremes; it is based on multi-level planning techniques and designed to take into account only those of the feedbacks which are considered as the most important.

2. A three-level model may be illustrated as follows. Project (p) belongs to subsector (s), which, together with closely related subsectors, belongs to set (S), which itself belongs to (E) characterizing the economy as a whole. The first level model (E) describes the entire economy in fairly aggregated terms. The second level model (S) magnifies a small part of the economy-wide model (E). The third level model (s) in turn magnifies a small part of the second level model (S); project (p) is individualized only in the third level model (s). To assess the impact of project (p) on the economy as a whole, one starts from the more aggregated to the less aggregated, as in the "simple method". However, after having gone from the first to the third level model, one can go back from the third to the second and to the first level models and proceed by iterations. When going from the more disaggregated to the less disaggregated, some information is lost at each stage of aggregation. This "limited information" method may be used to analyze the interaction between centralized and decentralized decisions.

3. A comparison between the three approaches will be illustrated by four case studies. In the cases selected, externalities will be significant and will reflect (a) modifications of relative prices, in particular for the non internationally traded commodities and services; (b) economies of scales and indivisibilities of investments leading to knapsack effects, and (c) creation of goods or services which are not sold, in particular, public goods and improvement of the human capital (learning by doing).

- 1) Stressing follow up of projects.
Mexico. what guides choice.
initial stage
2. Projects department.
with assist from Econ.
3. Public utilities pricing.
irrigation water pricing -
more overall level than
structure.

4.

Agriculture

- ✓ River basin planning -
what models exist
what other sort of models can be
developed.

First steps take stocks.

x 9 feeder roads. how do you estimate benefits

8. not much emphasis.

7. may let summer

Education

sector model - singles type of
model.
how do you make projections
of flow of people
policy aspects emphasized.

16 - not just now.

Transportation.
Planning model exercise - ongoing.

Highway design standards.

MIT - rely on outsiders
interrelationships - how important in the
total picture.

Hollman.

important that:

describes the experiment + not only
the objectives. - design, experiment
and procedure -

4. - present problems of project analysis + In the
ad hoc staff shadow pricing
employment of shadow prices for the proper
determination of the opportunity cost of
the various factors of production
in relation to rate of return analysis.

February 20, 1969

THE ECONOMICS DEPARTMENT RESEARCH COMMITTEE

Notice of Meeting

1. A meeting of the Committee will be held on Friday, February 28 at 3 p.m. in room C810 to discuss the future research program of the Sector and Projects Division, which is concerned with operational research in the field of project and sector analysis.
2. As background for the discussion there is attached a copy of a document entitled "Sector and Projects Studies Division Work Program - Major Research Areas" (Dec. 5, 1968). This was produced as an annex to a memorandum by Mr. van der Tak analysing the major activities and staff requirements of the division for the next few years. The document groups ongoing and prospective research in various areas of interest. In some of these a considerable amount of work has been done, or is in a fairly advanced stage of preparation, in others programs have still to be worked out. In the course of the past month the division has discussed this document further with the respective Project Departments with a view to settling on priorities and lines of attack. Mr. van der Tak will inform the Committee of the progress of these discussions in the course of the meeting. The staff requirements mentioned in the document were intended to cover all work activities, not only research and therefore are not of direct concern to the Committee.
3. Any member unable to attend should let me know (extension 2285).

Samir K. Bhatia
Secretary

Attachment:

Distribution: Members of the Economics Department
Research Committee

cc: Mr. Friedman
Mr. van der Tak
Mr. Leeming

Sector and Projects Studies Division
Work Program - Major Research Areas

General

1. Follow-up of Projects

Many people have expressed concern over the past lack of effort to follow up and learn from the development impact of Bank projects. Some work has been done in this area, for example, the Iranian Road Study (EC-147), and the Hirschman study, but not nearly enough. A proposal has been made to greatly expand activities to reevaluate the results from our projects and to learn from this experience (see memo van der Tak to Baum, October 24, 1968, with attachment). This is being discussed with the Projects Departments and some preparatory work is in progress. It is intended, first, to organize for all new projects systematic reporting of data so that actual and predicted benefits and costs can be compared, and, second, to make intensive reappraisal studies of selected projects, especially their benefits. It is envisaged that some six reappraisal studies will be in progress at any one time, partially carried out by Division staff and partially by consultants or research institutes under supervision and direction of Division staff.

Staff requirements: 5-8 professionals, in cooperation with Projects Departments, and possibly consultants.

2. Computer Simulation for Project Appraisal

Computer simulation is intended to mechanize appraisal procedures, at least for the simpler projects which conform to standard types. A study of 12-15 standard models should be prepared for prototype projects in the various sectors. This will speed up the calculations of investment returns and permit consideration of alternative project features and evaluation of project risks. It will also make it possible to make preliminary calculations, on the basis of whatever rough data are available in the Bank, before the mission goes to the field. This in turn will enable the mission to concentrate on assembling and checking the most crucial data. The final result should be speedier, yet more comprehensive appraisals, and more precise and clear reporting. Some preliminary work has been done in this area. A proposal has been prepared (see memo van der Tak to Baum, December 5, 1968, with attachment), for discussion with the Projects Departments.

Staff requirements: 2-3 professionals, with counterpart support from Projects Departments.

3. Public Utility Pricing Problems

These long-standing problems have recently again aroused a great deal of interest and discussion. What is needed is further clarification of the relevance of public utility pricing for utilization of resources,

*Very fine
good.*

investment criteria, financial and fiscal issues and equity considerations. Some work has been done in the Department, for example, the study on road user charges (EC-158), and its follow-up case study in Central America, and the paper on peak load pricing for power. Much more remains to be done in many fields, such as appropriate rate levels and structures for ports, railways, airports, power, telecommunications, irrigation, urban water, or education. Staff work will also be required for the envisaged working party on the uses and abuses of rate covenants in Bank lending. Work on these problems appears, therefore, especially timely.

Staff requirements: 3 professionals.

4. General Problems of Project Analysis and Investment Criteria

There are a large number of problems of a general nature relating to all sectors and projects, for example, use of shadow prices, optimum timing of investments, risk analysis, treatment of external economies and secondary benefits, etc. Some work has been done, for example, on cost of capital (EC-138) and on risk analysis (EC-164), and some work is in progress, for example, on conceptual problems with the use of shadow prices (by a consultant).

Staff requirements: no special staff required, but to be carried out by ad hoc staff, primarily working in other areas, and occasional consultants.

Agriculture^{1/}

5. Analytical Approaches to Agricultural Sector Planning

The objective is to study models which can be used to identify optimal sets of policies and capital investment decisions in the agricultural sector. The analytical approach will be to examine the efficacy of different models for different purposes, such as questions of overall strategy or the selection and evaluation of specific projects. Emphasis will be put on determining the extent of interactions between sectors and within the agricultural sector. Once the conceptual appropriateness of certain models will have been ascertained, attention will be directed toward outlining approaches for specifying and actually estimating the most relevant parameters. Work in this area will be coordinated with both the Projects and Area Departments and the Quantitative Applied Research Division.

Staff requirements: 2-3 professionals.

6. Irrigation Planning Models

Available water resource planning models, using system simulation and linear programming, should be reviewed for their suitability for various purposes in different circumstances. The multi-purpose features of many irrigation developments with complex interrelationships and many uncertainties

1/ See also items 1-4 above.

make application of modern operations research methods especially appropriate in this area. The methodological experience gained from past efforts (such as the Indus Basin Study) should be consolidated, and irrigation planning models should be made operational and accessible to Bank staff. Such models should be used with their preliminary data to appraise alternative irrigation developments as a guide for further investigations. This expertise should also serve to help review and guide irrigation planning work by consultants and improve future design of water resource development studies. A draft proposal for work on irrigation planning models has been prepared (September 13, 1968) and is being considered with the Agriculture Projects Department. Preliminary work on a river basin development plan (Lebanon) is in progress.

Staff requirements: 2-3 professionals, with necessary support from Agriculture Projects Department.

7. Supply Response and Production Models for Prediction Purposes

Some work has been done in this area (Working Paper Nos.18-20), but many questions remain unresolved. Further efforts will concentrate initially on the identification of the many different purposes for which supply and production functions are used, and specify the functions and how they might be estimated for each purpose. (A consultant is currently reviewing this topic). Subsequently, we may proceed by (a) keeping under surveillance work done by other researchers and research institutes; (b) working with research institutes, particularly in LDC's, on designing, collecting and analyzing production or supply behavior data; and (c) utilizing data collected for this purpose as part of follow-up data collection and evaluation of Bank projects (see above).

Staff requirements: 1 professional, plus consultants.

8. Policy Aspects of Agricultural Development

Work in this area should include both studies initiated in the Division and studies requested by Bank policy-makers. For example, the question of appropriate farm size, ownership or tenancy relationships, should be studied in terms of development impact and income distribution effects. Are policies and projects in favor of small farms necessarily bad for development? Should, in the name of development, the few rich be made richer and the many poor be left where they are? Or, to raise another problem, what is the impact of new technology on income growth patterns in agriculture, and how can the Bank contribute to development and adoption of particular technological changes? Increasing attention should also be given to problems of agricultural prices, taxes and subsidies, credit, marketing, extension, etc., and their impact on agricultural development. Some work has been done in this area by the Fiscal Policies Division, but much remains to be done.

Staff requirements: 2 professionals, in cooperation with the Fiscal Policies Division.

Supply response and production models

9. Special Aspects of Agricultural Projects

*Most important
Factors include
quantity & quality*

There are a large number of different types of agricultural projects which raise special problems of evaluation. For example, some work has been done in the Bank on livestock models to provide better basis for evaluating alternative herd management and development. Credit programs involve problems of estimation of benefits on the basis of prototype farms. Forestry projects have long-time horizons and sometimes ill-defined and uncertain alternatives. Grain storage projects raise problems of optimum size and location in relation to fluctuation of supply, transport costs and demand elasticities, etc. These and other questions need further study.

Staff requirements: 1 professional.

Education^{1/2/}

10. Efficiency of General Education Processes

Research will be directed at the internal efficiency of educational systems or sub-systems (i.e., success or failure to achieve a given objective of training people in an economical way) rather than their external efficiency (i.e., success or failure to give training to an extent and of a type which is relevant in the economy concerned, which will be dealt with in the following two program areas. Questions to be examined here are economies of scale in educational facilities, possibilities of input substitution and its effect on teaching results (including the special case of new educational media), and the various forms of trade-offs (such as time vs costs, quantity vs quality, etc.)

Staff requirements: 1-2 professionals, plus consultants.

11. Rural Education and Training for Socio-Economic Development

It is generally acknowledged that in most developing countries rural primary education, the largest segment of the educational system, is isolated from the environment in which it is given. This urban bias of education in general and primary schooling in particular is held responsible by many for the low esteem in which agriculture is held by most people and for the ensuing exodus from the countryside to the cities. It should hence be studied how the structure and content of rural primary education could be shaped with a view to contributing to the gradual transition of traditional rural societies into the modern economy while preventing

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- 1/ Research priorities in education are currently under general review. A discussion paper has been prepared by a consultant and is now being considered. Listed areas of research are tentative and subject to revision.
- 2/ See also items 1-4 above.

them from disintegration. The second central aspect of this problem area would be the developmental impact of adult education efforts (such as literacy drives, agricultural extension services, health campaigns, etc.) and their integration into a comprehensive rural system for training and dissemination of information.

Staff requirements: 1-2 professionals, plus consultants.

12. Technical/Vocational Training for Industry and Urban Employment

This area, like the preceding one, is so broad that a selective approach seems indicated. The intention is to study, in the setting of various developing countries, the costs and benefits of alternative education/training processes leading to the formation of certain well-defined categories of labor (say, accountants or draughtsmen). The analysis would have to take into account, apart from the immediate input/output considerations, the flexibility of training schemes (i.e., their responsiveness to technological and economic change), their elasticity (i.e., their ability to meet sudden increases or decreases in the demand for the instruction they give), and their universality (in the sense of their students being "employable" beyond the narrow confines of a certain occupation).

Staff requirements: 1-2 professionals, plus consultants.

13. Labor Market Studies

More needs to be known about the absorption of educated manpower in the labor force. This requires analysis of such questions as demand and supply functions for specific types of labor and their development over time, "over-education" and educated unemployment, the impact of educational expansion on formal or customary job qualifications, the influence of the public sector on salary levels and recruitment standards, the identification of sector or process-specific ranges of substitution (between labor and capital and among various types of labor), and internal migration analysis.

Staff requirements: 1-2 professionals, plus consultants.

14. Education Planning Models

A comparative study should be made of available planning models and submodels for education. What are the uses and abuses, advantages and disadvantages of different models for various purposes and in varying conditions. Models to be covered are to include partial models, such as cost-benefit analysis of particular educational expenditure, or optimum location and size of schools, as well as general models covering the whole educational system and its links with the economy. Intended work is

similar to that now undertaken for transport planning models. The purpose is to get those models operational in the Bank, get a better appreciation of their effectiveness, and make it accessible to Bank staff. Some work has been done to date on cost-benefit analysis of education (EC-157, and the Kenya case study now nearing completion).

Staff requirements: 1-2 professionals, plus consultants.

15. General Policy Problems of Educational Development

This area includes financial aspects of educational expansion. More analysis is needed of such problems as the appropriate allocation of financial responsibilities in the field of education (between the various levels of public authority on the one hand and the public and private sectors on the other); the suitability of a coordinated fee-scholarship policy to regulate educational expansion while assuring the proper development of exceptional talent; and the feasibility of a large-scale student loan program in secondary and higher education.

Staff requirements: 1 professional, in cooperation with the Fiscal Policies Division.

16. Economic Aspects of Health Planning

Health planning problems are coming closer to Bank interests, and some orientation is necessary in this area. Standard measures of the efficiency of investments in health should be developed and the ground prepared for cost-benefit analysis in this field. Attention should be given to the effect of reduced mortality rates on the volume and composition of the economically active population, and of improving health standards on the productivity of the labor force. Forecasting methods of demand for medical personnel should be reviewed, as well as the suitability of alternative patterns of using various types of medical manpower in developing countries.

Staff requirements: 1 professional.

Transportation^{1/}

17. Transportation Planning Models

A study is being undertaken of available general transport models, their uses, abuses, advantages and disadvantages, for various purposes and in varying conditions. The starting point is the so-called Harvard Transport Model which is being transferred to the Bank. The purpose is, first, to get this Model operational in the Bank and make it accessible for Bank operations and, second, to evaluate the merits of this Model and its submodels as well as several other interesting models. For a general account of the work program and its present status, see memorandum of van der Tak to Stevenson, dated November 20, 1968, with attachment.

Staff requirements: 1-2 professionals, plus major support from other divisions and departments.

^{1/} See also items 1-4 above.

18. Economics of Highway Design Standards

Better guidelines are needed for designing and constructing roads, especially for low-traffic conditions, such as, for example, in Tropical Africa. The great diversity of conditions makes the adoption of a single set of standards impractical and in many cases misleading. Some work bearing on these issues has been done (Quantification of Road User Savings, Occ.P. No.2). Further research is required on the inter-relationships between vehicle operating costs, road maintenance costs and road design characteristics and construction materials. The object of the study is to make progress towards providing a practical but theoretically sound rationale for determining the appropriate design standards and appropriate timing or staging for rural road improvements in relation to traffic. The initiative for the study was taken by the Transportation Projects Department. Draft terms of reference are available and have been discussed between the Departments. The start of the study has been delayed because of lack of staff.

Staff requirements: 2 professionals, with substantial support from the Transportation Projects Department, and possibly consultants.

19. Transportation Coordination and Policies

It is intended to continue studies of general transport policies, in particular, problems arising with efforts to ensure the proper coordination of the various modes of transport, for example, rail/road competition. Some work has been done in this field, for example, the road user charges study mentioned above, and a study on regulation of road transport is in progress (by a consultant). These issues are central to the efficiency of the transportation sector and will require continuous attention.

Staff requirements: 1 professional.

20. Special Aspects of Transport Projects

There are a large number of special transport project problems which require further study. For example, the analysis of the benefits of feeder roads, optimum port operation and investment, railway line closure, airport problems, etc. Some work has been done, for example, on the quantification of road user savings (Occ. P. No.2), on the benefits from road investments (EC-160) and on the optimum number of berths (W.P. No. 29). Other port studies are in progress.

Staff requirements: 2 professionals.

Public Utilities^{1/}

*Relative merits of simulation models
and linear type models (UK. Trans, Venice)*

21. Power Planning Models

In this area also, as in transportation, water resources and education, available planning models should be studied with a view to their applicability, strengths and weaknesses for different purposes and in various circumstances. Appropriate models should be made accessible to Bank staff for operational use in the Bank, and research done to develop them further. This work would start from the experience in the Bank with a model developed at Harvard University and used in the Indus Basin Study and Argentina. Such models should be useful for planning the broad outline of power system development, investigating the most efficient ways of operating the system, and evaluating specific power projects. It will also help the staff in reviewing and guiding consultants' planning work in this sector.

*what types of model, what complexity of models
are necessary to answer certain types of questions,
at what stage and some models
preferable to others.*

Staff requirements: 1-2 professionals, with support from other divisions and the Public Utilities Projects Department, and possibly consultants.

22. Telecommunications Planning

Efforts are currently being made in the Public Utilities Projects Department to consider more thoroughly the economic aspects of telecommunications. This work should be intensified and the use of planning models explored which would help take account of the complex interrelationships in telecommunications systems. More work needs to be done also on demand elasticities for telecommunications services.

Staff requirements: 1-2 professionals, with support from other divisions and the Public Utilities Projects Department, and possibly consultants.

23. Urban Water Projects

Work is needed on the evaluation of benefits from urban water (and sewerage) projects. How is the growth of water supply systems related to urban development patterns? What are the costs and benefits of alternative staging and patterns of expansion of water supplies and improvements of service? Better methods should be explored to determine the demand for water services, and the relevant elasticities. More should be done also on the measurement of consumer surplus and the evaluation of possible associated health benefits.

Staff requirements: 1 professional, in cooperation with the Public Utilities Projects Department.

^{1/} See also items 1-4, and 16 above.

Mrs. Francesca G. Stone

February 11, 1969

Bela Balassa

Mr. Hasson's Research Project

I have reviewed Mr. Hasson's research proposal and also had discussions with him on the subject. The proposal is rather vague and Hasson does not seem to be familiar with the pertinent recent literature. An empirical investigation of the Central American Common Market, however, offers an interesting research topic but I wonder if Hasson is the right person to undertake it.

cc. Mr. L. Goreux

BBalassa:alj

Orig - Ec Dept - Res. Prog.

Form No. 27
(7-61)

INTERNATIONAL DEVELOPMENT
ASSOCIATION

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE
CORPORATION

OUTGOING WIRE

TO: MANNE
STANFORD UNIVERSITY
CALIFORNIA

DATE: FEBRUARY 6, 1969

CLASS OF SERVICE: LT

COUNTRY: (USA)

W2

TEXT:
Cable No.: ~~ONE~~

AIRTICKET MAILED TONIGHT YOUR HOME

GOREUX

NOT TO BE TRANSMITTED

MESSAGE AUTHORIZED BY:

NAME Louis M. Goreux
DEPT. Basic Research Center

SIGNATURE _____
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

L Goreux/ph

49

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COMMITTEE (12V)

TO: CITIZENSHIP
SOUTH AFRICAN
MILITARY

SERVICE
CLASS OF TS

DATE: FEBRUARY 6, 1969

OUTGOING MESSAGE

ASSOCIATION

INTERNATIONAL DELEGATION

(1-91)

RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL BANK FOR

COOPERATION

INTERNATIONAL FINANCE

FORM NO. 35

Mr. J. E. Twining, Jr.

January 28, 1969

J. C. Leeming

Economics Department Research Committee

The attached announcement about the formation of the Economics Department Research Committee does give the appearance that it is to be a standing committee, if only because its membership is inter-departmental. I had thought, however, that we were inclined to argue that because it was only concerned with work of one department, we need not--and indeed should not--give it the status of a standing committee, which would then raise the question as to whether it should also consider research work done elsewhere in the Bank. I hope it will be possible to maintain this distinction; otherwise we should incorporate something about the committee in the Organizational and perhaps the Operational Manuals.

Do you agree that we can let things go on this informal basis at least for the time being?

JCL:rac

Mr. O. Hursit Calika

Jan. 27, 1969

C. P. van Dijk

SECTOR AND PROJECTS STUDIES DIVISION
WORK PROGRAM - MAJOR RESEARCH AREAS

1. The Economic Department's Annex dated December 5, 1968 under the above heading, contains a number of research items, which are of direct interest to our work. These are: numbers 1, 3, 10, 11, 12, 13, 14 and 15.

2. Without knowing the Bank's research budget and the available manpower, it is difficult to judge whether the outline work program is feasible; my impression is that the program is very ambitious and that time/manpower required to carry out the program in its entirety is under-estimated. This might adversely affect the operational value of this research for day-to-day Bank work. I may again stress the need of making maximum use of research by other organizations, which have sometimes reached a degree of excellence in the field, which will be difficult to equal.

3. In some cases it is difficult to see why certain closely related items have been separated into different research projects: e.g. items 3 and 15 obviously belong together; as to item 10, we have already made it clear that an investigation into the internal efficiency of an education system should not be isolated from its external efficiency (that is: its relevance for economic development); items 10, 11, 12 and 13 are consequently closely related.

4. I hope that, within item 10, the economics of new educational media will receive the greatest attention. As to item 12, an investigation into the costs and benefits of alternative forms of technical/vocational training is of great practical interest to us.

5. An additional research field, which is of great practical value is the efficiency of project implementation (organization, phasing and coordination of project execution).

CPvanDijk:lm

cc: Mr. S. J. G. Burt

January 21, 1969

Professor Joseph Hasson
Department of Economics
State University College
1300 Elmwood Avenue
Buffalo, New York

Dear Professor Hasson:

Following our telephone conversation I am sending you attached a brief note outlining the work of the Center, together with two copies of a personal history form.

I am looking forward to receiving your letter and will be in touch with you shortly thereafter.

Yours sincerely,

Louis M. Goreux
Director
Basic Research Center

Attachments

19
LMGoreux/gah

4. The work of the Committee is intended to supplement, and not to replace, the existing liaison between the Economics Department and other Departments, as well as with the IMF, about individual parts of the research program.

5. The Committee will be composed of the following:

A. M. Kamarck (Chairman)
J. H. Adler
W. C. Baum
R. Chaufournier
M. L. Hoffman
B. B. King
A. D. Knox
K. S. Krishnaswamy
A. Stevenson

In addition, the Chairman may invite outside experts or other individual staff members to attend particular meetings should he consider this appropriate in view of the subject to be discussed.

6. The Staff Assistant of the Economics Department (Mr. Bhatia) serves as a permanent Secretary of the Committee.

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- A. M. Kamarck (Chairman)
- J. H. Adler
- W. C. Baum
- R. Chaufournier
- M. L. Hoffman
- B. B. King
- A. D. Knox
- K. S. Krishnaswamy
- A. Stevenson

In addition, the Chairman may invite outside experts or other individual staff members to attend particular meetings should he consider this appropriate in view of the subject to be discussed.

6. The Staff Assistant of the Economics Department (Mr. Bhatia) serves as a permanent Secretary of the Committee.

Jan 6, 1969

AIRMAIL

Mr. C. Lamblet
Organisation of European
Co-operation Development
2 rue Andre-Pascal
Paris 16, France

Dear Mr. Lamblet:

A Research Center is now being established in the Bank along the lines described in the attached notes. The objective is to create closer ties between academic research and research needed to provide a better basis for the Bank development policies, and to attract first-class research workers.

Professor Houthakker, whom I saw last Monday in Chicago, mentioned to me that you might consider the possibility of joining this Center. If this were the case, I would be grateful if you could complete and return to me a copy of the Personal History form attached as soon as possible because the budgetary discussion for the next fiscal year will start very soon.

Looking forward to your reactions and wishing you a happy New Year.

Yours sincerely,

Louis M. Goreux
Director
Basic Research Center

Attachments

19
LMGoreux/gah

January 6, 1969

AIRMAIL

Professor Marshall Hall
Department of Economics
Washington University
St. Louis, Missouri 63130

Dear Professor Hall:

In a telephone conversation, Mr. Jeffries mentioned to you a few weeks ago the creation of a Research Center in the Bank. I intended to discuss the matter with you in Chicago, but since it was not possible I thought it might be useful to write to you.

The attached notes provide a broad description of the Center. The objective is to create closer ties between academic research and research needed to provide a better basis for the Bank development policies, and to attract from the academic community first-class research workers.

In case you would like more information on the Center, you may call me in Washington. Mr. Jeffries may also arrange for bringing you to Washington for discussions.

Looking forward to your reactions.

Yours sincerely,

Louis M. Goreux
Director
Basic Research Center

Attachments

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LMGoreux/gah

January 3, 1969

Professor Hector Correa
Department of Economics
Tulane University
Louisiana, New Orleans

Dear Professor Correa:

A Research Center is now being established in the Bank along the lines described in the attached note. The objective is to create closer ties between academic research and research needed to provide a better basis for the Bank development policies, and to attract from the academic community first-class research workers.

Mrs. Adelman, who will be consultant to the Center for the research project referred to in paragraph 4 of the attached note, thought that you might be interested in working in the Bank's Center. I am therefore writing to inform you of this Center and I will be getting in touch with you by phone in about a week to explore your reactions.

Yours sincerely,

Louis M. Goreux
Director
Basic Research Center

Attachment

lg
LMGoreux/gah

January 3, 1969

Professor Nathaniel Leff
Business School
Columbia University
New York, N.Y.

Dear Professor Leff:

A Research Center is now being established in the Bank along the lines described in the attached note. The objective is to create closer ties between academic research and research needed to provide a better basis for the Bank development policies, and to attract from the academic community first-class research workers.

Mrs. Adelman, who will be consultant to the Center for the research project referred to in paragraph 4 of the attached note, thought that you might be interested in working in the Bank's Center. I am therefore writing to inform you of this Center and I will be getting in touch with you by phone in about a week to explore your reactions.

Yours sincerely,

Louis M. Goreux
Director
Basic Research Center

Attachment

lg
LMGoreux/gah

January 3, 1968

Professor Fred Golladay
Department of Economics
University of Wisconsin
Madison, Wisconsin

Dear Professor Golladay:

A Research Center is now being established in the Bank along the lines described in the attached note. The objective is to create closer ties between academic research and research needed to provide a better basis for the Bank development policies, and to attract from the academic community first-class research workers.

Mrs. Adelman, who will be consultant to the Center for the research project referred to in paragraph 4 of the attached note, thought that you might be interested in working in the Bank's Center. I am therefore writing to inform you of this Center and I will be getting in touch with you by phone in about a week to explore your reactions.

Yours sincerely,

Louis M. Goreux
Director
Basic Research Center

Attachment

La
LMGoreux/gah

January 3, 1969

Professor L. Sjastaad
Department of Economics
University of Chicago
5801 South Ellis Avenue
Chicago 37, Illinois

Dear Professor Sjastaad:

A Research Center is now being established in the Bank along the lines described in the attached note. The objective is to create closer ties between academic research and research needed to provide a better basis for the Bank development policies, and to attract from the academic community first-class research workers.

George Tolley whom I saw last Monday in Chicago, thought that you might be interested in working in this Center. I am therefore writing to inform you of this Center and I will be getting in touch with you by phone in about a week to explore your reactions.

Yours sincerely,

Louis M. Goreux
Director
Basic Research Center

Attachment

LMGoreux/gah

cc: Professor A. Harberger
Professor G. Tolley

January 3, 1969

Mr. Kul B. Bhatia
c/o Department of Economics
University of Chicago
5801 South Ellis Avenue
Chicago 37, Illinois

Dear Mr. Bhatia:

A Research Center is now being established in the Bank along the lines described in the attached notes. The objective is to create closer ties between academic research and research needed to provide a better basis for the Bank development policies, and to attract from the academic community first-class research workers.

Professor Tolley indicated to me that you were among the very top Ph.D. students of Chicago this year and that you were interested in the area of economic development. If you were interested in joining the Bank's Center, I would be grateful if you could complete the Personal History form attached and return it to me as soon as possible.

Looking forward to your reactions.

Yours sincerely,

Louis M. Goreux
Director
Basic Research Center

Attachments

LMGoreux/gah

cc: Professor G. Tolley
University of Chicago

January 3, 1969

Mr. Yusuke Onitsuka
c/o Department of Economics
University of Chicago
5801 South Ellis Avenue
Chicago 37, Illinois

Dear Mr. Onitsuka:

A Research Center is now being established in the Bank along the lines described in the attached notes. The objective is to create closer ties between academic research and research needed to provide a better basis for the Bank development policies, and to attract from the academic community first-class research workers.

Professor Tolley indicated to me that you were among the very top Ph.D. students of Chicago this year and that you were interested in the area of economic development. If you were interested in joining the Bank's Center, I would be grateful if you could complete the Personal History form attached and return it to me as soon as possible.

Looking forward to your reactions.

Yours sincerely,

Louis M. Goreux
Director
Basic Research Center

Attachments

19
LMGoreux/gah

cc: Professor G. Tolley
University of Chicago

January 3, 1969

Mr. Assaf Razin
University of Chicago
Department of Economics
5801 South Ellis Avenue
Chicago 37, Illinois

Dear Mr. Razin:

A Research Center is now being established in the Bank along the lines described in the attached notes. The objective is to create closer ties between academic research and research needed to provide a better basis for the Bank development policies, and to attract from the academic community first-class research workers.


Professor Tolley indicated to me that you were among the very top Ph.D. students of Chicago this year and that you were interested in the area of economic development. If you were interested in joining the Bank's Center, I would be grateful if you could complete the Personal History form attached and return it to me as soon as possible.

Looking forward to your reactions.

Yours sincerely,

Louis M. Goreux
Director
Basic Research Center

Attachments


LMGoreux/gah

cc: Professor G. Tolley
University of Chicago

January 3, 1969

Mr. Clayne Pope
c/o Department of Economics
University of Chicago
5801 South Ellis Avenue
Chicago 37, Illinois

Dear Mr. Pope:

A Research Center is now being established in the Bank along the lines described in the attached notes. The objective is to create closer ties between academic research and research needed to provide a better basis for the Bank development policies, and to attract from the academic community first-class research workers.

Professor Tolley indicated to me that you were among the very top Ph.D. students of Chicago this year and that you were interested in the area of economic development. If you were interested in joining the Bank's Center, I would be grateful if you could complete the Personal History form attached and return it to me as soon as possible.

Looking forward to your reactions.

Yours sincerely,

Louis M. Goreux
Director
Basic Research Center

Attachments

19
LMGoreux/gah

cc: Professor G. Tolley
University of Chicago

January 3, 1969

Professor A. Harberger
Department of Economics
University of Chicago
5801 South Ellis Avenue
Chicago 37, Illinois

Dear Professor Harberger:

I am in some respects a product of the University of Chicago since I took a Ph.D. there in 1954. Last year I came back to the U.S. to join the World Bank and a few weeks ago I have been asked to establish a Research Center in the Bank. The attached notes provide a broad idea of our plans for this Center. I would like to ask your advice regarding recruitment and research programs.

George Tolley, whom I saw last Monday, indicated to me that the four top Ph.D. students this year were probably A. Razin, Clayne Pope, Y. Onitsuka and Kul Bhatia; I have written to them to inquire about their reactions. George also mentioned to me that L. Sjastaad might be interested and I send you a copy of my letter to him.

When I passed in MIT a couple of weeks ago, I saw Hagen, Rosenstein and Eckaus who informed me about their plans regarding a study of inflation in Latin America (see copy of my memorandum to Friedman attached). In view of your expertise on this subject, I would like to have your reactions to this specific proposal.

It would be easier to receive orally your suggestions as to possible candidates for the Center and your advice regarding our role in the MIT study. I will therefore be in touch with you by phone next week to discuss these matters.

Looking forward to your reactions.

Yours sincerely,

Louis M. Goreux
Director
Basic Research Center

Attachments

19
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