THIS FILE IS CLOSED AS OF
DECEMBER 1971.

FOR FURTHER CORRESPONDENCE SEE:

RECORDS MANAGEMENT SECTION
January 1972
October 22, 1971

Professor Moises Syrquin
Department of Economics
Bar Ilan University
Ramat Gan
Israel

Dear Moises,

We have received your statement of expenses and it is now going through the usual processing. You should receive the funds within a month or so, if not let me know.

Hazel and I are continuing the Uniform Analysis, mainly to the extent of trying the various splits on all the relationships, instead of just on the sector shares. The purpose at this stage is to get something out in popular form fairly soon. Needless to say, we are very much looking forward to your completed work. In that connection, we would like to know when you are going to be available to come here for a week or so (as we discussed earlier); Mr. Chenery would like to plan his schedule around your visit and if we wait much longer we may have difficulty in getting much time with him.

Hope all is going well with you.

Best wishes,

Sincerely,

Nicholas G. Carter

Nicholas G. Carter

P.S. I enclose a summary of Regressions Run to Date on Savings, Investment, etc.
October 35, 1971

Professor Moses Zaretin
Department of Economics
Harvard University
Cambridge, Massachusetts

Dear Professor Zaretin,

I have received your letter of expectation. You are to receive the course material within a month or so. It is not clear to me when.

You may recall the U.S. Army's requirement that you attend a training program on all the relevant arms of the service. The purpose of this program is to familiarize you with the various aspects of the battlefield. You are expected to take three of these courses a week on the first of your training. I am sorry if this is not the case.

I hope that you will enjoy your time with us.

Best wishes,

Sincerely,

Nicholas G. Carter
Mr. Bala Balassa

June 15, 1971

C. B. Baldwin

Notes to Accompany the Subcommittee's Recommendations

III.

1. Agricultural Mechanization Study: Mr. Duane is visiting India in late June to start negotiations. It is impossible to know costs well before these are concluded. We are unwilling to recommend more than shown in the table until we see whether any rupee contribution is forthcoming, as we hope it will be. We also feel the Bank should not encourage the starting of studies in more than two districts until results from those districts are in hand.

2. Livestock Simulation Model: The recommended figure is a contingency, since the project may be conducted internally. Completion of this project is likely to lead to the construction of models for dairy cattle, sheep and poultry.

V.

1. Measuring Efficiency in Regulated Utilities: This involves possible Bank support for an uncosted, unspecified project to be done by Mr. Rodrigo Botero, in Colombia. The subcommittee felt that Mr. Botero should be invited to make a specific proposal for Bank support but was not very optimistic about his ability to prepare an acceptable proposal. In general, we favor polite discouragement.

2. Compilation of Highway Design Standards: The subcommittee was reluctant to accept Mr. Morris' feeling that this should be done by an experienced outside consultant. It seemed to us that it could be done adequately by a young professional or by an engineering post-graduate student on summer employment under the guidance of an experienced staff member (in which case he would not be charged to the Research budget).

3. Port Congestion and Ship Re-scheduling: This is considered too operational to qualify for research support. It should be done with consulting funds or as part of a project.

4. Highway Design Study (Phase II): There was no question about importance of the subject to the Bank. The budget request has been reduced by $40,000 per year on the assumption that this amount will be covered by FED. Until this question is settled, $40,000 should be earmarked for this purpose in the contingency fund.

5. Promotion of Road Construction Industry: This was disapproved for inclusion at the present time with the suggestion that the sponsors
reapply later if they cannot find more suitable (i.e. operational) financing and if they can build a stronger case that this knowledge does not already exist in the Bank. The subcommittee was skeptical of the topic's suitability as a research subject.

6. Evaluation of Feeder Road Projects: It is felt that this subject could be handled much more appropriately by building research components into Bank operations than by conducting separate studies. This would permit following a project from identification through supervision. In addition, it was not felt that either the purpose or methodology of this study had been spelled out with sufficient precision.

7. Toll Road Study: This project is committed by the recent signing of a contract.

8. Evaluation of Travel Time Savings: This should be deferred until completion of Miss Bundi's survey at which time a better basis would exist for judging whether further work seems desirable. There is already a considerable amount of work going on in this subject, although most of it is in developed countries. Certain conceptual problems probably need resolution before empirical work in LDC's can be justified.

9. Application of Airport Appraisal Methodology: Approval withheld until Professor Dygert's report is completed and we can digest its conclusions and see what further research it may suggest.

10. Effects of Vehicle Passing and Crossing Maneuvers on Single Lane Roads: This seemed justified on grounds of its operational importance to the Bank. It is closely related to the Highway Design Study (Phase II), No. 1 above.

11. Measurement of Road Width/Traffic Flow in Vehicle Speed Relationships: Same comment as for preceding proposal. The work on this project, on No. 10 and on No. 11, should be closely coordinated.

12. International Hotel Comparison Survey: Accepted on the understanding that there is no intention to continue support of this survey beyond FY 72 (although it may be advisable to renew support at some future date).

13. Village Electrification: Despite some misgiving about the practical feasibility of doing so, the subcommittee hoped that this and the following project can be handled on an integrated basis, i.e. that studies of electrification and water supply can be made for the same sets of villages in most cases. Since the methodology and cost have yet to be worked out, the amount approved both in toto and for FY 72 are both fairly arbitrary. We would be receptive to requests for supplementary approvals if detailed costing showed this to be necessary. However, we hope that the number of case studies launched can be kept small until experience is gained in conducting such studies.
11. Village Water Supply: (See comment for previous proposal. Note that the funding recommended is intended to cover both proposals.)

15. Property Value Enhancement as an Estimate of Water Supply/Sewerage Benefits: While attempts to measure the contribution of transport projects to property value enhancement have raised doubts about the feasibility of establishing such relationships, the subcommittee is willing to experiment in a new field where this may prove more practical. The budget request seemed high and has been adjusted downward somewhat arbitrarily; if the amount proves inadequate when costs become clear we would recommend a modest increase, supplied from a contingency "kitty."

16. Tourism Gravity Flow Model: The subcommittee had some doubt as to its usefulness since fairly good data already exist for Europe; the big gap - comparable data for the U.S.A. - is hopefully being filled by a non-Bank study on American tourism in the Caribbean. The subcommittee agreed to reconsider its decision if Mr. Kundu and the Tourism Department come forward with a mutually agreed proposal.

17. Public Utility Pricing: This was easily accepted although the budget figure was revised downward on the theory that costs might be somewhat lower. If this hope proves unrealistic, the figure could be raised by drawing on the contingency "kitty."

18. Transport Policy in Developing Countries: Although the application is unclear, we were told that this would be used to provide a research assistant for Mr. Vincent Hogg who would be conducting a study on this subject while on sabbatical in FY 72.

19. Railway Costing/Pricing Manual: This was accepted as of obvious value to the Bank, with hopes that the study will be more productive than the last attempt to treat this subject by an outside consultant.

20. Substitution of Labor for Equipment in Road Construction: The Bank is well committed to this study, which is of great interest to Bank operations. Phase II is recommended for approval for FY 72; subsequent Phases, dependent on the outcome of Phase II, will require separate approval.
Work Program during my Absence

1. From your accumulated data material and any additional sources you may find, determine an approximate production center for each major commodity for each region. Major commodities may be ranked according to the area they occupy in a particular State. Mark these "production gravity" points on copies of our planning region map, one commodity per page. Hand a set of these maps to Mr. de Sousa.

2. Proceed with your study of transport distances for export by measuring for each commodity the distance from the production gravity point to the respective export points for every available mode of transport (rail, road, water) in every region.

3. Obtain from Mr. de Sousa a map showing centers of consumption for each region and measure shipping distances between these centers and import points. These distance estimates will later serve to compute import prices c.i.f. place of consumption.

4. Should you or Mr. de Sousa accomplish his task before my return, proceed to measure shipping distances between centers of production for intermediate commodities:
   (a) for all "hog points"
   (b) for all "cattle points"
   (c) for all "corn to hog points"
   (d) for all "corn to cattle points".

5. Record on maps or in table form all your results. List sources of data.

6. Until Mr. Egbert returns from his mission, you will supervise Mr. de Sousa's work. Since his work assignments are rather similar to yours, close cooperation is advisable.
From your community center and any other source of community

you may find information on the various programs offered to each member of your community. For example, in the town of

Combridge, there is a drop-in center called "Community House" where people can come for help and guidance. This center offers a variety of programs, including a drop-in counseling service.

A set of these programs are as follows:

1. Access: Free access to trained counselors for all clients.

2. Support: Support groups for people facing various challenges.

3. Education: Educational workshops on various topics.


It is important to know that these services are available to anyone in need. If you or someone you know is in need of assistance, please contact one of the above programs.

"For your benefit, you will find that most of these programs are open to the public."

"You can see that these programs are a great resource for our community."

"Let us know how we can be of service to you."

"We strive to serve you and your community."

"If you need help, please call our hotline: "

(1) (2) (3) (4)

"If you need help, please call our hotline: "

(1) (2) (3) (4)
1. Estimate resident population for the 13 agricultural planning regions shown on the attached map for the year 1966. Use official estimates for States, Zonas Fisiograficas or Municipios that you may find in my material in the office or in the library. Make estimates through interpolation or extrapolation where such procedures are necessary.

2. For each planning region, determine a demographic gravity point for the purpose of establishing a reference point to estimate transport distances for inshipments for consumption of commodities from other regions (production loci).

3. Obtain from Mr. Rhoe a map showing production gravity points for the major commodities for each region.

4. Estimate shipping distances from the production gravity point in each region to the consumption gravity point in every other region for each of the major commodities for every available mode of transportation (rail, road, water).

5. To measure distances, use scaled maps or any distance chart you may find. You may contact Mr. Hallgrimsson (Ext. 4437) regarding GEIPOT's Brasil Transport Survey to extract useful data.

6. Document fully on hand of maps and through tables your course of work. Record sources of data.

7. Until Mr. Egbert returns from Brazil, Mr. Rhoe will supervise technical aspects of your work.
Economic Program Department Work Program

In preparation for our meeting on Monday, these are some of the major points which occur to me.

**Country Economic Reports**

You know where we stand on the King-Tims paper. Next steps are:

1. To bring Projects Departments into a discussion of how sector surveys can be better integrated with country economic work.
2. To try to secure agreement on greater standardization of statistical tables.
3. To set up procedures for the advance scheduling of country economic work.
4. In due course (when?) to seek Mr. McNamara's agreement to the proposed system of country economic reports.

In addition, I would propose to experiment with comprehensive, pre-mission briefing meetings, bringing people in ad hoc from various parts of the Bank with special knowledge of the country or expertise in the major problems which it presents. This would be done at first on a trial basis on countries to be volunteered for the experiment by Area Department Chief Economists. A prerequisite will be that Mr. Tims' division should be able to go through earlier reports on the countries concerned to identify questions on which improved information or analysis is most required.

**Debt**

I feel that we can by no means let matters rest at the point reached in the P. & B. study. In the first place, much too much weight still appears to be attached to the debt service ratio. We should develop a range of supplementary indicators relating to the various points at which the debt shoe may pinch, and try them out on a comparative, cross-country basis. It may also be desirable to elaborate, or at least codify, the underlying theoretical framework. There also remain considerable problems of data and projections - e.g., adequate coverage of the role of foreign private direct investment. I attach some work program suggestions which have been drawn up by Mr. Saxe; also a note on certain particular studies by Mr. Hulley.
RECEIVED
CENTRAL FILES

Jun 4 12 01 PM 1971

I RECEIVED CENTRAL FILES.

The contents of the received files have been reviewed and processed.

[Signature]

[Date]
Comparative Analysis and Projections

Also attached is a work program note by Mr. Carter. The need here is to develop a more specific view of the projects to be undertaken. We need to consider what are the most important gaps in our armory, and which of these we can hope to fill in a reasonably satisfactory way. Priorities also need to reflect work being done elsewhere, including that under Mr. Goreux. I am not yet able to make very specific proposals on my own behalf, and hope that Monday’s discussion will work towards a clearer establishment of priorities.

Performance

Mr. S. K. Singh is supposed to be preparing a paper on this subject. We have still not got hold of whatever may survive from Alan Strout’s work at Brookings. Possibly we should aim to produce a paper summarizing the present state of discussions and cross-country analysis on the subject. Where cross-country analysis seems to indicate a tolerably firm base for establishing expected values (e.g. for savings and taxation rates), we might aim as a matter of routine to draw it to the attention of country economists when the values for their countries appear to be significantly low or high. The weakest part of such work that I have seen has been the formulation of judgments on efficiency in use of resources. Here we may need to try out the explanatory effects of certain proxy or judgmental variables, building on the work of Adelman and Morris.

There might be some point in trying out the checklist of quantitative and qualitative aspects of performance developed by the OECD Secretariat. This might provide a basis for summary notes on the various countries which could be used for purposes of both reference and comparative analysis.

Socio-Economic Data

Here the problems are not so much of deciding what to do as of establishing priorities between various tasks which have already been identified. For example, Mr. Saxe’s note proposes various tasks in the field of debt, private investment and the capital account. There will be continued pressure to collect, improve and analyze social statistics, requiring collaboration notably with Mr. Hawkins’ division. We have to decide on the follow-up to be given to the Kravis studies.

In addition, it would seem to be useful that this division should carry out what might be called first-level cross-country regressions — e.g. updating and possibly elaboration of Beckerman’s work on proxies for per capita consumption. Would there be any future in following up the Chicago factor analysis approach?

Domestic Finance Division

Since this is a well-established unit, I have so far contented myself with receiving an account of its work from Mr. Please, and have not yet attempted to think whether any new directions may be required.

Attachments
cc: Messrs. Lerdau and King
OFFICE MEMORANDUM

TO: Mr. Hollis B. Chenery

FROM: Elinor B. Yudin

DATE: May 24, 1971

SUBJECT: Summary of E.P.D. Work on Capital Flows in the Seventies: Draft Outline

1. The attached outline is preliminary. Messrs. Hayes, Lerdau and Saxe have commented on an earlier draft; I have made some changes in light of their comments.

2. I plan to treat the paper - with two exceptions - as if all the work done were included in the May 14 draft. The exceptions:
   a. Some mention will be made of the revisions in the treatment of the 30 countries from that of the earlier phases of our analysis.
   b. The results of the alternative roles for Bank and Bank/IDA - examined for the April 10 draft - will also be summarized.

In addition, I do think that the individual country work on the capital aspects of "demand" should be reported - if only because the position taken on allocating projected Bank flows among countries makes that work a logical "next step". For now, however, the topic is merely noted as an annex without outline.

3. For much of the proposed paper I plan to draw on earlier versions of the study and on the several notes, memos, etc., that have been produced. But there are points that have not been explicitly discussed in that form. For example, while results of the resource gap models have been presented, there has been little consideration of them, or of the models themselves: part II-B in the outline would emphasize these aspects.

Attachment

EBYudin:lcm

cc: Messrs. Hayes
    Lerdau
    Saxe
    Carter
    Holsen
OUTLINE

Summary of EPD Work on Capital Flows in the Seventies

I. Introduction

A. Purpose

Description and critique of methods adopted in analysis underlying "Capital Flows and the Role of Bank/IDA in the "Seventies" (May 14 draft); summary of background of study.

B. Summary of key inputs

1. Selection of countries

2. "Demand": defined effectively as resource gap plus capital (where capital is factor income payments and the capital account of the balance of payments) with different treatment of the two components.

   a. Resource gap - individual country models, two levels of detail, briefly summarized:

      i. "more detailed" - 24 countries

      ii. "less detailed" - 30 countries

   b. Capital: 54-country aggregate derived under uniform assumptions

3. Aggregate "supply" (adjusted for sample)

   a. DAC and others

   b. Bank/IDA

C. Summary of limitations in current stage of work

1. Simple algebraic summary of what we have; inferences of what we have not obtained: country detail on allocation of aid flows. For such allocation, need:

   a. alternative means of allocating total;

   b. or, better, individual country work of capital aspects of demand.

2. Treatment of prices

3. Treatment of private investment
II. Detailed description and critique

A. Sample countries

1. Statement of criteria
2. Identification (Table)
3. Coverage: "demand" and "supply"

B. Resource gap

1. Limits as estimate of "demand" (partial)
2. Country models: general characteristics and treatment
   a. "More detailed": types of model
   b. "Less detailed": treatment in earlier versions; revised treatment
3. Parameters of individual countries
   a. Method of determination
   b. Presentation of parameters: "more detailed" (growth of GNP, X, M, \(e_m\), MSR. . .); "less detailed" (growth of X, M - 1970-75, 1975-80)
   c. Analysis of dispersion among parameters
   (d. Note on ECLA study of Latin America: comparison of parameters)
4. Consistency of resource gap projections: allocation principles; role of absorptive capacity

C. Incorporation of price trends

1. Assumptions about prices
2. Description of method
3. Resource gap: constant and current prices

D. Capital in the aggregate

1. "Demand"
   a. Assumptions concerning private investment and terms (debt-service parameters)
b. Effect on analysis ("Demand" may be adequately quantified in aggregate; but the information for country analysis is insufficient without individual judgment as to appropriateness of assumptions in each case.)

2. "Supply"
   a. Implicit allocation
      i. in sample/out of sample
      ii. within sample: none
   b. Sources: adjusted for sample
      i. DAC and others: basis for projections; possible bias; method of adjustment
      ii. Bank/IDA

E. Aggregate "supply" vs. aggregate "demand"
   1. Financing the gap
   2. Role of Bank/IDA
      a. Alternatives considered
      b. Presented in May 14 draft
      c. Implications for creditworthiness of Bank lending

ANNEX: Country work on capital aspects of "demand" for development assistance.
Significance Tests and Mining the Data for Hypotheses

1. Inference theory tells us that we should formulate our hypotheses independently of the data that we are going to use to test the hypotheses. Yet, as you know, more often than not we formulate our hypotheses by examining the sample data. Subsequently, we display the $R^2$, t-ratio, etc. to argue that the data support the hypotheses. How far can we mine the data for hypotheses and then use them to validate the latter?

2. Early in December last year I submitted a proposal for examining this question. A few weeks ago Messrs. Slade and Ramiscal told me that it would be very expensive to work with the successive series of random numbers along the lines I had suggested. I have therefore been exploring some alternative ways of illustrating the points outlined in my memorandum of December 3 to Mr. Kundu.

3. We require a large amount of data. One of the sources that has it in a convenient form is the National Bureau of Economic Research in New York. I called on them in New York on April 9 and they said that they could easily duplicate a tape for us that has monthly series of the United States for a number of years. We could obtain the tape for about $100. This is a modest sum especially because data about the U.S. economy may also be useful for purposes other than my proposal.

4. If you approve I would like to request the National Bureau for the data and say that we will reimburse them for the cost of duplicating the tape.
TO:  Mr. Alexander Stevenson
FROM:  Emanuel Levy
SUBJECT:  Back-to-Office Report

DATE:  November 10, 1970

1. I left Washington on September 22 in order to join the statistical review team from our Division in Djakarta. En route to Djakarta, I stopped off in Tokyo for discussions with Dr. Bowman on the organization and functions of the Asian Statistical Institute. From Tokyo I proceeded to Manila for discussions with the Asian Development Bank and with the Philippine Statistical Bureau and National Accounts Office. I arrived in Djakarta on October 1, 1970, and returned to Washington, after completion of my assignment, on October 25.

Asian Statistical Institute

2. The Institute is in its first year of operations and is not yet fully staffed up. As a result, Dr. Bowman is himself obliged to give a considerable number of courses. Given the short time the Institute has been in existence, the progress achieved is considerable.

3. As at present structured, the ASI is designed to impart to students a broad understanding of statistical systems in general. In addition to basic mathematics and statistics, courses are given in national income, basic statistical series, etc. Seminars are also conducted in selected fields.

4. The students, who number about 35, are full-time participants assigned by the governments of the various Asian countries. One of the problems encountered is that their academic and work backgrounds differ considerably, thereby giving rise to pedagogical difficulties. The course, which extends over a full academic year, is intended to turn out "future leaders" in the statistical field in the various countries.

5. While this objective seems commendable in principle, I am not entirely sure that this is the most urgent requirement of Asian countries in the statistical field at the present time. I asked Dr. Bowman whether he did not also contemplate providing specialized training in particular fields. At the present time, persons needing training, say, in household survey design and implementation, foreign trade statistics, labor force surveys, etc., had frequently to be sent to one of the developed countries of Europe or America. This had caused problems in the past, especially since much of what was learned was not always directly relevant to conditions and problems in less developed countries. I suggested that the ASI could perhaps make an important contribution in this respect. This feeling was reinforced by what I later observed in Indonesia.
6. Dr. Bowman stated that such a development was definitely a possibility. I later learned from Dr. Oñate of the ADB in Manila that most member governments were interested in such a program and it was hoped that the ASI would eventually develop along these lines.

Asian Development Bank

7. While in Manila I had a series of discussions with Dr. Oñate, Mr. Rosen and other officials of ADB. I endeavored to obtain information on the state of Indonesian statistics and also those of Nepal which I was then scheduled to visit. The subject of cooperation and coordination of statistical work in the ADB and the Bank was also discussed and clarified.

Philippine Statistical System

8. While in Manila, I met with Dr. Tito Mijares, Director of the Philippine Statistical Bureau, who outlined to me the work now in hand and the progress that had been made over the past few years. I was very favorably impressed and there is no doubt that very considerable improvement has been achieved in recent years. A network of branch offices has now been established throughout most of the country and professional standards would appear to be high.

9. I also met with Dr. J. Sicat, the new Director of the National Economic Council. Dr. Sicat is a former professor of Economics at the University of the Philippines with whom I became acquainted during my stay in Manila as a member of the Resident Bank Mission in 1964-65. Dr. Sicat was enthusiastic about the progress made in the field of statistics and stated that a complete revision of the Philippine national accounts was scheduled for 1971. He indicated that a seminar would be organized sometime in the second quarter of 1971 and he expressed the hope that I would be able to participate. He stated that he would make formal application to the Bank in this connection.

Review of Indonesian Statistical System

10. The statistical mission to Indonesia was charged with reviewing the statistical information system of the country, assessing its performance, and preparing a program of future statistical development. Upon arriving in Indonesia, it became apparent that the volume of work involved was considerably greater than had been assessed in Washington on the basis of the information available. This resulted in an extremely heavy workload for each member of the statistical team. While we nevertheless succeeded in covering most areas, the balance of payments was touched-on only superficially and the government sector hardly at all.

11. The mission reviewed the following major areas: basic data series and national accounts, national sample survey, 1971 population census, data processing, and statistical organization.
12. Immediately subsequent to my arrival in Djakarta, a meeting was held with Mr. B. Bell and with Dr. Widjojo, Director of the State Planning Office. This meeting was also attended by other members of the statistical team and representatives of the Harvard and Ford Foundation groups in Indonesia. A further meeting was held with Mr. Bell, Dr. Widjojo, Mr. Tims and Mr. Thompson immediately prior to my departure on October 22, in which I reported on the summary findings of the mission. These may be recapitulated briefly as follows:

a) The chief weakness of the Indonesian statistical system lies with the management of the Central Statistical Office in Djakarta and, no less importantly, with the organization and level of competence of the provincial and regency offices. These latter offices are staffed by largely unqualified personnel who would appear to be more tied to the local provincial administrations than to the central office in Djakarta. In many cases, the salaries of the provincial and regional staff are paid by the provincial governments. Work morale and discipline are also low. In one of the field offices visited, not one member of the staff was on duty at 9:30 a.m. and we were informed that the office was already closed for the day. Given this situation, technical assistance concentrated primarily in Djakarta cannot be expected to yield any substantial results since, irrespective of the quality of statistical design and planning in the CSO, the response error in the field is so high as to cancel out its effects. There is an urgent need, therefore, to institute a practically oriented training course designed to impart at least a minimum of knowledge to directors of the provincial and regency offices, and also to open up career possibilities by creating proper channels of appointment and promotion.

b) Prior to arriving in Indonesia, we were informed that there were only two computers in the possession of government agencies. In the course of our inquiries, it became evident that the real figure was closer to 20. Much of this equipment lies idle, due to the lack of programmers and of funds necessary to insure current servicing and maintenance.

There would appear to be a need to concentrate the bulk of computer hardware into a government computer enterprise which would operate on something approaching a business basis. In this way, it would be possible to pay programmers salaries competitive with those obtaining in the private sector, and also to allocate the requisite funds for current servicing and maintenance. At the present time, the low level of salaries in regular government agencies makes it extremely difficult to retain programmers in the government service.
c) The population census for 1971 is now in an advanced stage of planning. From the point of view of Indonesian statistical development, its potential net contribution is in all probability negative. Given the low level of work in the field, the prospects for obtaining meaningful and usable results are extremely small. Moreover, it appears unlikely that the results, whatever their value, will become available except after a delay of many years. (The results of the 1961 census have themselves not yet been processed.) In the meantime, large sums of money and a large part of the trained manpower of the CSO is tied up in the census project, to the detriment of other operations. I intimated that, even at this late stage, it might perhaps be worthwhile considering cutting the losses and postponing the census for at least a number of years. Instead, the necessary funds should be allocated on an assured basis for the carrying out of the national sample survey on a regular and comprehensive basis.

13. At the request of Mr. Bell and Dr. Widjojo, the mission undertook to complete its report and to submit it to the Indonesian Government by January 1971. It was also agreed that Mr. Novak and myself would return to Indonesia in early March 1971 in order to discuss the report with the Resident Mission and the Indonesian authorities.

14. Apart from the summary main report to be prepared by myself, special annexes will deal in detail with each of the major fields covered.

E Levy: eb

cc: Mr. Kamarck
    Mr. Goodman
    Mr. Gilmartin
    Mr. Tims
Terms of Reference - Mission to Indonesia, Nepal and Iran

1. You will leave Washington on September 22 in order to participate in the review of the statistical system of Indonesia.

2. During your stopover in Tokyo you should contact Mr. Bowman of the Asian Statistical Institute in order to discuss with him the activities of the Institute and possible participation by the Bank.

3. From Tokyo you will proceed to Manila for discussions with the Asian Development Bank relating to the Indonesian statistical system and other matters of interest. You should also discuss the possibility of strengthening the coordination between the activities of the Statistics Division of the ADB and the National Accounts and Data Analysis Unit of IBRD. Time permitting, you should also review the progress of the Philippine statistical system in the light of previous Bank reports.

4. From Manila you will proceed to Djakarta where you will arrive at the beginning of October. Your assignment in Jakarta is to direct and coordinate the work of the other members of your Division engaged in carrying out the review of the Indonesian statistical system. You will endeavor to prepare within two weeks of your arrival a draft chapter pinpointing the main deficiencies of the statistical system together with tentative proposals for reorganization and future development. A preliminary estimate of possible technical assistance requirements should also be included. After completion of the draft chapter, you will remain in Jakarta for the discussions scheduled for October 19 to October 23 with the Indonesian authorities.

5. On completion of your assignment in Jakarta, you will proceed to Bangkok for discussions with ECAFE on the Indonesian statistical system and on the statistical system of Nepal. You should also seek means of strengthening the lines of communication between ECAFE and the National Accounts and Data Analysis Unit.

6. You will leave Bangkok around October 28 for Kathmandu, for exploratory talks with the Nepalese authorities regarding the requested statistical review mission to that country. The object of the talks will be to clarify the main fields for investigation and the probable composition of the mission.

7. From Kathmandu, you will proceed to Teheran, as requested by the Iranian authorities, in order to discuss with the Director of the Iranian Statistical Center the draft statistical program now being drafted by him.
8. On completion of the discussions in Teheran, you will return to Washington, arriving back towards the end of the second week of November.

9. On your return to Washington, you will prepare a brief back-to-office report on the results of the discussions and investigations carried out.

cc and cleared with Mr. Time
September 10, 1970

ECONOMICS DEPARTMENT

ACTIVITIES REPORT
(Fiscal 1970)

I. Introduction
II. Statistical Services Division
III. National Accounts and Data Analysis
IV. Economics of Industrialization Division
V. Population Studies Division
VI. Economics of Urbanization Division
VII. Domestic Finance of Developing Countries Division
VIII. Quantitative Techniques and Analysis Division
IX. Trade Policies and Export Projections Division
X. Sector and Projects Studies Division

Andrew M. Kamarck, Director
Alexander Stevenson, Deputy-Director
INTRODUCTION

There is little of the Bank's work that does not involve economics. Consequently, economists are to be found throughout the Bank in most departments and at all levels. The role of the Economics Department in the World Bank Group is therefore quite different than would be the case in an organization where the bulk of the work did not as directly involve economics and where the application of economics could be concentrated in one department.

As stated in the Organizational Bulletin: "The Economics Department has the responsibility for economic and statistical work in the Bank insofar as it has not been specifically assigned to other departments or units." This report attempts to cover only those activities of the Economics Department that would be of general interest. It should be noted that a very large part of the department's work, the direct support for management or for other departments, cannot be covered in a report of this kind.

Among the changes in Economics Department work in fiscal 1969/70, the following are probably most worth mentioning. The Economics Department and Projects Departments provide specialist economists in the country economic teams that carry out country economic analyses. The Economics Department responsibility covers the functional fields, whereas the Projects Departments provide sectoral specialists. The one exception was in industry, where the Economics Department did sector work. When the Industrial Projects Department was created in January 1970, it took over this responsibility and the Economics of Industrialization Division is turning its activities more to operational research. Because of the particular role of the Economics Department in the Bank, one of our tasks is to pioneer work in a new field which, once this becomes accepted, the operational aspect is taken over by an existing or new operations department. Last year this occurred in the fields of population and urbanization.

STATISTICAL SERVICES DIVISION

New External Debt System

The system for processing external debt reports was subjected to a complete revision during the past fiscal year and is now operating under an interim revision pending the completion of the programming required under the new systems design. The new system is designed to take advantage of the special characteristics of the B-5500 Computer and to incorporate the Expanded Reporting System under which DAC countries report credit information. The expected workload under the new system will include processing data on approximately 22,000 loans under the debtor system and 10,000 credits under the credit system as contrasted with the level of 20,000 loans reached by the debtor system alone. In addition, special country tables, formerly prepared manually, will be produced by the computer at the request of Area Departments.

When the new system is fully operational, the requirements for much of the manual processing of debt reports will be eliminated and the
manpower released will be able to concentrate on more intensive analysis of debt data and on improving the quality of debt reporting and of debt reporting systems. During the past fiscal year, debt missions to Ghana, Iran, Israel, Peru, Brazil, Uruguay and Mexico resulted in clarification of debt reporting problems and, in some cases, in improved systems for debt reporting.

Expanded Reporting System

The Expanded Reporting System, under which creditor countries in the DAC report loans and credits made to developing countries, is operated jointly with OECD. During the past fiscal year the reporting countries, with one very important exception, have generally improved the quality and time coverage of their reports. Based on the reports submitted, clarification of the instructions and definitions was undertaken. A DAC review held in Paris in December, 1969, was the vehicle for presenting the revisions to the reporting countries. Further clarification of definitions and instructions took place in Washington in May, 1970, when two OECD representatives came for a series of meetings. Although a few minor details remain to be taken care of, the system is nearly ready to be computerized.

Capital Markets Data

Reports of new foreign and international issues are published quarterly, and complete detail is published annually as an outgrowth of the requirement for these data in the Bank's external debt reporting system. As a result of the growth of the international bond market in recent years, financial statisticians have begun to focus more attention on these data.

The OECD Ad Hoc Group of Financial Statisticians, after comparing the new issues data collected by BIS, Federation Bancaire and various private financial institutions, determined that the IBRD had the most complete coverage mechanism. The IBRD agreed to be the official international source for these data and to accept the statistical standards and definitions established by the Group.

The meeting of the Group held in June, 1970, served as the medium for initial distribution of the first issue of international financial statistics prepared by the participating countries. The issue tables prepared by the IBRD reflected the reconciliation of issues appearing in country statistics with those from international and public sources. Further reconciliation and clarification of definitions is underway.

Debt Evaluation Unit

The Debt Evaluation Unit, approved in the midyear revision to the Bank's budget, was established in June and staffed by Mr. Hicks with one assistant. The unit is applying economic models to country debt data and attempting to meet the requirements of the Bank for a coordinated system of debt
models. In cooperation with the External Debt Section and the Programming Section, the new unit is systematizing debt and capital flow projections for further analysis by Programming and Budgeting and others.

Financial Management and Planning

A set of models developed to provide information needed in the internal financial management of the Bank includes the IBRD Financial Model, the IBRD Portfolio Model and Disbursements Projection Model. The work on these models is being carried out by Mr. Goor to meet requirements set forth by the Programming and Budgeting, Controller's and Treasurer's Departments. These models permit the projection of income and expenditures by the Bank under various assumptions and forecast the disbursements of Bank and IDA loans for current and future commitments. The importance of good estimates of future disbursements has been given greater recognition and other studies are underway to improve disbursement projections.

International Statistical Activities

Statistical officers from the UN organizations have been meeting during the year through the medium of the ACC Subcommittee on Statistics to coordinate statistical requests made to UN member countries. The problem of inadequate statistical reporting systems in developing countries and the consequent gaps in statistical data has been a topic of discussion in this Subcommittee's meetings. The Division has represented the Bank and is preparing material for the fall meetings of the UN Statistical Commission, at which time the UN member countries will be provided with the five-year statistical programs of the UN organizations.

Classification of Developing Countries

Over wide areas, socio-economic, socio-political and technological, quantitative indicators of levels of economic development are not available and IBRD reports have utilized more or less intuitive evaluations. In an effort to develop a meaningful composite index for measuring levels of development, Mr. Kundu is directing a project to quantify such narrative evaluations, using new tools from the field of non-parametric statistics.

General

The division has provided the entire Bank group with statistical services ranging from reviewing reports for statistical consistency and proper statistical format to providing advisory and consulting service to Bank staff on statistical techniques and their appropriateness for economic analysis. Data processing services were performed for Development Finance Company annual statistics and for a multitude of one-time projects in such fields as education, foreign trade, transportation and public works.
To meet the scientific programming needs of the Bank the division's Programming Section has written programs for a wide variety of statistical analyses and for country economic models used by Area Departments and by Programming and Budgeting as an aid in assessing current and future economic conditions.

NATIONAL ACCOUNTS AND DATA ANALYSIS

Country Data Bank

The country data bank which has been under development by the National Accounts and Data Analysis Unit (NADA) of the Economics Department over the past several years is now approaching completion, and may be expected to become operational on a limited basis in early 1971. Its present data base contains about 750,000 figures and codes for 190 countries and for most of the years 1950-69. A provision has been made for extending major socio-economic indicators as far back as feasible and for making 5-year projections. The data base may also be expanded to include additional time series as necessary. At present, about 600,000 additional cells have been prepared for the next major expansion of the data base. In all, it contains some 300 indicators, 167 of which are directly related to the World Tables. Forty indicators relate to demographic data, four series are on education, 26 indicators describe the national accounts at current prices, 14 series give the industrial origin of GDP, 23 series are on investment, 23 cover savings components, and another 23 series relate to national accounts at constant prices and deflators. Government accounts are summarized by 45 indicators, international financial data cover 26 indicators, price and production indexes comprise 22 series, while the remaining 50 indicators represent the balance of payments and selected foreign trade statistics.

The system will make it possible for NADA to meet more speedily demands for data made on it from elsewhere in the Bank. After it has been "debugged," however, the system should be further expanded and improved to take into account the special needs of other users and should provide for the Bank as a whole a centralized source of country statistical information, compiled to the maximum possible extent on a consistent and comparable basis.

In the first stages of its operation the data bank will provide electronic data processing for the World Tables, World Bank Atlas, the Annual Report, and various other computational subsystems. The requisite computer programs have already been written in cooperation with the Statistical Services Division. In subsequent phases, additional programs will be developed together with special data storage and retrieval subsystems to enable the instant retrieval of appropriate groups of economic indicators for all countries and/or of all indicators for any country and for any specified number of years. Standard computational programs are also envisaged that will facilitate the basic analysis of data quality and their
interpretation - such as tolerance checks for the evaluation of extreme values, growth triangles, consistency checks, and basic statistical tests of data.

Arrangements and procedures are being worked out to insure the revision and updating of the basic data input on a continuing basis, as soon as new or additional information becomes available.

The data bank is flexible enough to permit a gradual expansion of its scope and computational work at various phases of its operation. Several suggestions have already been made for expanding the data base on population, agriculture, investment, and transportation statistics.

An important additional advantage that will accrue as a result of computerization is that the special skills developed over the years by NADA staff will be more fully available for the improvement of data quality and reliability. To date, reliance has mainly been placed on international and country statistical publications and on data collected in the framework of IBRD country missions, supplemented in eight cases last year by ad hoc studies of individual country statistics. (The recent statistical review mission to Pakistan is worthy of special mention. It represented the first large-scale mission by the Bank for the purpose of reviewing an entire statistical system and advising the Government on its improvement and rationalization. Among the fields covered by the mission were: statistical organization and priorities, basic data series and national accounts, government sector accounts, data processing, and demographic and family planning statistics.) This process may accelerate, with increasing emphasis being placed on inquiries into the statistical methodologies employed, reconciling conflicting country data, and constructing analytical frameworks of consistent country statistics. In this way it should be possible eventually to fill-in many of the existing data gaps and to compile, as necessary, adjusted estimates of major aggregates. We are attempting to secure the active cooperation of the Regional Banks and the international agencies in this program. On our side, several missions are scheduled by NADA staff for the coming year, including full-scale reviews of basic statistics, national accounts, data processing, and the administrative organization of statistical agencies in Indonesia, Iran and Uganda.

Recurring Projects

World Bank Atlas. Revised and updated estimates of population and GNP per capita have been prepared for all countries through 1968. Revised population and GNP per capita growth rates have similarly been compiled.

IBRD Annual Report. The requisite regional summary tabulations of population, GDP, and other indicators were computed for inclusion in the forthcoming IBRD Annual Report.
International Comparisons of Per Capita National Products Project

NADA is also associated with the "International Comparisons Project" which is now being carried out by an international team under the direction of Professor I. S. Kravis of The University of Pennsylvania.

The object of the Project is to establish, by direct real income comparisons, the relative GNP per capita positions of some eight developing and developed countries vis-a-vis the US. Countries have been selected for each major region, and the tentative list includes: Colombia, Hungary, India, Japan, Kenya, Poland, UK, US. In addition, close cooperation is being maintained with the European Economic Commission which is planning a similar comparison among its six constituent countries and with other countries. It is also possible that in cooperation with the Economic Commission for Africa a North African country and a West African country will be added to the list.

The Project has considerable interest for the Bank since, on the basis of the results, it should be possible through a linking process to establish the relative positions of all other countries as compared with the US. For example, by linking all other African countries to Kenya, a general ranking will emerge of all African countries by GNP per capita in terms of US dollars. The same procedure might be applied to countries in other regions, thereby making it possible to arrive at a more meaningful picture of relative development levels.

ECONOMICS OF INDUSTRIALIZATION DIVISION

During this year the Division went through a period of reorganization and reorientation. With the establishment of the Industrial Projects Department towards the end of 1969, the Division was able to look forward to devoting more attention to research and to the closer coordination of research with mission staffing. At the same time, following the recommendations of the Economics Department Research Committee there was a shift in the emphasis of research from studies of individual industries to concern with industrialization strategies, policies and project evaluation. The problems of shifting from inward to outward oriented industrialization strategies, and the possibilities for the export of manufactured products from developing countries were to receive particular emphasis. However, due to changeover problems and pending full staffing of the Industrial Projects Department, the bulk of the Division's time was spent on mission work. Only toward the end of the year was it possible to move toward the new research emphasis.

The Industrialization Process

A study of development strategies in semi-industrialized countries dealing with Argentina, China (Taiwan), Colombia, Israel, Korea and Singapore was organized by Mr. Balassa with the Division's cooperation.
This study aims at comparing and contrasting the industrialization experiences of countries with different combinations of policies. The effects of protection and other incentives to industrialization will be evaluated, and the sources of comparative advantage in various industries in these countries will be studied. Mr. Balassa visited all the countries included in the study during the year. Local collaborators have been selected and government cooperation has been ensured. A seminar on project methodology was organized in Washington in May. Three of the Consultants, Messrs. Augustine Tan, D. Schydowsky and Malcolm Gillis participated.

Mr. Balassa and Mrs. Hughes, with the assistance of Mrs. Neufeld updated the data on statistical indicators of industrial development and completed the statistical analysis.

Mrs. Hughes completed her study of industrialization in Southeast Asia for the Asian Development Bank. Pending release by the ADB, her study was issued for internal circulation as Economics Department Working Paper No. 78, Southeast Asia's Economy in the 1970s. The Manufacturing Industry Sector. Mrs. Hughes is now preparing a paper assessing policies toward foreign investment in the Asian-Pacific Region.

The Division is undertaking the preparation of notes on various aspects of industrialization including employment and urbanization policies, some international trade aspects of industrialization, problems of productivity and the policy framework of industrialization.

Export Problems

A paper on Exports of Cotton Textiles from Developing Countries to the U.K. and E.E.C. 1958-1967 was completed by Mr. Geoffrey Shepherd, a Consultant to the Bank, in September 1969, and issued as Economics Department Working Paper No. 52. Miss Keough is working on a complementary paper on textile exports from developing countries to the United States, and Mr. Shepherd is completing a paper on comparative costs in textile production. The practical implications of these papers will be developed in a fourth paper discussing investment guidelines for textile industries in developing countries.

Employment

Mr. Schrenk is working on a paper on direct and indirect employment creation in Southern European countries, and Mrs. Neufeld is preparing a similar one on employment in Latin American countries as part of a broader project on industrialization patterns in Latin America.

Mission Staffing

During 1969-70 the Division staff took part in the following Missions: Mr. Datas reported on the industrial sector in Madagascar and the Philippines; Mrs. Hughes wrote a report on the industrial sector in Indonesia, and, together with Miss Keough, on Thailand. Mrs. Neufeld took
part in a special industrial mission in Colombia. Mr. Nowicki wrote reports on the industrial sectors of Korea, Venezuela and Argentina and Mr. Schrenk reported on the industrial sectors of Pakistan and Yugoslavia.

POPULATION STUDIES DIVISION

Tunisia - Project Identification and Project Preparation Missions. Two missions were sent to Tunisia, both led by Mr. D. Miller. The first was able to identify a project within the national family planning program which might be suitable for Bank financing. After discussions with the government on the report of the identification mission, a second mission (including a consultant architect-engineer, a consultant gynecologist and a young professional) was sent to Tunisia to appraise the project.

Jamaica - Population Project Appraisal Mission. Mr. T. King took part in the appraisal of the Jamaica population project (the Bank's first operation in the population field). He prepared a detailed economic justification of the project, and in the course of this made a significant contribution to the methodology of cost-benefit analysis in this field. Following extensive discussions within the Bank, it was agreed that the approach did provide a suitable framework of analysis for a Bank project.

Trinidad & Tobago - Project Preparation Mission. Mr. G. Zaidan working with a consultant, visited Trinidad & Tobago in order to prepare a project suitable for Bank financing.

India. Messrs. Hawkins and King took part in the discussions and preliminary work within the Bank which resulted in a mission being sent to India in order to identify a project suitable for Bank financing. In the course of these discussions it was decided that division staff would not take part in the mission itself (scheduled for July-August, 1970), but that a research proposal would be carried out by the Division which would be designed in such a way that it could be related to the India family planning project.

Mauritius. At the request of the President and the area department concerned, Mr. Hawkins carried out a brief methodological study to determine whether, in principle, a project proposal suggested by the Mauritius Government could be appraised. The proposal involved the promotion of a migration scheme through the medium of a revolving fund. The issue under consideration was whether an economic appraisal could be carried out and, if so, what data would be required for this purpose. The conclusion reached was that such an appraisal could be carried out in principle, but that it was unlikely that the necessary data could be procured.
Indonesia. Mr. G. Zaidan took part in a joint World Bank/UN/WHO mission which was requested by the Indonesian Government to advise them on the preparation of a 5-year national family planning program. The report was the responsibility of the mission, but the Bank provided the facilities for its completion. Mr. Zaidan, acting as rapporteur, was responsible for coordinating the drafting of the final report.

India. Messrs. Hawkins and King visited India at the request of the South Asia Department in order to discuss the proposed agenda for a special meeting of the India Consortium on the subject of family planning. In addition to discussions with the Government, they also met with representatives of other agencies and governments concerned with assistance to the family planning program in India. They subsequently attended the Consortium meeting held in Stockholm.

Pakistan. Mr. D. Miller, together with a consultant, took part in the economic mission to Pakistan in order to review the progress of the family planning program.

Brazil. Mr. T. King took part in the annual economic mission to Brazil with the task of studying population and employment questions. Since Brazil has no official family planning program, the focus of the work was largely upon questions of employment and education - these being the areas in which the problems arising out of a high rate of growth of population are being increasingly reflected.

Studies. The need to undertake the operational activities listed above severely limited the possibilities for carrying out studies during the fiscal year. However, the opportunities presented by these operational activities were used to gain background information and to begin work in fields in which studies will be carried out in the future.

The Jamaica population project provided the opportunity to continue the work done in the Division on cost-benefit methodology for family planning projects. This work resulted in the preparation of a detailed calculation for the Jamaica project, together with a separate working paper which sets out the theoretical and methodological problems that arise. The problems reviewed include pricing the output of a family planning program by first estimating output in terms of births averted and then making the cost-benefit analysis by comparing the discounted stream of differences in per capita incomes with and without the project with the per capita costs of the project.
A second area of study which benefited from operational activities concerns the methodology of family planning programs. Although it was not possible to carry forward this work in detail during the year, the computerized framework already devised was improved in the course of its use in some of the activities listed above. The objective of this work is to provide a computer program which can handle data concerning inputs into family planning programs. It is hoped that the computer program can be used as a basis for an extended study of the operating problems of family planning programs, possibly with particular reference to cost-effectiveness questions.

A general paper entitled Population Growth: Implications for Economic and Social Development was prepared as a background paper for a conference organized by the Rockefeller Foundation and held in Bellagio, Italy, in April 1970. The general relationships between economic development and population variables are under continuous study within the Division. This review has indicated that there are considerable links with the questions now arising in the development field concerning employment and migration. A study was begun towards the end of the fiscal year on the effects of international migration on the economies of the home countries of the migrants. This work originated in a request for assistance from the Europe, Middle East & North Africa Department who analyzed this topic in connection with their economic reviews of such countries as Turkey, Yugoslavia, Greece, Algeria, Tunisia and Morocco. These migrant labor flows have now reached such a size as to have a significant effect upon the labor force and the balance of payments.

Another topic on which preliminary work was done is that of the economic determinants of fertility. This research proposal will look at the results of sociological and demographic surveys to see whether they can throw light on the economic determinants of parental choices as to family size. Various hypotheses concerning the effect of increased income on family size will be tested.

The Bank has participated in the steering committee and contributed to the cost of a Mexican Housing and Employment Study. The study is being sponsored by the Inter-American Development Bank, the OECD Development Centre and the Ford Foundation office in Mexico. The objective is to identify the specific relationships between the factors defining an investment policy, and the effects generated by that policy as to direct and indirect employment, increase in production and social aspects such as internal migration.

Bank Information Service on Population

This service was set up in cooperation with Research Files who process and handle the material. This material comes from various sources, but the heart of the system is the material prepared by the Population Council Information Service. The Bank is contributing $25,000 a year to the cost of the service. In addition, it has been possible during the year to arrange to receive and make use of the detailed demographic data now emerging from the studies of the UN Population Division in New York. These
include population projections by country, 1965-85, consistent historical figures for the same countries covering 1960-70, urban-rural projections and estimates of the numbers of households.

Consultants

During the course of the year the divisional consultants, Professor Ronald Freedman and Dr. Joseph Beasley, assisted in Bank work by providing general advice on the Bank’s involvement in the India family planning program and on the joint Bank/UN/WHO review of the Indonesian program.

ECONOMICS OF URBANIZATION DIVISION

Urbanization involves planning for the more efficient spatial and economic organization of systems of cities in the LDC’s in order to achieve growth and employment objectives. In the immediate future a good deal could be done to minimize the costs of urbanization, improve the mobilization of resources to finance urban development and finally to improve the management of urban centers.

In the past year, the Division was principally engaged in exploring the nature of the urbanization process in the less developed countries and its implications for the Bank Group. The nature of the urbanization problem, its causes, impacts and policy implications for the Bank Group was explored in a "white paper" completed in April 1970 ("The Urbanization Problem in Less Developed Countries: Causes, Impacts and Policy Implications for the Bank Group," by R. Westebbe). Also drafted in the Division was a section for the Annual Report.

The Problems of Regional Imbalance

A key problem in many countries concerns the wide disparity between growth and incomes in major cities and the relative backwardness of the country’s less developed regions. This has often led to the adoption of policies limiting big city growth and promoting "growth poles" in the form of a variety of settlements in poorer regions and made possible largely through investment in costly public overhead facilities and in some cases tax incentives to private enterprises. Working in conjunction with the economic mission to Brazil, the Division explored this aspect of the problem in various countries. In particular, it concluded that if Brazil wished to pursue its employment and output objectives, there was no alternative to the continued growth of Sao Paulo. Opportunities existed for promoting growth in the Northeast, but they had to be exploited first in the few large towns to take advantage of external economies. Similar conclusions emerged in Venezuela from a study done as part of a country economic mission.
Planning and Managing the Urban Region

As the urban areas are the centers of a nation's economic growth, the efficiency of investment in these centers is a crucial issue. The Division examined the problems of regional planning and plan implementation in Bombay, Calcutta and Sao Paulo. Study of Bombay and Calcutta, for example, shows that the principal variable in resource availability was the difference in quality of management and associated political stability between the two areas.

Investment in Urban Overhead: Criteria based on Current Cost

A continuing research effort of the Division has concerned the relationship between requirements for urban overhead investments, the current costs of urbanization and the relationship to private costs of production. In essence, we are trying to devise a methodology for optimizing the location of public and private investments. A study was made of 17 cities in Pakistan to determine how these criteria could be applied to empirical data gathered for us by the Pakistan Planning Commission with whom we are collaborating. The study shows that where current marginal expenditures per capita rise in given cities, a prima facie case exists for considering an increase in urban social overhead investments.

Housing and Urban Development

The Division is now attempting to develop an approach to the housing issue wherein it is recognized that this is a key social problem not subject to solution through large-scale public subsidies. This fact is inescapable in view of resource limitations and other higher priority development needs. On the other hand, well organized housing systems may, in effect, lead to the mobilization of the resources needed to finance the program. As inflationary impacts would be minimized through the mobilization of largely new savings, unused raw materials and underemployed labor, such a program might not conflict with other development objectives. The thesis is being tested in an evaluation of housing programs in several countries. An approach is also being explored which emphasizes sites and service schemes for self-built housing in connection with integrated land development projects.

Urban Transportation

The growth of large cities is usually associated with increasing diseconomies in the form of transportation congestion. Future investments in transportation will be crucial in that they will determine the eventual pattern of growth in these cities and will influence decisively the location of most activities. A study concerned with the development of methods and criteria for economizing on existing transportation facilities and new investment is presently being taken by a consultant, Mr. Christopher Foster.
DOMESTIC FINANCE OF DEVELOPING COUNTRIES DIVISION

Country Economic Missions

During FY 1970, approximately 60 percent of the staff time of the Division was devoted to covering the domestic finance sector of country economic missions to ten countries -- Pakistan, Malawi, Iran, Yugoslavia, Ethiopia, Ghana, Mexico, Morocco, Sudan and the U.A.R. In the case of economic missions to nine other countries, the Division arranged for fiscal economists to be supplied by the Fiscal Affairs Department of the IMF. In two other instances, consultants were hired for that purpose. The determination of which country economic missions should be serviced by the Division has been based on one or more of several considerations:

(i) the Division's continuing involvement in a large and important country (e.g., Pakistan);

(ii) the central importance of the fiscal issues to the Bank's judgment on the economic performance of a country (e.g., Malawi, Iran, Sudan and Ghana);

(iii) the complexity of the fiscal analysis (e.g., Yugoslavia and the U.A.R.); and

(iv) the relationship of country economic work to the Division's research interests (e.g., Pakistan, Iran, Morocco and Ghana).

Mobilization of Agricultural Incomes

The Division has continued to maintain its involvement in work directed toward improving the mobilization of incremental agricultural incomes for helping finance the government budget or investment. A general paper on this subject was prepared for the Board (Sec. M 70-38), dated January 30, 1970, and this paper formed the basis of a Board seminar. More specifically, Mr. Eklund has been assigned throughout FY 1970 to concentrate upon the problems associated with the mobilization of agricultural incomes in Pakistan. In this connection, he has been concerned with Bank work at the country, sector and project levels. He has been a member of the economic mission to Pakistan, a member of the East Pakistan Agricultural and Water Development Program team and a member of the appraisal mission for the Chandpur Irrigation project.
Other Tax Studies

A study of the elasticity of the Tunisian Tax Structure was undertaken by Mr. Sciolli. This was of direct operational significance to the Area Department which had initially suggested the study and was also of interest from a methodological point of view.

Public Expenditure Levels, Growth and Structure in Developing Countries

Research work has been started in the Division on problems of government expenditure. This study will focus primarily, though not entirely, on African countries, and Messrs. Gandhi and Stolber will be most directly concerned. Two working papers have been produced: the first, "Wagner's Law of Public Expenditure; Do Recent Cross-Section Studies Confirm It?" and a second entitled, "Are There Economies of Size in Government Current Expenditure in Developing Countries?". The latter study concluded that a developing country is likely to consume about the same proportion of its gross national product in government administration and civil consumption expenditure whatever the size of its population or gross national product. Work is being related to that undertaken by Gandhi and Stolber on regular economic missions to Ghana and Morocco.

Mobilization of Private Savings

The Division's work in this area has been primarily motivated by an attempt to make it more effective in terms of Bank operations. Many of the problems with which it has been concerned have arisen in the context of some of the country economic missions in which the Division has participated (e.g., Iran, Pakistan and the Philippines). A special study on "Aspects of the Resource Mobilization in Iran" gave particular emphasis to this matter. Secondly, the Division has raised these problems as they impinge on Bank lending, particularly to the specialized lending institutions in the agricultural and industrial sectors. A paper was prepared by Mr. Joshi on "Development Banks and the Mobilization of Savings" which emphasized the disappointing performance of these institutions as direct mobilizers of domestic private resources. After subsequent discussions with DFC Department, a letter was sent by Mr. Diamond to the chief executives of most of the industrial development banks to which the IBRD lends, alerting them that it was the intention of the World Bank to give more attention to this aspect of their policies in the future. The Division has then worked with the DFC department in helping them move in this direction. Messrs. Please and Joshi also undertook a study of the China Development Corporation and its role in the mobilization of funds for industrial development in Taiwan. This study was undertaken in association with the appraisal mission for a further IBRD loan to CDC. Messrs. Schebeck and Joshi assisted the appraisal mission to IMDBI in preparing that part of its report which was concerned with the role of IMDBI in mobilizing domestic resources in Iran. In general throughout the year the Division has been developing closer and substantive links with the DFC Department in regard to these matters of common interest.
Apart from these operational activities the Division has also undertaken more general studies in this area. A study of interest rates and the mobilization of savings in Taiwan, which suggests that Taiwan has successfully employed interest rate policy to increase bank mobilization of savings, has been prepared by Miss Meldau. Mr. Joshi has prepared a paper on the "Role of Contractual Savings in Mobilization of Savings," which concludes that contractual savings take place at the expense of consumption rather than of other forms of savings. In addition, in collaboration with the Pakistan Institute of Development Economics, a study of the interest elasticity of bank deposits in Pakistan is being undertaken.

QUANTATIVE TECHNIQUES AND ANALYSIS DIVISION

General

During 1969-70, members of the Division participated in six country economic missions. Mr. Cheetham and Mr. Carter each took part in two missions, while Mr. Holland and Mr. Shourie each assisted in one mission.

Argentina. A quantitative analysis of recent economic trends was prepared and short-term and longer-term projections made with particular reference to the government budget and the balance of payments.

Ceylon. We assisted in an assessment of the overall growth of the economy, the performance and prospects of the manufacturing sector, and the analytical basis used in formulating the country's development programs.

Korea. A review of the macroeconomic performance and prospects of the economy was carried out. Projections of national accounts, balance of payments, and external financing requirements were made, a debt projection model constructed, and recent changes in input-output relationships analyzed.

China. Here projections of national accounts, balance of payments, and external financing were undertaken. Past developments in the agricultural sector and of agricultural investment projects which might be made the subject of preinvestment studies were also reviewed.

Venezuela. Past data on national accounts and the balance of payments were collected and analyzed, and the use of these data for purposes of projection studied. Projections were made of sectoral investments and output, and a review of family planning programs in operation initiated.

Mexico. A revised and consistent set of macroeconomic accounts and projections, which eventually constituted the quantitative framework for the recent country economic report, were compiled.
Other service activities were numerous and varied. Mr. Shourie advised the South Asia Department on methods of projecting the demand for fertilizers in India. Mr. Carter aided in the appraisal of a tourist project, and Messrs. Shourie and Ramiscal consulted with the Public Utilities Projects Department in connection with the analysis of rainfall data. Mr. Carter worked in conjunction with the Trade Policies and Export Projects Division on a model of the cocoa market. Mr. Cheetham assisted the Population Studies Division in the development of a model for analyzing the effects of a family planning program on population growth.

Mr. Carter and Mr. Malik have undertaken the analysis of the main macroeconomic projections that are set out in country program data sheets, while Mr. Carter has also taken an active part in the work that has been done on developing a set of standard models for purposes of debt projection. Mr. Henderson has been involved in the Bank's participation in the preparatory work for the Second Development Decade, and was also responsible for a number of papers on international allocation of aid, arising out of one of the principal recommendations of the Pearson Commission.

Research and Publications

Most of the research carried out within the Division was closely connected with the operational work that was undertaken. In particular, a good deal of work was done on the development and review of the kind of models that can be used in country economic work. Thus Mr. Carter worked on three different macroeconomic models of the Jamaican economy, each designed for a different purpose. One of these, which involves the use of a linear programming model for analyzing employment and growth problems in Jamaica, was embodied in a paper presented to a conference on employment problems which was held in Paris in December 1969 by the OECD Development Center. Mr. Cheetham developed a model for making medium-term projections of the Korean economy using a reduced input-output table. Mr. Holland has been a member of the team led by Mr. de Weille which has been concerned with the analysis and adaptation of the Harvard transport simulation model for Colombia; his particular concern has been with the macroeconomic model which forms a part of the total model.

In addition to work on country-specific models, members of the Division have undertaken more general research in model-building and quantitative methods. Mr. Holland presented a paper on dynamic simulation models at an international conference held in Cairo in December 1969. Mr. Shourie has prepared an extensive review of the uses and limitations of aggregative regression models for purposes of prediction and policy choices, while Mr. Ramiscal has just completed a paper on the choice of independent variables in multiple regression analysis.

Much of this work was published within the Bank during the course of 1969-70. The following Departmental Working Papers have been issued by Division members:

The paper gives a detailed description of how the 1968 Bank economic mission to Jamaica arrived at its projections. It illustrates how such projections might be made in situations where at least a moderate amount of data is available. The paper identifies the shortage of skilled manpower as the critical bottleneck in Jamaica. Using estimates of an incremental capital-output ratio and the investment rate it projects possible growth paths of the economy, the investment requirements, patterns of financing the investment and various magnitudes in the public accounts. It also explores the consequences for the economy's growth rate of changed capital-output ratios and shortfalls in public and private investment arising from an inability to prepare a sufficient number of projects.


The paper sets out a 33-equation macro-model for Jamaica. The model provides a compact summary of the data, explicates some of the structural relationships of the economy and provides some hints that can be of use in making projections for the future. The individual equations have significant t-ratios, high coefficients of determination and the residuals are not auto-correlated. The equations are used to simulate the behavior of the Jamaican economy over the sample period and the results are very encouraging; in particular the model captures the downturn of 1961-63 in investment and the somewhat abrupt upward shift in consumption in 1964.


The paper reviews the growing use of Klein-type macro-economic regression models. Its conclusions are based on a study of about 45 such models. As these models are being constructed for one country at a time they have necessarily to rely on time series data. This data is generally available for only a few years, and when available is of uncertain or very low reliability. As the time series are very short and as almost all variables seem to grow or decay over the short periods for which data about them can be assembled, every attempt to include in the equations all the explanatory variables that appear to be relevant on a priori grounds soon exhausts the degrees of freedom and is itself frustrated by the prevalence of collinearities. For this and other reasons there is every likelihood that the models and their equations are grossly
underspecified or mis-specified. Moreover, in a large number of cases one can expect little help from economic theory, from mechanically-applied statistical tests or from appeals to one's intuition. It would seem, therefore, that the apparent faith in these regression models for forecasting and - even more so - for purposes of control is unwarranted.


Very often it seems that the behavior of a particular dependent variable could have been caused by any one or any combination of a large number of independent variables. Situations are not uncommon in which any one or any combination of 10 or 15 explanatory variables seems to be equally plausible on a priori grounds. The econometrician is then faced with a combinatorial problem: as a variable can be either in an equation or not in it he must try out \(2^p - 1\) combinations where \(p\) is the number of explanatory variables. With 15 variables, for instance, he must try out about 32,750 combinations. The paper formulates a new method of enumerating the combinations and some cut-off rules that drastically shorten the computations involved in searching for the optimal set of regressors. By using the program outlined here the search for the optimal sets in problems involving 16 variables, for instance, was completed in a mere three minutes on the Bank's Burroughs 5500.

The second of the four papers listed above has been accepted for publication in Social and Economic Studies; the third has been accepted by Oxford Economic Papers, and the last has been submitted for publication. Mr. Holland's paper on dynamic simulation models is to be published in the proceedings of the Cairo Conference. Two of Mr. Henderson's papers were published during the year: "Political and Budgetary Constraints: Some Characteristics and Implications," Chapter 13 of Public Economics (ed. Margolis and Guitton); and "Some Unsettled Issues in Cost-Benefit Analysis," a contribution to Unfashionable Economics: Essays in Honor of Lord Balogh, (ed. Streeten).

TRADE POLICIES AND EXPORT PROJECTIONS DIVISION

During the bulk of fiscal 1969 and part of fiscal 1970, the Division provided support for Part II of the Bank study on the problem of commodity price stabilization and the related Board seminars. In fiscal 1970 the Division's support for Bank's operations became more intensive as a result of a greater awareness, particularly on the part of the Executive Directors, of commodity trade problems. This operational support consisted, as in past years, of making short and medium term forecasts of demand, supply, prices and trade, globally and in relation to individual countries, in some 30-40 major commodities of significance in the export earnings of
the developing countries. The individual commodities in which we have developed expertise include: petroleum, coffee, cocoa, tea, sugar, rubber, cotton, wool, jute, sisal, abaca, textiles generally (silk and synthetics to a lesser degree), vegetable oilseeds and oils (coconut, groundnut, palm, soybean), fishmeal, beef and veal, tobacco, rice, wheat, maize, tropical timber and its products (pulp and paper to a lesser degree), bananas, citrus, copper, tin, lead, zinc, silver, bauxite and aluminum, iron and steel, iron, manganese and nickel ores, phosphate rock, potash, fertilizers generally. In fiscal 1970 we began studying wine, vegetables, pepper and fish products. In addition, individual economists were also assigned general subjects to be followed: developments in the commodity-oriented general policy activities of GATT, EEC, UNCTAD and FAO, developments in the world food problem generally and trends in world export trade. The forecasts are based on a combination of quantitative and qualitative analysis, depending on the availability of data, with a key role being played by informed, professional judgment based on accumulated knowledge of the statistical, technological, institutional, governmental and financial aspects of the individual commodities in his charge.

A major step toward deepening and generally improving the quality of the Division's analytical work on individual commodities was the expanded participation of Division members in mission field work. During fiscal 1970 commodity economists from the Division participated in country missions to Malawi (Elz), Pakistan (Taylor), Thailand (Geer), UAR (Varon) and Zambia (Takeuchi), in an agriculture sector mission to Brazil (Singh, Varon and Elz) and in a project mission to Mauritius (Elz). A major objective of this participation has been to enable the Division to improve the quality and reliability of the supply/cost analysis underlying its long-term price projections for individual commodities.

Briefing for Management and Board: Other Formal Documentation

Because of the large number of country economic missions which now take place annually (each of which needs to be briefed on the Division's current projections in connection with their balance of payments analysis and other purposes) and the increase in appraisal of commodity-oriented projects (for which the Division supplies price and marketing forecasts), substantially every commodity which is currently being followed by the Division's economists was the subject of some degree of review and reassessment during the course of the year as to its long-run prospects. The results of these re-assessments in most cases are transmitted to the operational divisions of the Bank through personal briefings, internal memoranda and in comments on economic and appraisal reports. The Division also tries insofar as it is able, to document its views in papers for general distribution (absence of a formal paper on a commodity, however, by no means indicates that no research is being carried out on that commodity).

During fiscal 1970 the following briefing papers were prepared for Board or Management use.
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**Executive Directors' Decisions on Commodity Price Stabilization**

Since the publication of the Executive Directors' decisions on commodity price stabilization in July 1969, the Division (Macone) has responded to inquiries from various international organizations for elucidation of these decisions. The inquiries initially tended to focus on the decisions relating to the possibilities of financial assistance for buffer stocks.
Subsequently, interest has focused on the decisions relating to financial assistance for end-use research on commodities subject to substitution from synthetics. The International Institute for Cotton, an intergovernmental organization, has been particularly interested in the possibilities of Bank financial assistance for such research, has had preliminary discussions with the Division (Macone, Varon) and is hoping in due course to discuss with the Bank a program of basic research which it is organizing.

Collaboration with International Organizations

Apart from the fact that members of this Division attend periodic meetings in an effort to gather information and data, this Division also has a more direct cooperative relationship with some international organizations – notably the International Coffee Organization, which administers the International Coffee Agreement. During the past year this cooperation centered particularly on the formulation by member countries of national coffee plans. These were required for the administration of the Agreement and as an essential step toward initiating lending operations by the Diversification Fund of the ICO. The Division (Singh) coordinated the Bank’s comments on the country plans, and participated in the technical review of them.

The Division also has been cooperating with the Secretariat of the International Rubber Study Group, which is carrying out a study of world rubber supply and demand.

Cooperation with Regional Banks

At the second meeting of the heads of the research departments of the regional banks and the World Bank on the coordination of economic work, commodity analysis was noted as a field where the regional development banks felt a specially urgent need for help from the World Bank. It was agreed that the Division would keep the regional development banks informed about ongoing work and would try to be responsive to requests for ad hoc assistance. If the information were not available, we would advise as to where such assistance might be obtained.

SECTOR AND PROJECTS STUDIES DIVISION

AGRICULTURE

Sector Planning Models

Parallel with the expansion of sector studies and surveys in the Agricultural Projects Department, the Sector and Projects Studies Division is examining the potential usefulness of inter-regional and inter-activity analysis models for analyzing sector investment priorities and sector policies. Messrs. Egbert and Ablasser are currently constructing such
models for agriculture in Portugal and Brazil. In collaborating on the
collection and interpretation of sector data at the time the sector mission
is in the field, they have made an immediate contribution to the ongoing
impressionistic appraisal of the sector, while constructing a more elaborate
data base to be used in subsequent in-depth, analytical studies. Eventually,
it should become possible to evaluate the usefulness of various analytical
approaches when the implications of alternative policies derived from appli-
cations of the analytical models are compared with the conclusions and re-
commendations contained in the sector mission reports.

Re-evaluation of Mexican Irrigation Projects

A report by Mr. Manning on the re-evaluation of projects under
Loans 275 and 336 to Mexico is now at the discussion draft stage. This
study is a first attempt in the Bank at a thorough re-evaluation of an
agricultural project. Although there is more data available in Mexico
than in many other countries, the study clearly illustrates the difficulty
of learning from a project's experience when no provisions were made from
the start for collecting data for this purpose. Nevertheless, the study
showed that the overall rates of return of the projects seem to have been
only slightly overestimated at the time of the appraisal. More importantly,
however, the study concludes that the pre- and post-evaluation estimates
are comparable only due to compensating errors. Crop yields were under-
estimated, but the extent of farmer participation and the value of the
crops benefiting from the project were overestimated. The study points
out that some of the projection errors would have been avoided with the
currently practiced appraisal procedures and concludes with suggestions
as to how further improvements in appraisal methodology could be made and
how these would result in different rankings of individual parts of the
project.

Re-evaluation of Irrigation Projects in India

Mr. Duane visited India in May/June 1970 and selected two irri-
gation projects for reappraisal: the Sone project in Bihar and the Purna
project in Maharashtra. These provide sharp contrasts in rates of develop-
ment, cropping patterns, size, pre-project conditions and problems of
water management. In addition to the reappraisal exercise, it is proposed
to study the policy conflicts between striving for efficient production
and equitable distribution of project benefits. Arrangements have been
made for collaboration in this study with economists of Nuffield College,
Oxford, led by Professor Ian Little.

Re-evaluation of Pakistan Credit Project

Mr. Manning has started to collect data and set up a co-operative
study arrangement with the Pakistan Agricultural Development Bank for re-
evaluating IDA credits for tractors, tubewells, tillers and low-lift pumps.
The study will focus on micro-economic aspects and policies which would
bring into line private profitability and social benefits.
Computer Simulation Models

Mr. Husain completed the development of a simulation model for the cost-benefit evaluation of beef ranch livestock projects. The scope and limitations of this model are discussed in Economics Department Working Paper No. 56. Mr. Husain has also completed work on a simulation model for the cost-benefit analysis of single-purpose irrigation projects. Furthermore, Mr. Husain has worked on developing a simulation model for appraising a tea plantation project in a cyclone infested area. This model can be generalized for use in appraising projects exposed to natural hazards.

Mr. Reutlinger's paper on Techniques for Project Appraisal Under Uncertainty was published as World Bank Staff Occasional Paper No. 10.

Evaluation Methodology for Grain Storage Projects

In view of the growing demand for grain storage projects, the Division, at the request of the Agricultural Projects Department, has started work on identifying procedures for evaluating benefits from large grain storage programs on a scale where the usual, simple cost-benefit analysis breaks down. Economics Department Working Paper No. 66, prepared by Messrs. Reutlinger and Wilde (Consultant, MIT), discusses storage demand arising from seasonal differences in supply and demand. The model considers simultaneously seasonal changes in production, consumption and storage operations and the benefits attributable to storage. Work has been started on evaluation of buffer stock storage programs to counter random fluctuations in grain production. Mr. Reutlinger will present a paper on this subject at the Second World Conference of the Econometric Society at Cambridge, England. Mr. Reutlinger also prepared an internal paper on grain storage requirements in India in conjunction with a current project financing request.

Agricultural Development Strategy

The Division convened a seminar with Professor Bruce Johnston of Stanford Food Research Institute to discuss his research on the hypothesis that present agricultural policies favor an expansion path of agricultural output which is unnecessarily expensive in terms of capital investment, unemployment and income distribution in the rural sector.

Currently under preparation is a study of the productivity, employment and income distribution effects of mechanization. This will utilize sample data to be collected in conjunction with the Bank financed credit projects in the Indian states of Gujarat and Punjab.
Review of Agricultural Production and Supply Response Research

Professor James Seagraves (Consultant) did a review study of the state of the art of estimating supply and production functions. His findings and recommendations are summarized in Economics Department Working Paper No. 57.

Skilled Manpower Demand Projections for Irrigation Projects in Mexico

In this study, Mr. Haissman (Consultant) reviewed the skilled manpower requirements for irrigation projects in Mexico and presented a model for the optimal deployment of scarce manpower in developing irrigation projects. The study is issued as Economics Department Working Paper No. 83.

TRANSPORT

Transport Planning Models Study

The objectives of the study are to review currently available transportation models, to further develop and test such models on actual planning problems at the project and sector level, and to determine the feasible scope of such techniques as operational planning tools. This study is being undertaken by Messrs. de Weille, Miller, Harral and Holland with programming support from the Statistical Services Division. The complex Harvard transport model has been transferred and made operational on the Bank's computer. In December 1969 the study team presented a number of seminars on transport models for the staff of the Transportation Projects Department. Collection of data in Colombia is in progress and the transfer of a transport planning model capability to that country is well advanced. In addition, the study team has supported the modelling efforts in Reappraisal of a Railway Project in Thailand and the Central American Port Study. At present the study team is preparing a paper evaluating the various model approaches. Future efforts will be concerned with the revision and further application of transport planning models (Colombia and possibly Yugoslavia and Chile). The study team has prepared the following Economics Department Working Papers:

No. 60 - Regional Macroeconomic Model, June 22, 1970.
No. 64 - Transfer Cost Performance Model, February 26, 1970.
Highway Design Study

This study aims at providing a better basis for answering the question of suitable design standards for low-traffic-volume roads in developing countries. This is essentially a problem of cost minimization involving trade-offs among road construction costs, road maintenance costs and vehicle operating costs. The initial, exploratory phase of the study (Phase I) is practically completed. The consultants (CLM) have recently submitted their draft final report which presents a comprehensive framework in which the principal interrelationships are represented in a systematic fashion, and makes recommendations on what should be done in Phase II to improve the data base of the model. Phase II, data collection in East and West Africa, to be carried out in cooperation with the Road Research Laboratory of the UK and a group of French institutions led by the Laboratoire Central des Ponts et Chaussées, is in preparation. Mr. J. de Weille, assisted by Mr. Harral, is directing the study in close collaboration with the Transportation Projects Department.

The Economics of Rail Line Closure

Mr. R. K. Sau (Consultant) recently completed a paper discussing how to determine which sections of a rail system to close and when. The decisions are analyzed for both the economic (net social benefits) and financial (railway company's gains) objectives, when either exogeneous traffic projections or traffic demand curves are available. The issue of government subsidization of rail service is also discussed. The approach of the paper is essentially theoretical and further work is envisaged on actual case studies to develop pragmatic solutions for the line closure problem. The study was issued as Economics Department Working Paper No. 76 (May 22, 1970).

Reappraisal of Railway Project in Thailand

This study, carried out by Mr. Israel, analyzes the effects of the project on the operations and costs of the railways on road-rail competition in Thailand. It also tries to ascertain and to explain the differences between actual outcomes and expectations in the variables affecting the project's benefits. The study has been based on a partial application of the Harvard Transport Model. A preliminary report is expected by September 1970.

The Optimum Depth of Water in a Port

Mr. Ray recently completed a study which discusses the problems of cost-benefit analyses of port deepening projects. It defines the relationship between the concepts of optimum vessel size and optimum shipment size and discusses how this relationship is affected by depth limitations in the port. It analyzes the nature of the benefits that may be expected from a port deepening project, and the distribution of these benefits between the investing country and other countries. A general formula for
the measurement of benefits is developed. The study was issued as Economics Department working Paper No. 67 (February 18, 1970).

Central American Ports Study

This study will determine the optimal program of port investment that the Bank should pursue in the five countries belonging to the Central American Common Market: Guatemala, El Salvador, Honduras, Nicaragua and Costa Rica. Alternative programs are being evaluated to determine the minimum total cost plan from the point of view of the countries. The study is being undertaken by Mr. A. Ray (Economics) and Mr. J. Lawden (Consultant) for the Transportation Projects Department and the Western Hemisphere Department.

Appraisal Methodology of Feeder Road Projects

Mr. Israel has completed a paper discussing appraisal methodologies for feeder road projects. The study concludes that feeder road improvements should be appraised within the context of regional development, and that a detailed knowledge of the interrelations between transport and agriculture is necessary. The study also discusses ways of incorporating institutional and sociological variables in feeder road appraisals. Talks have been initiated with the Transportation Projects Department and the Agriculture Projects Department for the application of the proposed methodology on the appraisal of a Bank feeder road project. The study was issued as Economics Department Working Paper No. 70 (March 22, 1970).

Systems Analysis of Rural Transportation

Meta Systems, Inc. (Consultants) has completed a systems analysis study of rural transportation. The emphasis is on the development of techniques for measuring the economic impact of alternative rural transport system investments (different feeder road grids). The focus of the example in this study is on the SCARP 1 project area in West Pakistan, but the analysis structure approaches can be generalized from one project area to another. The study was issued as Economics Department Working Paper No. 77 (May 22, 1970).

The Economic Regulation of the Road Transport Industry

Professor Oort (Consultant) has recently completed a paper presenting a review of regulatory policies on the basis of economic theory and of its practical implications. The author examines the problem in three successive stages, beginning with the road transport industry considered in isolation, moving on to the coordination between different modes, and finally placing transport in the framework of the total economy. He accepts economic efficiency as the major policy criterion, i.e., that all transport services valued as highly as their social costs, and only those, should be supplied, since the examination of other possible objectives leads him to conclude that the latter are largely irrelevant for transport policy.
Value of Travel Time

Miss Bundi, backstopped by Mr. Ray, is undertaking this study. The study will discuss the theoretical concepts involved, describe and evaluate how in practice the value of travel time has been estimated, and make practical suggestions how it should be done in the future. This is an issue in Bank road projects which reduce travel time.

Appraisal Methodology of Airport Projects

Professor P. K. Dygert (Consultant) is working on a study which aims at providing in a systematic fashion a description and evaluation of appraisal methodologies used in practice (as much as possible with reference to developing countries). In essence: What is the state of the art, and how good is it, and (possibly) where do we go from here? Mr. de Weille, in close collaboration with the Transportation Projects Department, is in charge of the study for the Bank.

EDUCATION

Kenya Case Study of Cost-Benefit Analysis

Messrs. Thias and Carnoy (Consultant) completed the Kenya case study applying rate of return analysis to investment in education. The study attempted to isolate the benefits directly attributable to education and to project the demand and supply to persons with various amounts of schooling. The study was issued as Economics Department Report EC-173.

Reappraisal of Education Project in Tunisia

The purpose of the study, undertaken by Messrs. Thias and Carnoy (Consultant) is to identify, measure, and explain educational achievements in a group of secondary schools constituting project 29-TUN and several other secondary (control) schools. For this purpose, two surveys, one of the secondary school students and another of their teachers, have been conducted; the data are at present being analyzed. The second part of the study will attempt to link these outcomes to subsequent performance on a job. A related labor force survey was carried out in January by Mr. Thias.

Education Financing Problems

A consultant, Mr. Rogers, is at present completing the first draft of a study which aims at screening existing education financing arrangements from the point of view of obtaining certain educational and other objectives (such as equality of educational opportunities, demand for specific types of education, quality of schooling, etc.). This study should give clues as to where subsequent extensive research would appear to be most fruitful.
Survey of Education Planning Models

Mr. Holm is developing a basic framework for evaluating education plans and models and their underlying theories. The study will give a representative survey of existing educational plans and models and point to models which might be used by the Bank in its work on education.

PUBLIC UTILITIES

Ex-Post Evaluation of Electricity Demand Forecasts

Mr. Anderson has completed a study of electricity demand forecasts used by the Bank and IDA in 140 past loans and similar experiences in the industrialized countries. The study estimated the accuracy of the forecasts and sought explanations for the errors. It was found that forecasting accuracy did not increase with the size and rate of expansion of the system or the Bank's loan experience over time and with countries. The analysis concluded with some suggestions of methods to be explored for improving the accuracy of forecasts. The study was issued as Economics Department working Paper No. 79.

Econometric Analysis of Electricity Demand

Mr. Anderson has started on a study to determine whether electricity forecasting accuracy can be increased by using econometric methods. The study attempts to estimate from time series and cross-section data the effect of income, output, price, industrialization, urbanization, population, technical progress and other economic and demographic variables on aggregate electricity demand and the demand of specific consumers (income groups, industrial groups, rural and urban communities). The forecasting properties of the econometric models will be compared with other methods of forecasting.

Investment and Simulation Models

This study reviews models used for evaluating investment and operating policies in electricity supply. During December 1969, Mr. Anderson visited the leading experts in Europe to discuss their models and methods. The Linear Programming method seems most promising, since it can be easily adapted to the large variety of situations encountered in the Bank, and as standard Linear Programming packages exist in many countries. Mr. Anderson has developed a linear programming routine which has been already tested on the CDC computer and will shortly be applied to some Bank projects.

Economic Benefits of Electricity Power Projects

Economic analyses of electric power programs traditionally assume demand as being exogenous, and seek least cost ways of satisfying demand.
A study to determine how to estimate the benefits from expanding the supply of electricity when the demand is responsive to price changes brought about by the project and the electricity project is part of a broader investment program is currently being developed.

**Economic Benefits of Water Supply Projects**

Mr. Ray is preparing a paper on the problems of measuring the benefits from urban water supply projects. The conventional methods are discussed with their merits and disadvantages in the context of such projects in underdeveloped countries.

**TOURISM**

**Forecasts of Tourism Demand - Japan**

Mr. Pernia, backstopped by Mr. de Weille, is undertaking this study at the request of the Tourism Projects Department. The objective is to test techniques for forecasting Japanese tourism outside Japan over the next 10 years in terms of number of travellers, countries of destination, length of stay, amount of money spent, and so on.

**GENERAL**

Messrs. Reutlinger and de Weille visited Nuffield College, Oxford to discuss with Dr. I.M.D. Little studies in progress applying the social cost-benefit accounting procedures suggested in the Little-Mirrlees Manual for agricultural projects. Tentative plans were made to collaborate with Dr. Little and his colleagues on the reappraisal of some projects in order to better acquaint ourselves with their proposed procedures for estimating shadow prices. If their procedures result in rates of return estimates substantially differing from ours, the feasibility and desirability of changing the Bank's cost-benefit accounting procedures will be further examined. Mr. Reutlinger also participated in a DAC sponsored meeting to discuss the Overseas Development Ministry Manual in project appraisal based on the Little-Mirrlees proposals.

Messrs. van der Tak and Reutlinger attended the FAO/WHO/UNESCO sponsored Protein Advisory Group meetings at Geneva and New York respectively. The purpose of this group is to evaluate the extent of protein malnutrition and its impact on health and normal functioning of affected segments in the population and to review means for overcoming these problems, particularly by use of low cost new protein sources. The Division sponsored a seminar in the Bank by Dr. Cantor on the application of systems analysis to the evaluation of a protein supply project.
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1/ Consultant (3 months)
2/ Young Professional

August 24, 1970
Mr. E.K. Hawkins

Alexander Stevenson

Terms of Reference - Visits to Cambridge and Copenhagen

September 10, 1970

In accordance with arrangements already agreed you will proceed to Cambridge on or about September 11 in order to represent the Bank at the Cambridge Conference on Development to be held at Jesus College Cambridge.

Your attendance at this Conference will be subject to the requirement that you take part in the seminar to be organized by the Bank and the IMF in Copenhagen from September 16-18. In order to deliver your paper, which is scheduled for September 18, you should plan to arrive in Copenhagen from Cambridge on the night of the 17th.

During the period that you are in England, you may take advantage of any opportunities which arise to consult with economists working in either London or Oxford.

On your return to the Bank you should prepare a brief back-to-office report on the discussions at Cambridge.
Visit to Montreal, October 6

I will visit Montreal and participate as a panelist in the discussion of three papers presented at the VI World Highway Conference.
Visits to Paris, Kenya, Montreal - Terms of Reference

1. You will visit Paris (September 21-22), Kenya (September 23-October 6), and Montreal (October 8).

2. In Paris you will further discuss with Mr. F. Leger (Laboratoire Central des Ponts et Chaussées) the preparation of a detailed proposal for the data collection effort in West Africa (Phase II of the Highway Design Study). With Mr. J. Audibert (Fond d'Aide et de Cooperation) you will further explore the possibilities of French financial participation in Phase II of the Highway Design Study.

3. In Kenya you will jointly with Mr. R. Bonney (Road Research Laboratory, U.K.) lay the basis for a detailed proposal for the data collection effort in East Africa (Phase II of the Highway Design Study).

4. In Montreal you will participate as a panelist in the discussion of three papers to be presented at the VI World Highway Conference.

5. Upon your return you will prepare a brief back-to-office report.

cc: Messrs. A.M. Kamarck
S. Reutlinger
A. Que
V.W. Hogg
Miss E. Powell

IBRD Nairobi Office
IBRD Paris Office
Attached is the Department's consolidated monthly activity report for June. Also attached is the Summer Help activity report for June. The time reported by Summer Help is not included in the Department total.

The following observations can be drawn from the data presented in the table: About 50% of staff time was spent on service activities and 28% was spent on research, 7% was spent on management and 15% was divided among other activities; (the corresponding figures for May were: 54%, 30%, 7% and 9% respectively). Thirty-six percent of operational time (total minus management and other activities) was spent on research. Sixty-four percent of operational time was spent on service.

Attachments

cc: Messrs. Friedman
    Stevenson
    Chaffey
**ECONOMICS DEPARTMENT MONTHLY ACTIVITY REPORT**

**Period of Report:** June 1 - 30

<table>
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<th>Division:</th>
<th>Department Totals</th>
<th>Section:</th>
<th>Period of Report:</th>
<th>June 1 - 30</th>
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<th>Tr. Policies &amp; Exp. Proj.</th>
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<th>Comparative Data</th>
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### Economics Department Monthly Activity Report

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**Period of Report:** June 1 6-30

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**TOTAL** 7 22 101 54 18 202
Mr. S. Reutlinger

Jan de Weille

Annual Activities Report

July 1, 1970

I attach the activities report for Transport, Tourism, and Water Supply.

As you will note the list is appreciably longer than in the last activities report. This is partly because the December report was incomplete (it omitted The Economics of Rail Line Closure, The Optimum Depth of Water in a Port, Systems Analysis of Rural Transportation, and The Economic Regulation of the Road Transport Industry) and partly because of studies started since December (Value of Travelling Time, Appraisal Methodology of Airport Projects, Economic Benefits of Water Supply Projects, and Forecasts of Tourism Demand: Japan).

attachment

JdWahl
Mr. S. Reutlinger
Richard C. Manning

Contribution to Annual Activities Report

June 30, 1970

1. Re-Evaluation of Projects

A report by Mr. Manning on the irrigation rehabilitation projects financed under loans 275 and 336 to Mexico is now at the discussion draft stage and will be finalised during September. Mr. Manning is spending the month of July in Pakistan collecting data and establishing a cooperative study arrangement with the Agricultural Development Bank for re-evaluation of IDA credits 76 and 117 for tractors, tubewells, tillers and low lift pumps. In this case it will be necessary to give considerable emphasis to the micro-economic aspects of the investments being undertaken. A key element in the study will be building a basis on which to make recommendations for public policy changes that would make private profitability a good guide to social desirability of specific forms of farm mechanization.

2. Review of Land-Reform impact.

3. Cooperation with EDI - agricultural study for general development course.

RCManning:rlb
Mr. Bela Balassa

Alexander Stevenson

May 26, 1970

Terms of Reference

You are requested to travel to Kiel, West Germany, to participate in the Conference on "Changing Structures in the World Economy", and then proceed to Jerusalem to have discussions on the Israeli study in the "Development Strategies in Semi-Industrial Countries" project.

Cc. Mrs. Armstrong

Balassa:alj
Monthly Activity Report for May 1970

Attached is the Department's consolidated monthly activity report for May.

The following observations can be drawn from the data presented in the table: About 54% of staff time was spent on service activities and 30% was spent on research, 7% was spent on management and 9% was divided among other activities; (the corresponding figures for April were: 59%, 24%, 7% and 10% respectively). Thirty-six percent of operational time (total minus management and other activities) was spent on research. Sixty-four percent of operational time was spent on service.

Attachment

cc: Messrs. Friedman
    Stevenson
    Chaffey
<table>
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<th>Division:</th>
<th>Department Totals</th>
<th>Section:</th>
<th>Period of Report:</th>
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Mr. Andrew M. Kamarck

Jack L. Lowther

Monthly Activity Report for April 1970

May 20, 1970

Attached is the Department's consolidated monthly activity report for April.

The following observations can be drawn from the data presented in the table: About 59% of staff time was spent on service activities and 24% was spent on research, 7% was spent on management and 10% was divided among other activities; (the corresponding figures for March were: 54%, 29%, 7% and 10%, respectively). Twenty-nine percent of operational time (total minus management and other activities) was spent on research. Seventy-one percent of operational time was spent on service.

Attachment

cc: Messrs. Friedman Stevenson Chaffey

JL Lowther: sm
# ECONOMICS DEPARTMENT MONTHLY ACTIVITY REPORT

**Period of Report:** April 1 - 30

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Collaborative Research In India

1. For some time now we have been talking about moving more towards conducting research studies in collaboration with research personnel and institutes in the developing countries. Studies resulting from a cross-breeding of our own research capabilities in the Bank with those of researchers in the developing countries are likely to be better than studies carried out separately.

2. Some of the comparative advantages of local research are (a) lower cost, (b) easier access to data and new data generation, (c) greater familiarity with local conditions, and (d) better chance for communicating research results to users in the country. Our comparative advantage is in the (a) proximity to development problems and decisions on a vast scale, (b) insulation from local pressures and biases, and (c) opportunity for drawing useful generalizations beyond local applications.

3. We have been discussing for some time with Professor Raj Krishna ways in which to get such a collaborative research program under way with him and his associates. Raj Krishna has been a visiting lecturer at EDI for the past year and he is about to return to Rajasthan University in Jaipur, India. India is definitely a country where the gains of collaborative research would be very substantial. There are a large number of unresolved problems in project and policy planning in agriculture of interest to the Bank and the Government. Raj Krishna is an excellent agricultural economist and by working with him and others like him we can expect to make much more headway on research than we could expect to do otherwise.

4. Raj Krishna has made it clear to us that collaborative research under Indian conditions can and should not be divorced from a long range program of institution building. His University would not hire researchers and give them permanent status, unless assurances are given for continued employment. In turn, highly qualified researchers would not accept employment under temporary contracts. While we do not think that we can in any way underwrite a commitment for permanent staff positions at Rajasthan University, we do think it appropriate to take some steps which permit Raj Krishna to make long range plans for his research team.

5. As a solution to these problems we suggest that the Bank make clear its intent to commission studies by Raj Krishna's group over a 5 to 10 year period at a minimum annual cost level of 15 to 20 thousand dollars. Each study would have to meet the usual contract conditions - agreed terms of reference, cost, written reports and termination date. In practice the arrangement would mean that at all times 2 to 3 studies would be going on at the same time.
6. If the suggested arrangement is agreeable to both institutions, Raj Krishna will prepare detailed outlines for two studies and suggest topics for further studies to be initiated subsequently. We have suggested that the first two studies should be on differential impacts on production, income, distribution and disposition of income from introduction of new technological inputs with different farm sizes and organizations. One shorter-term study may primarily utilize existing data and a longer-term study may involve new generation of farm survey data. Topics for future studies may include re-evaluation of selected Bank sponsored projects (Credit Project in Gujarat, Irrigation Projects), supply and demand projection methodology under Indian condition, and inter-relationships of agricultural and non-agricultural investment. We expect the South Asia and Agricultural Projects Departments to participate actively in the review and formulation of further studies.

7. The above proposal is within the scope of our work program for 1970-71 and can be accommodated in the confines of previously submitted budget requests by our Division. In our judgment the proposal represents an excellent vehicle for making a worthwhile contribution at a minimal cost. We shall appreciate having your approval to pursue further preparation of this proposal on the basis outlined above.

SReutlinger:bso

cc. Messrs. A. Stevenson
    G. B. Baldwin
    W. A. Wapenhans/S. Takahashi
    G. B. Votaw/M. G. Blobel
Mr. Andrew M. Kazarok

Jack L. Lofather

Monthly Activity Report for March 1970

April 9, 1970

Attached is the Department's consolidated monthly activity report for March.

The following observations can be drawn from the data presented in the table: About 54% of staff time was spent on service activities and 29% was spent on research, 7% was spent on management and 10% was divided among other activities; (the corresponding figures for February were: 54%, 27%, 7% and 12%, respectively). Thirty-five percent of operational time (total minus management and other activities) was spent on research. Sixty-five percent of operational time was spent on service.

Attachments

cc: Messrs. Friedman, Stevenson, Chaffey

JLLowther:sm
## Economics Department Monthly Activity Report

**Division:** Department Totals  
**Section:**  
**Period of Report:** March 1-31, 1970

*(figures are days worked)*

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Mr. Alexander Stevenson

February 17, 1970

Robert A. McPheeters, Jr.

January Quarterly Activities Report

A minor complaint: I feel that the Statistical Services Division draft for the report was not very well edited. Although there are a couple of small errors in the final version, and it does not read particularly well, pride of authorship is not the real problem. Mention of two issues which have been giving us trouble was completely cut out. One was the distinction between the types of projections being done by Programming & Budgeting and Creditworthiness; this apparent duplication of effort has caused some grumbling in the area departments. The other is the pressure on computer resources and the efforts under way to deal with it. This, no doubt, will also cause some grumbling. We had hoped to bring these matters to the attention of other departments through the report.

In future, would it be possible to check with the Division before the report goes into final draft?

cc: Mr. Tiemann

R. McPheeters: ra
Mr. Kamarck

Michael L. Hoffman

February 5, 1970

I was mildly surprised to see in the January Report on Quarterly Activities of your Department that you have a man working on the problem of classifying countries by their level of development. Is it possible that he could be of assistance to the unfortunate Committee on Development Planning Group that is wrestling with the non-problem of the "least developed among the less developed countries."?

ML.Hoffman/pnn

cc: Mr. Franco.
January 19, 1970

Mr. S. Gueronik
The Executive Director
Intergovernmental Council of Copper Exporting Countries
3, Avenue du General de Gaulle
92-Puteaux, France

Dear Mr. Gueronik:

Thank you very much for your letter of January 9, 1970, and for granting me the opportunity to visit your organization.

According to my present plans, I will be arriving in Paris from Rome on February 19 and will come to your office around 10:30 a.m. or 11:00 a.m. on the 20th. I will probably stay at Lotti.

Should you wish to contact me, please write to me care of Dr. S.L. Pringle, Forest Economics and Statistics Branch, Forest Industries and Trade Division, Food and Agriculture Organization of the United Nations, Via delle Terme di Caracalla, Rome.

Looking forward to meeting you.

Sincerely yours,

K. Takeuchi
Economics Department

KTakeuchi:dfb
January 19, 1970

Mr. Robert A. Perlman
Commodities Research Unit, Ltd.
30 Welbeck Street
London, S.W.1, England

Dear Mr. Perlman:

Thank you very much for your letter of January 5. I am sorry for the delay in confirming the date of my visit.

I will arrive in London on Sunday, February 1, and will stay at the Bank's flat the evening of February 4.

I should like to call on you at, say, 10:30 a.m. on Monday, February 2. Unless I hear from you to the contrary, I will assume that this appointment is convenient to you.

Looking forward to seeing you.

Sincerely yours,

K. Takeuchi
Economics Department

KTakeuchi:dfb
Activities of Sector and Projects Studies Division, December 16-31

Agriculture

Ablasser: Brasil agriculture sector survey mission report (7 days); annual leave (3 days).

Duane: Technical note on agrarian reform (4 days); India irrigation reappraisal study (1/4 days); review of Mr. Seagraves' paper on agriculture supply research (1/4 days).

Egbert: Brasil agriculture sector study (4 days); Portugal agriculture sector study (4 days); American Economics Association meetings in New York (2 days).

Hassman: Planning skilled manpower deployment in irrigation projects (part time).

Hussain: Discussions on irrigation with Agriculture Projects Department (2 days); livestock appraisal and risk analysis paper (7 days); Ethiopia irrigation appraisal study (1 day).

Heming: Mexico irrigation reappraisal study (3 1/4 days); review of Mr. Seagraves' paper on agriculture supply research (1/3 days); preparation of draft on discounting procedures for short-lived projects (1/3 days); seminar on foreign capital and development at Basic Research Center (1 day); annual leave (3 days).

Neutlinger: Grain storage projects criteria (3 days); program development (2 days); Mr. Seagraves' paper on agriculture supply research (1 day); American Economics Association meetings in New York (1 day); technical note on agrarian reform (2 days); Spanish (1 day).

Carr: Reviewing Institute of Development Studies articles (2 days); Mexico irrigation reappraisal study (2 days); annual leave (6 days).

Kim: Portugal agriculture sector study (7 days); analysis of demand for food in Portugal (3 days).

King: Grain storage projects criteria (4 days); annual leave (6 days).

Wilde (Consultant): Grain storage projects criteria (part time, Boston, Mass.); in office December 16.
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<td>Thailand railway reappraisal mission (4 days); Thailand railway reappraisal study (6 days).</td>
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<td>Transport planning models study (6 days), and review of: &quot;Capacity of a Single Railway-Line&quot; (METRA) (2 days); Appraisal of second highway construction project in Brazil (1 day), and Karachi, Pakistan, port appraisal (1 day).</td>
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<td>Ray</td>
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<td>Mijares</td>
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<td>Central American ports study; domestic origin of exports and destination of imports analysis (5½ days); annual leave (1 day); sick leave (½ day).</td>
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<th>Public Utilities</th>
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<tr>
<td>Anderson</td>
<td>Consultative mission to Europe (4 days); back-to-office report (2 days); ex post analysis of electricity demand (2 days); annual leave (2 days).</td>
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<tr>
<td>Villafloros</td>
<td>Computations for analysis of electricity demand forecasts (9½ days); sick leave (½ day).</td>
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General

Shell: Editing and commenting on Mr. Israel's feeder roads paper (9 days); progress report (1 day).

van der Tak: Transport planning models seminar (2 days); feeder roads study (1 day); Thailand railway reappraisal (1 day); general supervision (5 days); annual leave (1 day).

cc: Mr. Kasarick
Mr. Lowther
Mr. Alexander Stevenson
January 6, 1970

Arthur E. Tiemann

Progress Report - Professional Staff - December 16-31, 1969

The professional staff of the Statistical Services Division carried out the activities indicated below during the period December 16 to 31, 1969:


McPheeters - Discussions with South America, South Asia and Western Africa country economists on various data and statistical problems. Planning and initial preparations for 1970 Annual Report. Planning for and coordination of various statistical requirements with Creditworthiness Studies, Programming and Budgeting, and Projects Departments. Completed cost analysis of accelerated acquisition of additional disc capacity for Joint Computer Center. Supervision of Division in absence of Division Chief. Leave.

Goer - Preparing for the changeover to the new base fiscal year for the "Financial Model" projections (P & B) and to make the new projections. Reviewing and assembling the factors and data needed. Completed sensitivity analysis of disbursements using different rates as applied to a series of beginning points and carried over successive quarters. Reviewing and correcting portfolio projections and looking at plans for future projections. Prepared a memorandum for Mr. Gabriel giving a very brief description of the Disbursement Model, the disbursement rates used and estimate of disbursements projected for FY 1970. Reviewing the calculation of disbursements on new commitments in the IBRD Financial and revising other sections of the model.

External Debt Section

Paulson - Attendance at ERS Annual Review. Discussions with national representative and technicians about ERS reporting problems. Discussions with OECD staff on revision of forms and reporting requirements.

Slappey - For the external debt system, I arranged for translation and printing of the reporting forms and worked with the programmers/analysts on programming requirements. Supervision of the section in Mrs. Paulson's absence. Leave.
Martin - Preparation of fiscal debt projections for Pakistan. Compilation of lists of debts for African countries for the purpose of transmitting debt numbers assigned by IBRD. General supervision. Leave.

Perella - Updating of "Report on Status of Debt Information". Wrote memoranda on debt submissions of Ecuador, Paraguay and Chile. Updating and revising of external debt tables of Chile and Colombia. Supervised reorganization of debt data for the new reporting system. General supervision. Leave.

Srovio - General supervision. Leave.


Douletsinos - Wrote memoranda on external debt of Yugoslavia and Korea. Checked debt data received from Yugoslavia and updated debt tables. Checked debt data received from Cambodia. Updated reports on status of debt information for all countries. General supervision. Leave.

Helne - Returned from Ghana mission. Wrote back-to-office report and had discussions with Mssrs. Schmettje, Gaunty (Western Africa Department) and McPheeters regarding the Ghana debt situation. Studied possibilities of updating our non-standard June 30, 1968 Ghana debt tables with information given in a Ghana government publication entitled "Developments in the Ghanaian Economy between 1960 and 1968". Leave.

General Statistics Section


Regression analysis on Malaysia model (Asanuma). Preparation of progress reports. Meeting with Mr. Thiass to discuss the Tunisian educational model. Partial supervision. Leave.

Fairall - Research and collection of data for classification of developing countries. Checking machine runs of IDMD loans and IDA credits to Africa, by country. Leave.

Giatrakos - Ceylon country report: statistical calculations and regression analysis based on the balance of payments statistics (Sicourie). Food Demand Analysis in Portugal: regression analysis between 70 variables (Egbert). Leave.

Hui - Jury duty.

Lara - Regression analysis: imports of permits obtained as a function of payments authorized for import permits settled (1954-1964). Regression analysis: demand for food in Nigeria which includes cocoa and maize. Calculation of the means and standard deviation from trade coefficients of 66 commodities in 7 countries including Brazil and Chile.


Programming Section
Angel - Continued running program to produce creditworthiness tables (de Vries) and modified same program to produce a summary table giving values for all countries by item. Continued running debt program for Programming and Budgeting (Colago) and for Western Hemisphere (Hyde). Corrected data and programs to run Portfolio (IDMD tables have been completed).

Abellon - Completed and ran a program to compute financial returns on fishing vessels (Pohland). Debugged and ran a program to tabulate U.S. trade with Central American countries (Ray). Provided assistance to the General Statistics Section on DASM runs.

Bradley - Continued work on External Debt System. Leave.
Comer - Got the data for the Tunisian Education Evaluation Project put on tape. Preliminary analysis will now be done. Continued the cost-benefit analysis of the simulation results of the Bangkok Port Project. Leave.

Concliffe - Continued work on the Livestock Simulation and Livestock Risk Analysis (Husain). Continued work on Enrollment Forecasts and Teacher Cost calculations (Lultan). Helped set up a model and calculate loan requirements for Korea (Cheetham). Continued to help with an Econometric Simulation of Pakistan Debt (Niesbuhr).

Fan - Completed Klongtoi Wharf Study (Pouliquen). Continued work on Forecast of National Accounts (Leoni). Continued work on Karachi Port Study (Ray).

Kisser - Continued coding programs for new external debt system. Began debugging Table 1 program.

Krishna - Continued working on Risk Analysis of Irrigation in Ethiopia. Started debugging some of the routines. Continued spending a considerable time in assisting and advising other staff members in the use of ALPS I and ALPS III. Had consultations with Burroughs in Detroit regarding some problems in ALPS III.

Schneider - Continued to work on Harvard Transportation Model, debugging the "CUREE" model, started to convert a "train performance calculator" model, which was developed by Canadian National Railways for an IBM 7070 computer.

Slade - Continued work on the new external debt system. Began debugging the file creation program and preparing specifications for the edit-update program. Supervised the preparation of data by external debt section personnel for use in the new system. Coordinated the work being done on the system by other programmers/analysts. Prepared special projections on Pakistan for Mr. Niesbuhr. Ran disbursements model on Colombia for Mr. Hyde. Supervision of the Section during Mrs. Angel's absence.

Yen - Wrote a program on agricultural sector model (Kim). Continued work on the modifications and debug on Financial Model (Goor).

Att:1

cc: Mr. McPheters
Mr. Lowther (2)
**PROFESSIONAL STAFF**

**TIME DISTRIBUTION - PERCENTAGE**

December 16 - 31, 1969

<table>
<thead>
<tr>
<th>Section</th>
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<tr>
<td>II - Service</td>
<td>48.2</td>
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<td>III - Supervision</td>
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<td>IV - International meetings and report writing</td>
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<td>VI - Training</td>
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<td>VII - Leave</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100.0</strong></td>
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*Statistical Services Division
Economics Department
January 6, 1970*
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

ECONOMICS DEPARTMENT

QUARTERLY ACTIVITIES REPORT

I. Introduction
II. Domestic Finance of Developing Countries
III. Sector and Projects Studies
IV. Population Economics
V. Quantitative Techniques and Analysis
VI. Economics of Industrialization
VII. Commodities
VIII. Comparative Data
IX. Statistics
X. Urbanization
XI. Other

January 1970
This is the second issue of the Quarterly Activities Report of the Economics Department. An attempt has been made to focus on some of the problems currently being worked on in the Economics Department that may be of special interest to other parts of the Bank Group. Inquiries concerning particular items should be made directly to the relevant division or staff member.

II. DOMESTIC FINANCE OF DEVELOPING COUNTRIES

Mobilization of Private Savings in Developing Countries

Bank country economic work concerned with the mobilization of domestic resources has concentrated almost entirely - and in some countries entirely - on the mobilization of resources through budget and para-budgetary policy (autonomous enterprises, social security funds, etc.). Thus far, private savings mobilization has often been ignored, and it is hoped that this bias can be redressed.

First, this problem is being approached as part of the Bank's regular country economic work. During the quarter under review Messrs. Please and Schebeck, as members of an economic mission, undertook an initial examination of the problem as it exists in Iran. Their findings were presented in the Economics Department Report (EC-171), "Aspects of the Problem of Internal Resource Mobilization in Iran", which is at present under review within the Bank.

Secondly, the problem of private savings mobilization is being approached as it impinges on Bank lending particularly to the specialized lending institutions in the agricultural and industrial sectors. During this period, Messrs. Please and Joshi initiated work to be undertaken in collaboration with the Development Finance Companies Department, by linking up with an appraisal mission to Taiwan. In addition to assisting the mission in its immediate task of appraising an intended third loan to the China Development Corporation, the Economics Department personnel pursued more fully the role of the C.D.C. in mobilizing domestic resources. A report is being prepared on these findings. As a consequence of this assignment the Chinese Government approached the Bank for advice in obtaining assistance in regard to the development of the capital market.

Finally, we are pursuing research studies as the third aspect of our involvement in the private savings mobilization problem. These are at the moment focussed on an attempt to determine the interest elasticity of banking sector deposits. These studies cover Taiwan (Miss Meldau), India (Mr. Schebeck), and Pakistan (Mr. Eklund in collaboration with the Pakistan Institute of Development Economics).
Mobilization of Agricultural Incomes

The Division has a continuing involvement in the problem of mobilizing agricultural incomes, particularly in those countries in which heavy investment is taking place in support of major technological changes in the sector. Mr. Eklund has been working on this question in Pakistan. During this quarterly period he has completed his contribution to the report of the appraisal mission for the Chandpur Irrigation Project. This included the preparation of an annex on "Agricultural Taxes and Local Taxes in East Pakistan" which led to the preparation of a more general paper on "The Fiscal Situation and Investment in the Water Sector in East Pakistan during the Fourth Plan period." In addition to the contribution of this paper to the technical discussion of the fiscal problem it raised the much wider problem of the Bank's attitude to regional as opposed to national development.

Tax and Other Fiscal Studies

At the request of the Europe, North Africa and Middle East Department, a study was undertaken of the elasticity of the Tunisian tax system (Mr. Sciolli). This is a matter which the country economic mission had isolated as central to the budgetary and savings problem of the country and therefore as central to the Bank's operations in the country. During the quarter under review the study was completed and presented to the Economic Committee for comment.

During the quarter two requests for assistance in the fiscal field were undertaken. These requests involved Malawi and Yugoslavia, and both were undertaken by Mr. Beier. The Yugoslav fiscal situation was judged to require a special examination in view of (a) the fact that no previous study in depth of the problem had been undertaken by the Bank and (b) the difficulty in preparing a consolidated public sector picture in an economy which had intentionally decentralized the decision-making process.

III. SECTOR AND PROJECTS STUDIES

Agriculture

Sector Planning Models

The Sector and Projects Studies Division is examining the potential usefulness of inter-regional and inter-activity analysis models for analyzing sector investment priorities and sector policies. Messrs. Egbert and Abllasser are currently constructing such models for Portugal and Brazil. In collaborating on the collection and interpretation of sector data they were able to make an immediate contribution to a sector mission while contributing a more elaborate data base to be used in subsequent in-depth analytical studies. Eventually it should become possible to evaluate the usefulness of various analytical approaches when the implications of alternative policies derived from applications of the analytical models are compared with the conclusions and recommendations contained in the sector mission reports.
Re-Evaluation of Projects

Messrs. Manning and Reutlinger collected data for re-evaluating loans ME-336 and ME-275 for irrigation projects in Mexico. The main objectives of the study are to (a) compare projections of actual outcomes in the major variables affecting the project benefits and identify the reasons for projection errors, and (b) recommend how the appraisal model and data projections might be improved. The data is now being analyzed with the intention that this first reappraisal study should provide us with a model for similar studies of other projects and should suggest data collection requirements for such projects in the future.

Computer Simulation Models

Mr. Husain has completed work on a simulation model for the cost-benefit evaluation of a beef-ranch livestock project. The model has been programmed for calculating changes in cattle herd composition and beef output over time and providing financial and economic projections for the project based on projected technical coefficients, costs and prices. Use of the model during appraisal would make it possible to make more accurate projections in less time, to consider alternative plans for the project and answer questions on the riskiness of the project. Mr. Husain has recently participated in the irrigation project appraisal mission to Ethiopia with the objective of developing simulation models for cost-benefit analysis of certain types of irrigation project.

Evaluation Methodology for Grain Storage Programs

At the request of the Agricultural Projects Department, the Division has started work on identifying procedures for evaluating benefits from large grain storage programs on a scale where the usual, simple cost-benefit analysis breaks down. A paper has been prepared by Messrs. Reutlinger and Wilde (Consultant, MIT) on storage demand arising from seasonal differences in supply and demand. Work has been started on evaluation of buffer stock storage programs to counter random fluctuations in grain production.

Social Cost-Benefit Accounting

Mr. Reutlinger visited Nuffield College, Oxford to discuss with Dr. I.M.D. Little studies in progress applying to social cost-benefit accounting procedures suggested in the Little-Mirroees Manual to agricultural projects. Tentative plans were made to collaborate with Dr. Little and his colleagues on the reappraisal of some projects in order to acquaint ourselves better with their proposed procedures for estimating shadow prices.

Agricultural Development Strategy

The Division organized a seminar with Professor Bruce Johnston of Stanford Food Research Institute to discuss his research, which sets forth the hypothesis that present agricultural policies favor an expansion path of agricultural output which is unnecessarily expensive in terms of capital investment, unemployment and skewing of income distribution in the rural sector.
Transport Planning Model

The objectives of this work are to review currently available transportation models, to further develop and test such models on actual planning problems at the project and sector level, and to determine the feasible scope of such techniques as operational planning tools. The Harvard transport system model has been transferred and made operational on the Bank’s computer. Descriptive write-ups of the models have been revised and expanded by Mr. Miller and Mr. Harral, who, with Mr. de Weille, conducted seminars for Transporta-

tion Projects Department professional staff in mid-December. Collection of data in Colombia and the task of setting up a transport planning model capability in the country is continuing.

Highway Design Study

This study focuses on the inter-relationships between vehicle operating costs, road maintenance costs, and construction costs, with the objective of developing a computer model to be used by the Bank in determining appropriate design standards for low traffic density roads. CIM Systems, Inc., is the research contractor, operating under the supervision of Messrs. de Weille and Harral in conjunction with various staff members in the Transportation Projects Department.

Central American Port Study

This study is to determine the optimal program of port investment that the Bank should pursue in the five countries belonging to the Central American Common Market, viz Guatemala, El Salvador, Honduras, Nicaragua and Costa Rica. Alternative programs are being evaluated to determine the minimum total cost plan from the point of view of the countries. The study is being undertaken by Mr. A. Ray and Mr. J. Lowdon (Consultant) for the Transportation Projects Department and the Western Hemisphere Department.

Re-Assessment of Railway Project in Thailand

Mr. Israel has begun a re-assessment study of this project in an attempt to ascertain and explain the differences between actual outcomes and expectations in the important variables affecting the project’s benefits.

Appraisal Methodology of Feeder Road Projects

Mr. Israel has completed a draft of a paper discussing methodologies of feeder road projects. The study highlights the distinction between feeder roads when complementary investments and activities are assured, and feeder roads which constitute one of many components of an investment program.
Education

Kenya Case Study of Cost-Benefit Analysis

Messrs. Thias and Carnoy (Consultant) completed the Kenya case study applying rate of return analysis to investment in education. The study attempted to isolate the benefits directly attributable to education and to project the demand and supply of persons with various amounts of schooling. The study was issued as Economics Department Report, EC-173.

Re-Appraisal of Education Project in Tunisia

Data have been assembled through survey questionnaires and are now being analyzed in an attempt to estimate the contribution of schooling and extra-schooling variables on school performance and other objectives of education, and to link these to subsequent performance in the labor market.

Public Utilities

Ex-Post Analysis of Electricity Demand Forecasts

Mr. Anderson has made a study comparing forecasts of electricity demand in 140 Bank and IDA loans with the actual demand. The forecasts were found to be unbiased, the errors being normally distributed with zero mean. Approximately 75% of the forecasts of the change in demand lie within + 40% of the actual change. Further analyses will be made to determine if forecasts are more accurate in countries where the Bank has had more experience with loans in electric power; if forecasting accuracy is improving with time, that is, if forecasts in the 1960's are better than forecasts in the 1950's; if the errors are larger for smaller countries; and if there tends to be any downward bias when growth rates are higher.

Econometric Analysis of Electricity Demand

Mr. Anderson has started on a study to determine whether forecasting accuracy can be increased by using econometric methods. The study will consider the effect of income, output, price, industrialization, population, technical progress, various qualitative, and other economic and demographic variables on electricity demand. Cross-section and time-series data will be used for estimation. Then the forecasting properties of the econometric models will be compared with other methods of forecasting.

Power Investment and Simulation Models

Mr. Anderson is reviewing procedures for formulating investment and operating decisions in electricity supply. The important discovery so far is that standard Linear Programming packages can be used for every type of problem likely to be encountered: for overall power system development programs, for large multi-purpose projects (e.g., hydro), for joint programs such as water and electricity supply and for energy transport. A linear programming model is currently being tested with data for Mexico on the existing L.P. within the Bank.
IV. POPULATION ECONOMICS

The greater part of the study undertaken in this field has been done at the request of the Population Projects Department. Much of the work will be taken over by this department once the initial groundwork has been completed and the study becomes fully operational.

India

Messrs. Hawkins and King visited India as part of the preparations for the special meeting of the Aid India Consortium, held in Stockholm in November. The purpose of this visit was the investigation of the possibility of a Bank project in family planning in India. The program now in operation consists largely of expenditures on the provision of services which are integrated into the health facilities of the different states. These expenditures are largely directed to goods and services produced within India, and the foreign exchange component is less than 10 percent. The program is currently running below the scale of activities laid down in the draft Fourth Plan, and at the same time it is apparent that even the target figure for expenditures would not have a big enough impact upon the birth rate.

The first step, therefore, is to make use of external aid to facilitate the expansion of the present rate of expenditures. The main issue is to identify the obstacles restricting the absorptive capacity of the program both for local resources and external assistance. Once identified, then, steps can be taken to redesign procedure so as to remove these bottlenecks. This diagnosis points to the possible role of the Bank in this field. If a suitable project could be identified it might encompass a large enough element of the program in a particular state or district to provide scope for the technical assistance needed in the organization and administration of family planning activities.

Colombia

The project identification mission to Colombia led by Mr. Zaidan was able to identify a health project related to family planning. However, it became clear that the Government of Colombia was not in sympathy with a project that made any explicit allusion to family planning. After discussions with the Government, the Bank intimated that it could not proceed with the project along the lines desired by the Colombian Government. This mission, although it did not result in subsequent operational activities, did serve the valuable function of clarifying the issues to the point where both sides could understand clearly where they stood. The issue as to how far a family planning project can consist of the provision of health facilities and still maintain its justification for family planning purposes will continue to arise as long as the Bank holds to its present policies in this area.
Other Countries

Mr. Zaidan took part in the combined UN/IBRD/WHO mission to Indonesia. The report will recommend the steps necessary to establish a comprehensive national family planning program. It will also provide guidance as to the role that might be played by external assistance which might include possible Bank projects. Mr. Miller led a project identification mission to Tunisia which followed up on earlier discussions.

Assistance to Country Economic Work

The Division continued to prepare population briefs for missions. The briefs have now been systematized and steps are being taken to relate their content to work being done by the Area Departments and the Comparative Country Data Division for the Five Year Programs. In three special cases (Tunisia, Chile and West Pakistan) population projections were obtained for Area and Projects Departments' use.

Studies and Research

The heavy load of operational activities mentioned above has severely restricted the time available for this. However, the Division has continued to explore three main study areas of immediate concern to the Bank. 1) Further work has been done on the principles of cost-benefit methodology, as they apply to the economic justification of population projects. 2) A second and related problem concerns the need for devising a satisfactory procedure for evaluating the likely effects of a family planning program. This involves an examination of the ways in which different patterns of contraceptive usage are reflected in a reduced number of births. There is, at the moment, no general acceptable procedure for this because the functional relationships involved are not fully understood. Our exploration of this problem consists in the elaboration of a framework, now computerized, which will be used to analyze systematically any pattern of family planning services and any specific assumptions concerning the effects of those services on fertility. 3) The relationship between rapid population growth and employment prospects in member countries is also under study.

V. QUANTITATIVE TECHNIQUES AND ANALYSIS

Country Economic Projections

In the recent mission to Ceylon, Mr. Shourie reviewed the rather ambitious input-output model that was developed there by the Ministry of Planning. He has also completed a draft of a paper on "The Relevance of Econometric Models for Policy Projections and Prescription."
Mr. Carter has issued a Departmental Working Paper (No. 50), "Notes on a Macro-Economic Model Used to Project the Possible Performance on the Jamaican Economy, 1968-73." A further paper is almost completed which outlines a macro-economic regression model of the Jamaican economy.

In connection with the recent mission to Korea in which he participated Mr. Cheetham has made medium-term projections of items in the Korean national accounts and balance of payments, and constructed a reduced input-output table for use in projecting the structure of industrial output and the demand for imports.

It is hoped to undertake further work in the near future on the methods of forecasting and of making projections that are currently used in country economic work within the Bank, and the possible implications of these.

Dynamic Simulation Models

Mr. Holland prepared a paper on "Simulating the Dynamics of Development" for presentation in December at an international conference in Cairo. A revised and expanded version of this paper, with special reference to the possible uses of simulation models within the Bank, is under preparation. In addition, Mr. Holland has continued to work on the macro-economic model which forms part of the Harvard transportation simulation for Colombia.

Analyzing Tourist Projects

Mr. Carter continued his work on developing a methodology for assessing the effects of a particular tourist project, by means of a model which links the project, the region in which it is located, and the economy as a whole. This study, which deals with a case in Mexico, should be completed and issued fairly soon.

Employment as an Objective of Policy

Mr. Carter has continued his work on a linear programming model, using Jamaican data, which analyzes employment possibilities and the choices that may arise between growth of output and growth of employment. A revised version of a paper on this topic was presented at a conference on employment research held in Paris by the OECD Development Centre. Further work is to be done in exploring the extent to which a wider range of possibilities is opened up when non-linear relations are introduced into the model.

VI. ECONOMICS OF INDUSTRIALIZATION

The Industrialization Process and Country Policies

Arrangements have been made to launch a research project, under the direction of Professor Salassa, on Development Strategies in Semi-Industrial Countries. The study will be carried out with the view of suggesting improvements in policies, and of ascertaining the applicability of the findings to
countries at similar as well as lower levels of industrial development. The countries selected for inclusion are Argentina, Chile, Israel, Korea, Taiwan, and Singapore. The project will be an extension of the study on the Structure of Protection in Developing Countries, which has been carried out by Professor Balassa and is now close to completion. The latter is limited to an appraisal of the effects of protective measures on resource allocation.

Southeast Asia

The research project on industrialization in Southeast Asia was advanced by Mrs. Hughes on a mission to the Philippines, Taiwan, Singapore, Malaysia, Thailand, and Indonesia. It was found that several Southeast Asian countries are reappraising their industrialization policies, and questioning simplistic import-replacement-at-all-costs views. Arrangements have been made with the Asian Development Bank for Mrs. Hughes to cooperate in a study it is conducting of industrialization in the area in connection with the outlook for development in Southeast Asia in the 1970's. Mrs. Hughes' work on Indonesia was also combined with the requirement of a concurrent Area Department mission, for which she drafted a chapter on manufacturing for the country economic report.

Other Countries

Mr. Nowicki served as an industrial economist on an Area Department economic mission to Korea. By arrangement with the Area Department, Mr. Balassa has undertaken two brief missions involving consultations with the Korean Government on trade policies. Mr. Schrenk served as an industrial economist on an economic mission to Yugoslavia which aimed at surveying the country's industrial structure in the light of recent structural changes and at assessing the effects of industrial policies. Mr. Datas has undertaken an assignment as an industrial economist on an Area Department economic mission to the Malagasy Republic.

Economic Aspects of Selected Industry Branches

An Economics Department Working Paper (No. 51) was completed by Mr. Datas on the Economic Aspects of the Pulp and Paper Industry, with Special Reference to Developing Countries. Particular attention is paid to the importance of economies of scale, in relation to the various categories of paper products. World patterns of consumption, production and trade are also surveyed. Mr. Walstedt is completing a series of four studies in the heavy mechanical equipment field, covering tractors, earthmoving equipment, diesel locomotives and boilers.

Industrial Project Appraisal

Mr. Walstedt cooperated with the Industrial Projects Department and with the Area Department in analyzing the economic aspects of a proposal for an expansion of the Eregli steel mill in Turkey. He also directed the gathering of
data available in the Bank on shipping and shipbuilding in Turkey as background for a proposal that has been presented to the IFC for investment in a plant to manufacture marine engines. Mr. Walstedt also cooperated with the Industrial Projects Department in a preliminary appraisal of the economic aspects of a proposed integrated steel mill in Korea. The work on the Turkish and Korean steel mill projects pointed up the importance of data on world steel prices, and a study of the trends of such prices is being organized.

**LDC Exports of Manufactures**

During the summer of 1969, Mr. G. Shepherd, a graduate student at the University of Sussex, prepared under the auspices of the Industrialization Division a paper on Exports of Cotton Textiles from Developing Countries to the E.E.C. and the U.K. The paper surveys trade trends, tariffs and other barriers to trade in the importing countries, and the position of domestic industries in the importing countries. It concludes that import policy in the U.K. vis-a-vis developing countries has tended to be more liberal than in the E.E.C., and there appears to be a greater disposition in the U.K. than in the E.E.C. toward some orderly contraction of its cotton textile industry and shift into other activities such as engineering industries.

Miss Keough is undertaking a companion study on such exports to the U.S., after which it will be possible to combine the analyses in an assessment of exports of textile manufactures from LDC's in general.

**Industrial Estates**

Mr. Kalmanoff prepared a draft paper on industrial estates, particularly for smaller entrepreneurs, concluding that the Bank should adopt a generally positive attitude toward projects of this type. Financial assistance is usually needed for the importation of capital equipment by the enterprises establishing in industrial parks and less so for the infrastructure investments themselves.

**Classification of Countries by Industrial Level**

As a sequel to an Economics Department Working Paper on Statistical Indicators of Levels of Industrial Development (No. 45, May 19, 1969), research is proceeding on a system of classification of developing countries by their level of industrialization, directed by Mr. Balassa and Mrs. Hughes. Research is also being undertaken by Mrs. Neufeld on a study in somewhat greater depth of Levels of Industrial Development in the Western Hemisphere, including the structure of industry, its impact on employment, performance, relation to external trade, and relation to other structural characteristics of the economies.

**Industrial Projects Department**

The Division has cooperated with the Industrial Projects Department in the planning of future industrial sector studies in individual countries. Matters covered in the planning phase have included staffing requirements,
availability of personnel, extent of past coverage, cost of consultants, and guidelines for content of the studies. Mr. Kalmanoff, former Chief of the Economics Department Industrialization Division, was named Deputy Director of the Industrial Projects Department effective November 1, 1969. His successor as Chief of the Division in the Economics Department will be Mr. Bohr, presently with the IBRD Resident Mission in India. Mrs. Hughes is Acting Chief of the Industrialization Division pending Mr. Bohr’s arrival.

VII. COMMODITIES

Major Issues of Individual Commodities

Vegetables

The out-of-season import market throughout Western Europe for a number of vegetables presents opportunities for expanded trade from developing countries. Accordingly, systematic work has been started in Trade Policies and Export Projections Division in order to assess the characteristics and scope of the major import markets (Miss White).

Petroleum

The discovery of substantial oil reserves in Alaska has created uncertainties about future geographic trade flows in the world industry. A review of our petroleum projections has been initiated (Mr. Huang).

Copper

A review of our medium term copper demand and price projections was also carried out (Mr. Takeuchi).

Yugoslavia and Brazil Missions

In October, Mr. Elz participated as a commodity economist in the mission to Yugoslavia. At the request of the Agriculture Projects Department, the Division undertook to send three commodity economists (Messrs. Varon, Elz and Singh) to Brazil at staggered intervals to study domestic and export market prospects for the principal agricultural commodities.

Cooperation with I.C.O.

Late in October Mr. Kamarck met with Mr. Beltrac, Executive Director of both the International Coffee Organization (ICO) and the ICO’s Coffee Diversification Fund (CDF) to discuss assistance to the ICO in preparing a coffee development plan for Indonesia. Procedures were agreed upon for Bank cooperation.
VIII. COMPARATIVE DATA

Statistical Mission to Pakistan

The special statistical mission to Pakistan carried out a thorough survey of the statistical information system including basic statistical series and national accounts, population, government sector accounts, data processing, and statistical organization (Mr. Eory, Deputy Chief, and Mr. Novak).

Other Countries

Mr. Franchet participated in the IBRD mission to Cambodia as national accounts and data expert. The report will include revised and updated estimates of national income and expenditure. Miss Vial participated as national accounts and data expert in the mission to Yugoslavia. As it seemed that the Yugoslav national accounts figures for investment in inventories were not consistent, a review was carried out of the basic statistical series and national accounts estimates, and revised and updated figures were compiled.

Country Data Bank

Work was continued on the basic data inputs, with particular emphasis on filling in the gaps for African and Asian countries.

IX. STATISTICS

Financial Management and Planning

An important internal management tool is the IBRD Financial Model, which is currently being updated from FY 1970 and expanded to incorporate more detail. This model attempts to forecast the income and expenditure of the Bank on a fiscal year basis. Supplementing this is the IBRD Portfolio Model, designed to permit analysis of the effect of Bank and IDA lending on the external debt and capital movements of individual member countries. Both models are supported by additional sub-models, including two which determine sector disbursement patterns and project disbursements of current and future commitments. This work is being carried out by Mr. Goor and other staff of Statistical Services Division in cooperation with the Programming and Budgeting Department.

The External Debt and Programming Section of the Division is also working with Programming and Budgeting and the Creditworthiness Studies Group to establish debt and capital flow projections for developing member countries. Programming for these models is done by the Programming Section (Mrs. Angel),
with basis debt data and projections supplied by the External Debt Section (Mrs. Paulson). Projections were to be completed for a list of some 30 priority countries near the end of 1969, with others to follow during the first quarter of 1970.

Application of Analytical Techniques

The increasingly complex economic and statistical analysis being undertaken in the Bank requires parallel development and application of analytical techniques and methodology. The Statistical Services Division is involved in a wide range of activities involving the preparation of data and the application of Burroughs programs for linear programming models. For instance, Mr. Kundu and Mrs. Condliffe have developed a general computer program for use by the Bank in input-output analysis. Using this program, calculation of technical coefficients, inverse matrices, and supply and import requirements for given sets of final demand has been carried out for Jamaica and Ceylon. Mr. Lejano is working with the South Asia Department on a large-scale econometric analysis of Indian fertilizer demand.

Classification of Developing Countries

In considering the allocation of scarce resources, the eligibility of developing countries for concessionary aid, and the measurement of international capital flows, it has become increasingly apparent that the one- or two-variable indicators of development currently in use are not wholly adequate. Thus far there is no generally satisfactory means of classifying countries by their level of development on a scale other than simple rank order. Mr. Kundu, together with other staff of the General Statistics Section is currently conducting a study of this problem. The objective is to try to establish a composite index for measuring levels of development, incorporating economic, social and other characteristics which can be quantified and for which data are generally available.

X. URBANIZATION

Iran, Pakistan and India

One of the key problems affecting the Bank's activities in the field of urbanization is the kind of urban planning organization required. In order to explore this matter, Mr. Westebbe and Mr. Bhatia visited Iran, Pakistan and India during October and November. In Iran it appears that the lack of a regional urban planning framework and the consequent inability of planners to devise realistic alternative growth poles to Teheran has meant that there is an inadequate basis to evaluate the impact of investments with long-term payoffs. In Pakistan, the new five-year plan (1970-1975) treats urban development primarily as a series of city physical plans. The criteria for allocating resources is based on equity in distribution and political considerations.
with little regard for the contribution of urban investments to national economic development. Pakistan has requested advice in the preparation of the methodology and analytical techniques for the three pilot regional economic development studies covering respectively Karachi, East Pakistan and Peshawar Valley. Messrs. Westebbe and Mera visited Bombay and Poona at the request of the Government of Maharashtra in order to discuss the metropolitan regional plans for these two cities. It appears that planning in the two cities is too narrow to cover the respective development regions, and further there is neither a reasonable financial plan nor an organizational structure to carry out the proposed land development schemes. Finally, the metropolitan plan does not appear to be well integrated with the plans and existing programs for the City of Bombay.

New Departures in Research: The Optimum Location of Economic Activity

In Pakistan Messrs Westebbe and Bhatia discussed Mr. Bhatia's pilot study on the optimum location of urban overhead investments based on the analysis of government and private costs of various locations. Agreement was reached for the participation of the Pakistan Planning Commission in collecting the data and in sharing the results of the study.

The issue of whether to allocate more resources for central city development or to emphasize less developed regions has been broached in Brazil. Here the Bank is faced with the decision of whether to contribute to the further growth and efficiency of the Sao Paulo complex or to attempt to develop alternative growth poles in the Northeast. Mr. Mera drafted a first paper on this subject dealing with efficiency and urban concentration. In this paper he presented statistical evidence which indicates that larger urban centers tend to be more productive and that in the early stages of economic development the economies of agglomeration achieved in large urban centers are more crucial for economic growth than they are in developed economies. The paper also pointed out the intrinsic value of decentralization policies in achieving a more equitable distribution of income over different regions. Further study will be made of this issue in Brazil.

XI. OTHER

Employment Problems in Developing Countries

The Department is surveying the research work being done elsewhere on problems of employment in the developing countries preparatory to making plans for further work on the subject in the Bank. A draft paper suggesting next steps for the Bank is being prepared.
Mr. Alexander Stevenson

Richard M. Westebbe

Economics of Urbanisation Division: Progress Report - December 17-31

Miss Higg

1. Worked on Pakistan study.
2. Working on population figures for Brazil.
3. 3 days leave (December 29-31).

Mr. Nhatia

1. Finalised and discussed the paper entitled "Pakistan - An Analysis of Urban Planning and Management" for the Area Department as a part of the Country Economic Brief on Pakistan.
2. Briefed the loan officer for Pakistan and the economist of the Public Utilities Projects Department on the Multan Road Urban Development Project in Lahore and participated in the preparation of the terms of reference for the forthcoming Projects Department mission to appraise the 2nd stage of the Bank financed Lahore water supply project.
3. Assisted the Education Projects Department on the question of location and future population and labor force concerning the Bank's education project in West Pakistan.
4. Visited the UN in New York to discuss the results of his research project on Pakistan with Dr. Weissmann, Advisor to the Pakistan Government for Urban Development.

Mr. Nera

1. Preparation of research program for the Division during the coming year.
2. Discussions with representatives of Projects Department and Sector and Projects Studies Division on the research topic to be contracted to Professor C. Foster.
3. Discussion with Urban Development Division of Special Projects Department on the method of appraising the Sao Paulo Beltway Project.
4. Discussion with Mr. Marc White on an intercontinental labor transfer project.
5. Attendance at the annual meetings of Allied Social Science Associations in New York (2 days).
6. Preparation of mission reports to India.
Mr. Westebbe

1. Preparation of Division’s in house and outside research program. Discussion with Bank staff and Resources for the Future.

2. Meetings with C.D. Foster and Projects Departments on urban conceptual problems.

3. Discussion with Special Projects Department on the economics of the Sao Paulo Beltway and our proposed assistance to them.

4. Discussion with Professor Kuhn and Dr. Koukis on the York University Planning project in Kenya.

5. Discussions on the Bank’s annual report.

6. Meeting with FADCo representatives on their report concerning a proposed Tanzania urban development corporation.

7. Continued work on “white paper”.


cc: Messrs. Kamara
Lowther
Mr. Alexander Stevenson

December 31, 1969

Stanley Please

Report on the Activities of the Domestic Finance Division for the Period
December 16-31, 1969

Major Studies

Mr. Gandhi - continued work on the Study on the Growth and Structure
of Government Expenditure in Developing Countries (10 days).

Mr. Joshi - preparation of draft study on Domestic Resource Mobilization
in China (8 days).

Mr. Stolber - continued work on the Public Expenditure Problems in
French-Speaking African Countries (particularly on Morocco), (7 days).

Country and Project Mission Work

Mr. Joshi - revising his contribution to the report of the DFC mission
to China (2 days).

Mr. Beier - preparation of his contribution to the report of the
economic mission to Yugoslavia (4 days).

Mr. Ecklund - preparation of his report on his recent fiscal mission
to Pakistan (9 days).

Mr. Schebeck - revising the report "Aspects of the Problem of Internal
Resource Mobilization in Iran" (1 day).

Other Activities

Mr. Stolber - preparation of comments and participation in meeting
on the economic report on Morocco (2 days); French lessons (one hour each day).

Mr. Schebeck - preparation of comments on Gilbert Brown's paper on
"Resource Mobilization in Korea" (1 day).

Mr. Joshi - Spanish lessons (2½ hours each day).

Miss Meldau - government expenditures in developing countries (7 days).

Miss Dacunou - collection of statistical data on gross domestic savings
(1 day); on banking companies in India (5 days); and on Pakistan (4 days).

Mr. Please - supervision of Division activities.

Annual Leave

Mr. Beier - (6 days)
Mr. Schebeck - (6 days)
Mr. Ecklund - (1 day)
Miss Meldau - (3 days)

cc: Messrs. Kanarck and Lowther
Those listed below, in turn

Jack L. Lowther

Africa Report

December 23, 1969

Could you please advise me so that I may pass on to Mr. Kamarock whether or not you would be interested in becoming a book reviewer or contributor for the Africa Report, in accordance with the third paragraph of the attached letter. Also, would you please indicate names of any persons not listed which you feel may be qualified to serve in this capacity.

Messrs. Stevenson

Hawkins

Kalmanoff

van der Tak

Carter

Attachment

cc: Mr. Kamarock

JL Lowther: dj
Mr. A. F. Kirk

R. H. Cassen

December 22, 1969

INDIA - Work of Country Economists

Following our meeting of 17 December I have compiled this list of the division of work between the country economists. The list refers to things we have worked on, are engaged in or wish to take on, and without doing anything so precise as defining areas of responsibility is intended to give a rough guide in that direction.

Robert Cassen:

Economic Situation (Updating memorandum; and mission next month)
Population & Family Planning
Local Currency Finance (paper for Consortium)
Industry Study (edited Waide review; mission in future)
Planning Models in India (comment on proposed Bank paper)
Projects - economic aspects of Bank projects

Christian Ladame:

Economic Situation (Updating memorandum)
Industrial Imports Credit (mission just completed)
Suppliers' Credits for Indian Imports (especially ships & aircraft)
Refinance of Suppliers' Credits for Indian Exports Commodities

Bong Suh Lee:

Industry Study (mission completed) and mission in future
Industrial Imports Credit (mission just completed)
Preferences for Domestic Suppliers
Debt - Projections etc.
Fertilizer Demand Study

It was agreed that all three of us should take an interest in general questions relating to the balance of payments and to agriculture.

R.H. Cassen

CC: Messrs. McDermid
    Ladame
    Lee

N.D.O.
December 22, 1969

Dr. I. M. D. Little
Nuffield College
Oxford, England

Dear Dr. Little:

I was happy to see from your correspondence with Shlomo, and hear from him personally, that his visit to Oxford has been a valuable and pleasant one for all concerned. I am also pleased that you have kindly invited us again next term when your program will be mainly concerned with transport. I am reasonably certain that one of us can make time for a week or so at Oxford during February or the first half of March. It would greatly help however in deciding who might go and what sort of seminar he might give if you would let me have a list of topics that are to be considered. At present we are rather hazy about the sort of transport problems you would like to cover during the spring term.

With best wishes, also for the Season,

Sincerely yours,

Herman G. van der Tak
Chief, Sector and Projects Studies Division
Economics Department

cc: Mr. de Weille
December 18, 1969

Mr. Warren C. Baum

Herman G. van der Tak

Current Reappraisal Studies - Sector and Projects Studies Division

As you requested, I attach some brief notes on our current reappraisal studies. I hope this provides you with sufficient answer to the Swedish enquiry. You may also wish to send them a copy of (1) the earlier re-evaluation of a road project in Iran and (ii) the recent preliminary review of some irrigation projects (attached).

cc: Mr. A. Stevenson

HdvanderTak/vj
Current Reappraisal Studies - Sector and Projects Studies Division

Agriculture

1. Messrs. Manning and Reutlinger have collected data in the field for re-evaluating loans ME-336 and ME-275 for irrigation projects in Mexico. The main objective of the study are to (a) compare projections of actual outcomes in the major variables affecting the project benefits and identify the reasons for projection errors, and (b) recommend how the appraisal model and data projections might be improved. Mr. Manning is now analyzing the data with the added objective that this first reappraisal study in this field should provide us with a model for doing similar reappraisal studies of other projects and suggest data collection requirements for project experience to be analyzed in the future. Messrs. Manning and Duane have started to prepare proposals for reappraisal studies of irrigation projects in India and credit projects in the Philippines or Pakistan.

Education

2. Messrs. Thias and Carnoy (consultant) have carried out most of the data collection for a reappraisal of an education project in Tunisia (TUN-22). The study will attempt to analyze the "education production process" at the secondary level in Tunisia, with a view towards identifying and measuring the contribution of material and non-material inputs to the formation of the educational system's output (graduates, dropouts). The other side of the study will concern the absorption of this output into the country's labor market; it is hoped that by combining these two sides of the analysis, a framework will develop for assessing the economic relevance of an education system as well as of its constituent features.

Transportation

3. Messrs. Israel and van der Tak are undertaking a re-evaluation of a railway project in Thailand for which the Bank made a loan in 1961 (TH-280). The study will try to assess the benefits of this project, involving investment in diesel locomotives, freight cars, truck improvement and steel bridges with the help of a computer model. Apart from a comparison of actual costs and benefits with original expectations, it is hoped that the study will contribute to the improvements of appraisal methods and for railway projects. Messrs. Israel and van der Tak have been in Thailand to collect relevant data, and analysis is about to start.

Public Utilities

4. Mr. Anderson is making a study comparing forecasts of electricity demand in 110 Bank and IDA loans with the actual demand. The forecasts were unbiased, the errors being normally distributed with zero mean. Approximately 75% of the forecasts of the change in demand lie within ±10% of the actual change. Further analyses will be made to determine if forecasts are
more accurate in countries where the Bank has had more experience with loans in electric power; if forecasting accuracy is improving with time, that is, if forecasts in the 1960's are better than forecasts in the 1950's; if the errors are larger for smaller countries; and if there tends to be any downward bias when growth rates are higher.
Agriculture

Alessner: Brazil agriculture sector survey mission (10 days), and mission report (1 day).

Duane: India irrigation reappraisal study (3 1/2 days); review of Jengka Triangle agriculture proposal for Malaysia and of Djatiluhur irrigation proposal for Indonesia (4 days); seminar and paper by Prof. Bruce Johnston of Stanford University (1 1/2 days); review of paper on comparative advantage in the use of home-produced vs. imported materials in West Pakistan, by M. F. Scott of Oxford University, England (2 days).

Egbert: Brazil agriculture sector survey mission (10 days) and mission report (1 day).

Haisman: Planning skilled manpower deployment in irrigation projects (part time).

Husain: Ethiopia irrigation appraisal study (5 days); livestock appraisal and risk analysis paper (5 days); special leave (1 day).

Manning: Mexico irrigation reappraisal study (5 days); agriculture credit appraisal methodology (3 days); review of aggregate employment study by S. K. Singh (1 1/2 days); Mexico agriculture sector report (1 day); discussion on farm mechanization in Pakistan with Prof. Bruce Johnston of Stanford University.

Reutlinger: Grain storage projects criteria (2 days) organization of seminar on December 4 with Prof. Bruce Johnston of Stanford University (1 day); program development (2 days); division supervision (5 days); Spanish (1 day).

Carr: Mexico irrigation reappraisal study (6 days); reviewing Institute of Development Studies articles (4 days); reviewing Iran and Philippine Bank agriculture loans (1 day).

Kim: Portugal agriculture sector study (7 days); analysis of demand for food in Portugal (4 days).
King: Portugal agriculture sector study (8 days); computer programming for grain storage model (3 days).

Wilde (Consultant): Grain storage projects criteria (part time, Boston, Mass.); in office December 11 and 12.

Education

Garney (Consultant): Tunisia education study (part time, Stanford, California).

Thias: Tunisia education study (11 days).

Brandenburg: Tunisia education study (10 days); French (1 day).

Transportation

de Weille: Annual leave (10 days); supervision (1 day).

Harral: Transport planning models study (8 days); discussions with Western Hemisphere Department on Guyana (2 days); highway design standards study (1 day).

Israel: Thailand railway reappraisal mission (11 days).

Miller: Transport planning models study: preparation and delivery of seminar (December 15-19) about Colombia transport model with Transportation Projects Department (9 days); Central American ports study (2 days).

Cort (Consultant): Regulation of road transport study (part time, Utrecht, Netherlands).

Ray: Central American ports study (9 1/2 days); optimum depth of port paper (1 day); ongoing port research, port of Karachi (1 day); sick leave (1/2 day).

Issac: Review of Thailand Transportation Coordination Study for Mr. Israel (10 days); sick leave (1 day).

Mijares: Assisting Messrs. Harral and Miller prepare for seminar (December 15-19) about Colombia transport model with Transportation Projects Department (8 days); transport planning models study (3 days).

Pernia: Central American ports study: domestic origin of exports and destination of imports analysis (10 days); French (1 day).
Public Utilities

Anderson:
- Ex post analysis of electricity demand (2 days);
- preparation for consultative mission to Europe (3 days);
- on mission (6 days).

Villafloros:
- Computations for analysis of electricity demand forecasts (11 days).

General

Snell:
- Editing Mr. Masse’s paper on project appraisal methodology (4 1/2 days);
- editing Mr. Israel’s paper on feeder road appraisal methodology (4 days);
- Economics Department anti committee (1 1/2 days);
- progress report and
- Kenya education manuscript (1/2 day each).

van der Tak:
- Thailand railway reappraisal mission with stopover in
  Paris, Amsterdam, and London on return trip (9 days);
- general supervision (2 days).

cc: Mr. A. M. Kamerock
    Mr. J. L. Lowther
Mr. Alexander Stevenson

Richard M. Westebbe

Economics of Urbanization Division: Progress Report - December 1-16

Miss Briggs

Mr. Bhata
1. Prepared a paper entitled, "Pakistan - An Analysis of Urban Planning and Management" for the Area Department to be used in the Pakistan Briefing Paper.
2. Continued work on Pakistan research project - completed calculation of private production cost for a number of industries for different urban centers.
3. Reviewed the report entitled, "Proposals for Action on Finance for Housing," prepared for the UN meeting of experts on this subject.

Mr. Mara
1. Returned from Mission to India on December 8.
2. Working on urbanisation report on India.

Mr. Westebbe
1. Returned from Missions to Pakistan, Iran and India on December 8.
2. Attended and spoke at the Ad Hoc UN Meeting of Experts on Housing and Finance.
4. Meetings with Special Projects Department.

cc: Messrs. Kamrank, Lowther
Mr. Alexander Stevenson
December 17, 1969

Robert A. McFheeters, Jr.

Progress Report - Professional Staff - December 1-15, 1969

The professional staff of the Statistical Services Division carried out the activities indicated below during the period December 1 to 15, 1969:


McFheeters - Continued study of organization, control and evaluation of programming and data processing activities. Discussions with U.S. AID and Presidential Task Force personnel on data problems. Extensive consideration of debt data preparation, specification and coordination with Creditworthiness Studies and Programming and Budgeting. Continued work on external debt system revision, including coordination with Administration Department of inputs for Bank and IDA lending. Began planning for preparation of 1970 Annual Report. Discussions with Area Department economists on various debt and statistical problems. Attention to various personnel and staffing problems; supervision of Division in absence of Division Chief.

Coor - Directed the preparation of new estimates of disbursements in the next five fiscal years (for P & B). Reviewed validity of selected disbursement rates as applied to new commitments. Preparing for the change-over to the new base fiscal year for the "Financial Model" projections (for P & B), and to make the new projections. Reviewing and assembling the factors and data needed. Prepared estimates of average interest rates on disbursements and repayments in Fiscal Year 1970 (for Blaxall/Rotberg). Projected the percentage distribution of disbursements by fiscal years based on the present lending program for Fiscal Year 1970. Making sensitivity analyses of disbursements using different rates as applied to a series of beginning points and carried over successive quarters. Reviewing portfolio projections and looking at plans for future projections.
External Debt Section

Paulson - Consultation at OECD on Turkish debt. Attendance at meeting of Ad Hoc Group of Financial Statisticians. Consultations at OECD on preparation for ERS Annual Review. Attendance at ERS Annual Review.

Slappey - For external debt system: completed writing instructions for debtor reporting system, participated in meeting on obtaining data for IBRD loans. Supervision of section. Leave.

Martin - Compilation of lists of debts for African countries for the purpose of transmitting debt numbers assigned. General supervision. Leave.

Perella - Attended meetings with area department to discuss debt problems of Brazil and Colombia. Supervised revision of debt figures for Spain. Worked on and supervised reorganization of our debt data for the new debt reporting system. General supervision. Leave.

Samonte - Preparation of tables (Finland) on major reported additions contracted January 1 - October 10, 1969, and on future service payments on loans outstanding as of December 31, 1968 plus additions. Checking a listing of creditors within lending countries. Supervision. Leave.

Caden - Continuing survey of reporting practices of all participants in the ERS (prior to mission to Paris). General supervision of ERS group. Mission to OECD, Paris, to attend Second Annual Meeting of the ERS.

Douletsinos - Prepared table showing UAR's arrears to the U.G. Govt. Calculated weighted average terms on Turkey for loans received during 1966. Prepared data for calculation of weighted average terms by creditor for loans received during 1965-1968 by India. Estimated the flow of IBRD loans to Yugoslavia during the last 5 years. Evaluated debt report received from Cambodia. Commented on the new procedure for reporting on external debt. Checked debt data received from Yugoslavia. General supervision. Leave.

Holne - Mission to Ghana.

General Statistics Section

Mr. A. Stevenson

December 17, 1969


Fairall - Research and collection of data for classification of developing countries: items - literacy, primary school enrollment, technical and professional personnel and trade. Checking computer runs, IBRD and IDA commitments by purpose and individual countries.


Hui - Jury duty.

Lara - Analysis of electricity demand in 15 countries including Brazil, Cyprus, Malaysia and Peru (Anderson). Analysis of rainfall in India for irrigation project (Manning). Calculation: discounting cash flows in hydro project of Panama (Stahl). Regression analysis: import permits obtained as a function of payments authorized for import permits settled (1954-69) (Guerra).

Lejano - Stages of Industrial Development: involves moderately complicated calculation of various economic indicators to measure industrial development (Hughes/Balassa). Kenya model: moderately complicated regression analysis involving GNP, exports, imports etc. (Shourie). Indian Weather Study: involves complicated projection of weather index by use of stepwise regression (Oury). Indian Fertilizer Study: miscellaneous readings on the subject of fertilizers. This project will eventually involve complicated projection of fertilizer demand in India by state and district (Lee). Liberia Power Project: involves complicated rate of return calculation given certain level of probabilities (Minnig).

Programming Section

Angel - Attended a Data Processing Committee meeting on cost/benefit analysis of data processing applications. Continued work on various debt models for Creditworthiness Studies (de Vries) and Programming and Budgeting (Colaco). Ran projections of loan disbursements (Goor) and completed run of Portfolio
Angel (Cont.)

Tables based on June 30, 1969 data (Haxall). Started writing a program to compute average terms of loans by year of commitment (Niebuhr).

Abellon - Performed timing tests on new version of DAM with variable dimensions. Started analysis and programming of a financial return calculations on fishing vessels program (Pohland). Modified U.S. trade with Central American countries program to conform to new specifications (Ray). Coded and ran a program to transform a data deck input for an IBM 360 linear programming model to ALPS III format. Attended meeting of Sector and Projects Studies division staff on the development of grain storage simulation models (Reutlinger).

Bradley - Attended computer steering committee meeting concerning the cost/benefit of the new External Debt System and the need to acquire more disk. Continued work on External Debt System. Wrote and ran a sort program on several IBRD/IDA tape files. Prepared several runs using special projections procedures for External Debt.

Comer - Completed the debugging of the Bangkok Port Simulation program and made the 75 sample runs. Presently doing the cost/benefit analysis on this project. Completed the work left by Mr. Allison. Completed the ALGOL self-taught course.

Conliffe - Continued revision of livestock simulation and livestock risk analysis (Hussain). Continued revision of econometric simulation to study Pakistan debt (Niebuhr). Helped with rerun of econometric simulation for Indonesian debt (Tims). Converted a Spanish education model for use on the Burroughs 5500 (Letham). Continued work on education cost and enrollment forecasts (Maltin). Leave.

Pan - Continued work on forecast of National Accounts (Leoni). Continued work on World Tables Summary (Novak). Worked on Karachi Port Study (Part I) - plot and tabulate ship arrivals and the distributions for different time intervals, print matrix of different variables, and calculate waiting time, service time and tonnage of the different class of ships, etc. (Ray).

Kisser - Continued work on External Debt System. Attended computer steering committee meeting where cost/benefit analysis of the External Debt System was presented by Mr. McSheeters. Attended class in ALOGL presented by the Burroughs. Consulted with Harold Schneider on Harvard Transportation Model. Developed file specification for IBRD data used by Economics Department.
Krishna - Started working on the Risk Analysis of Irrigation in Ethiopia simulating various crops through the life of the project - their production costs, benefits and using ALPS to optimize the land allocation among various crops. Continued advising and assisting other members of the Bank staff on the use of ALPS I and ALPS III.

Schneider - Continued work on Harvard Transportation Model. Finished programming and testing of a new transport version, omitting linkage to the macro-model and using supply-demand disaggregation as input (Miller). Programming new economic model using approach different to that of Harvard University (Holland). Started to reprogram and convert the program "CURSE", which is a program for processing recursive simulation models. Originally programmed for the UNIVAC 1108 computer.

Slade - Continued work on External Debt System. Prepared table of figures and supporting memorandum demonstrating the desirability of the Bank's acquiring a data memory bank at the earliest possible date. Attended computer steering committee meeting where cost/benefit analysis of the External Debt System was presented by Mr. McPheeters. Continued monitoring the progress of staff members taking the FORTRAN programming course.

Yen - Computer runs and debugging on IBRD Financial Model using quarterly repayment rates (Goor). Data preparation and computer runs for IBRD and IDA loan disbursement conversion (Goor). Made one run on simple correlation (83 x 83 matrix) (Oury). Start working on Portugal Agricultural Sector Model (Kim).

Att: I

cc: Mr. Lowther (2)

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<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>I - Research</td>
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<tr>
<td>II - Service</td>
<td>55.3</td>
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<td>III - Supervision</td>
<td>10.9</td>
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<td>IV - International meetings and</td>
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<td>report writing</td>
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<td>V - Other activities</td>
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<td>VI - Training</td>
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<td>VII - Leave</td>
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Statistical Services Division  
Economics Department  
December 17, 1969
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<th>Work</th>
<th>Requested by</th>
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<tr>
<td>Posting, coding and preparation of debt tables; see monthly report prepared by External Debt Section for most recent status of tables.</td>
<td>Europe, Middle East and No. Africa (Masse)</td>
<td>In progress</td>
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<td>Yugoslavia - checking of external debt data</td>
<td>Europe, Middle East and No. Africa (Payson)</td>
<td>Completed</td>
</tr>
<tr>
<td>Tunisia - preparation of external debt data as of December 31, 1968 according to maturity dates</td>
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<td></td>
</tr>
<tr>
<td>Finland - preparation of tables on reported additions contracted January 1 - October 10, 1969 and on future service payments on loans outstanding as of December 31, 1968 plus additions</td>
<td>Europe, Middle East and No. Africa (Gallo)</td>
<td>Completed</td>
</tr>
<tr>
<td>Nicaragua - preparation of debt tables as of December 31, 1968 broken down by sectors</td>
<td>W. H. (Huber)</td>
<td>Completed</td>
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<tr>
<td>Mexico - preparation of two amortization schedules for proposed IBRD loan</td>
<td>W.H. (Rosenblad)</td>
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<td>EAC - preparation of amortization schedule for proposed IBRD loan</td>
<td>E. Africa (Clements)</td>
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<td>Ethiopia - preparation of amortization schedule for proposed IBRD and IDA loans and credits</td>
<td>E. Africa (Clements)</td>
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<td>Thailand - preparation of amortization schedule for proposed IBRD loan</td>
<td>Easia &amp; Pacific (Meylan)</td>
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<td>Cambodia - checking of external debt data</td>
<td>E.A.ia &amp; Pacific (Habluzzel)</td>
<td>Completed</td>
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<tr>
<td>Senegal - calculations of annual disbursements from 1964-1968</td>
<td>W.Africa (Narayo)</td>
<td>Completed</td>
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<tr>
<td>Checking of debt records in preparation of new reporting system</td>
<td>Eco.</td>
<td>In progress</td>
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<tr>
<td>Routine checking of Korea's third railway project</td>
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<td>Projected interest receipts of DAC countries on official loans to LDC's</td>
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</tr>
<tr>
<td>15. Calculations of net cost to borrower on basis of standard and IDA lending re: IDA replenishment</td>
<td>Off.Pres. (Cope)</td>
<td>Completed</td>
</tr>
<tr>
<td>16. Preparation of data for Creditworthiness Studies</td>
<td>Creditworthiness Studies In progress</td>
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<tr>
<td>17. Range of official terms of lending of DAC countries as reported under the ERS for 1968</td>
<td>Creditworthiness Studies (de Vries)</td>
<td>Completed</td>
</tr>
</tbody>
</table>
B. GENERAL STATISTICS

1. Moderately complicated tabulations:
   IBRD and IDA commitments in Africa by country, for fiscal years 1967/1965
   Eco. (Kundu) In abeyance

2. Moderately complicated data collection:
   Pakistan - detailed industrial data, input of imported goods etc.
   Eco. (Schrenk) In abeyance

3. Complicated statistical and regression analysis:
   Port of Mombasa Study - determination of service time of ships in the port (loading and unloading), identification and quantification of the various factors involved with special focus on the average number of gangs working simultaneously on a ship. Testing ship arrival patterns and service time distribution
   Eco. (de Weille) In abeyance

4. Complicated analysis:
   Classifications of developing countries - selection of criteria, their measurement and an index for classification
   Eco. (Kamarck) In progress

5. Complicated analysis:
   Preparation of factors and data for the projections of the "IBRD Financial Model" and the "Five Year Plan". Testing disbursement projections of IBRD loans in total and by purpose
   Eco. (Goor) In progress

6. Complicated analysis:
   Sensitivity analysis of IBRD and IDA lending operations
   Eco. (Goor) In progress

7. Moderately complicated calculations:
   Stages of industrial development. Various inter-relationships among income, industrial output, exports, imports, share of manufactured goods, etc.
   Eco. (Balassa/Hughes) In progress

8. Moderately complicated data handling and statistical analysis:
   Portugal - livestock production, percentages of annual total production, average yield, time series analysis of yield by districts and for the whole country during 1952-67
   Eco. (Egbert) In progress

9. Complicated analysis:
   Linear and non-linear programming models of the output and employment possibilities of the economy of Jamaica
   Eco. (Carter) In progress

10. Moderately complicated regression analysis:
    Portugal - food demand analysis
    Eco. (Egbert) In progress
<table>
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<th>Status</th>
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<tr>
<td>11. Complicated analysis:</td>
<td>Eco. (Anderson)</td>
<td>In progress</td>
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<tr>
<td>Mexico - linear programming model of electric power system</td>
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<td>12. Complicated analysis:</td>
<td>Eco. (Henderson)</td>
<td>In progress</td>
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<tr>
<td>Linear programming model for IDA programming systems</td>
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<tr>
<td>13. Moderately complicated calculations and tabulations:</td>
<td>Eco. (Shourie)</td>
<td>In progress</td>
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<tr>
<td>Ceylon Economic Report - capacity utilisation, proportion of domestic and imported inputs in production, etc.</td>
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<tr>
<td>14. Moderately complicated regression analysis:</td>
<td>Eco. (Ray)</td>
<td>In progress</td>
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<tr>
<td>Guayaquil Port Study</td>
<td></td>
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<tr>
<td>15. Moderately complicated data handling and statistical analysis:</td>
<td>Eco. (Egbert)</td>
<td>In progress</td>
</tr>
<tr>
<td>Portugal - crop production, percentages of annual total production, total acreage, time series analysis for each crop by districts, regions, and for the whole country during 1952-67</td>
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<tr>
<td>16. Moderately complicated regression analysis:</td>
<td>Eco. (Gandhi)</td>
<td>In progress</td>
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<tr>
<td>A cross section analysis of government expenditure patterns in developing countries</td>
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<tr>
<td>17. Moderately complicated regression analysis and statistical calculations:</td>
<td>Eco. (Shourie)</td>
<td>In progress</td>
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<tr>
<td>Kenya econometric model involving calculations of increase in agriculture, manufacturing etc.</td>
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<tr>
<td>projection of GDP, exports, imports, capital to 1978</td>
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<tr>
<td>18. Moderately complicated regression analysis and calculations:</td>
<td>Eco. (Anderson)</td>
<td>In progress</td>
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<td>Electricity demand forecasting for 15 countries including Brazil, Chile, Cyprus, Malaysia etc.</td>
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<td>19. Moderately complicated tabulations and regressions:</td>
<td>Eco. (Ray)</td>
<td>Completed</td>
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<tr>
<td>Central American countries trade and commodity data</td>
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<td>20. Moderately complicated step-wise regression analysis:</td>
<td>Basic Research (Oury)</td>
<td>In progress</td>
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<tr>
<td>Ludhiana wheat production model - weather index as dependent variables</td>
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<tr>
<td>21. Moderately complicated regression analysis:</td>
<td>EDI (Dominguez)</td>
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<tr>
<td>Economic implications for Latin America countries - a paper for the Columbia University Conference for the Pearson report</td>
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<tr>
<td>Liberia - project calculation of rate of return, given certain level of probabilities</td>
<td>(Minnig)</td>
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<tr>
<td>23. Moderately complicated calculations:</td>
<td>Agric.Proj. (Knobel)</td>
<td>Completed</td>
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<tr>
<td>Latin America livestock projects</td>
<td></td>
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<tr>
<td>a. calculation of amortization schedules</td>
<td>Agric.Proj. (Manning)</td>
<td>In progress</td>
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<tr>
<td>b. calculation of exports of animals, technical service budget etc. for various countries</td>
<td></td>
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<tr>
<td>24. Moderately complicated regression analysis and statistical calculations:</td>
<td>E.Asia &amp; Pacific (Reif)</td>
<td>In progress</td>
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<tr>
<td>Southeast India - rainfall index</td>
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<td>25. Moderately complicated data handling and tabulations:</td>
<td>So.Asia (Lee)</td>
<td>In progress</td>
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<tr>
<td>Korean Mission</td>
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<tr>
<td>26. Moderately complicated statistical analysis:</td>
<td>W. H. (Pilvin)</td>
<td>In progress</td>
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<tr>
<td>India fertilizer demand study by states and districts</td>
<td></td>
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<tr>
<td>27. Moderately complicated statistical calculations and tabulations:</td>
<td>W. H. (Guerra)</td>
<td>In progress</td>
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<tr>
<td>Bolivia - country report</td>
<td>IFC (Mustafa)</td>
<td>Completed</td>
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<tr>
<td>28. Complicated data handling, statistical analysis:</td>
<td>Europe, Middle East and No.Africa (Ahluwalia)</td>
<td>Completed</td>
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<tr>
<td>Ecuador - industrial statistics</td>
<td>Agric.Proj. (Stahl)</td>
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<tr>
<td>29. Moderately complicated regression analysis:</td>
<td>EDI (Edelman)</td>
<td>Completed</td>
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<tr>
<td>Taiwan - cement consumption</td>
<td></td>
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<td>30. Moderately complicated regression analysis:</td>
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<td></td>
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<tr>
<td>Yugoslavia - economic country report</td>
<td></td>
<td></td>
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<tr>
<td>31. Rate of return calculations:</td>
<td></td>
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<tr>
<td>a. Panama - steam and hydropower projects</td>
<td></td>
<td></td>
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<tr>
<td>b. Pakistan - cargo handling equipment for a port</td>
<td></td>
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<tr>
<td>C. PROGRAMMING</td>
<td>Work</td>
<td>Requested by</td>
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<tr>
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</tr>
<tr>
<td>1.</td>
<td>Highly complex system analysis - planning a new system for coding, punching, assembling, editing, adjusting, external debt data in the form of a disk oriented data base and the required retrieval and processing procedures</td>
<td>Eco. (Stat.Serv.)</td>
</tr>
<tr>
<td>2.</td>
<td>Complex systems analysis to plan and program a macro-economic data bank</td>
<td>Eco. (Levy)</td>
</tr>
<tr>
<td>3.</td>
<td>Highly complex system analysis and programming (OECD/IBRD Joint Reporting System) to produce tapes for OECD and summary tables for participants</td>
<td>Eco. (Stat.Serv.)</td>
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<tr>
<td>4.</td>
<td>Moderately complex computer program to produce cash flow tables of World Bank operations</td>
<td>Eco. (Goer)</td>
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<tr>
<td>5.</td>
<td>Harvard Transportation Model (analysis and debugging of a complex computer program) including input, equations, output and FORTRAN conversion</td>
<td>Eco. (Miller)</td>
</tr>
<tr>
<td>6.</td>
<td>Port of Mombasa Study - testing ship arrival patterns and service time distributions</td>
<td>Eco. (de Weille)</td>
</tr>
<tr>
<td>7.</td>
<td>World tables summary - several programs to calculate and to print the annual growth rates of the aggregate amounts of national accounts by areas and by years</td>
<td>Eco. (Levy)</td>
</tr>
<tr>
<td>8.</td>
<td>Tunisian education evaluation study</td>
<td>Eco. (Thias/Carnoy)</td>
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<tr>
<td>9.</td>
<td>Generalized debt model</td>
<td>Eco. (Stat.Serv.)</td>
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<tr>
<td>10.</td>
<td>Imports of Persian Gulf countries</td>
<td>Eco. (Stat.Serv.)</td>
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<tr>
<td>11.</td>
<td>Livestock model</td>
<td>Eco. (Husain)</td>
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<tr>
<td>12.</td>
<td>Waterborne U.S. trade with Central American countries</td>
<td>Eco. (Ray)</td>
</tr>
<tr>
<td>13.</td>
<td>Karachi Port Study - plotting and tabulating distributions for different time intervals, printing the matrix of different variables, etc.</td>
<td>Eco. (Ray)</td>
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<tr>
<td>14.</td>
<td>Conversion to B5500 of &quot;CURSE&quot; Program for processing recursive simulation models</td>
<td>Eco. (Holland)</td>
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<tr>
<td>15.</td>
<td>Risk analysis of irrigation in Ethiopia</td>
<td>Eco. (Husain)</td>
</tr>
<tr>
<td>16.</td>
<td>Preparation of an input-output matrix program</td>
<td>Eco. (Kundu)</td>
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<td>17. Port of Guayaquil Study - testing ship arrival patterns and distributions for waiting time, berthing time, etc. and to analyse the relationships between different variables</td>
<td>Eco. (Ray)</td>
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<tr>
<td>18. Education model</td>
<td>Educ. Proj. (Maltin)</td>
<td>In progress</td>
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<tr>
<td>19. Financial return calculations on fishing vessels</td>
<td>Agric. Proj. (Polland)</td>
<td>In progress</td>
</tr>
<tr>
<td>21. Further development of existing road analysis program</td>
<td>Transp. Proj. (Pouliquen)</td>
<td>In progress</td>
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<tr>
<td>22. Conversion to B5500 of Discounted Cash Flow Economic Evaluation Program</td>
<td>Transp. Proj. (Bain)</td>
<td>In progress</td>
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<tr>
<td>23. Klongtoei Wharf Study - testing ship arrival patterns and distributions for tonnages</td>
<td>Transp. Proj. (Pouliquen)</td>
<td>In progress</td>
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<tr>
<td>24. Evaluation of the transport part of the Gabes project</td>
<td>Transp. Proj. (Pouliquen)</td>
<td>In progress</td>
</tr>
<tr>
<td>26. Debt model</td>
<td>P &amp; B (Blaxall)</td>
<td>Completed</td>
</tr>
<tr>
<td>27. Indonesia debt model</td>
<td>P &amp; B (Colago)</td>
<td>Completed</td>
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<tr>
<td>28. Net Transfer Model</td>
<td>Creditworthiness(de Vries)</td>
<td>In progress</td>
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<tr>
<td>29. Average term calculation (by year of commitment)</td>
<td>Creditworthiness(de Vries)</td>
<td>In progress</td>
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<td>S. Asia (Niebuhr)</td>
<td>In progress</td>
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<td>Comparative Data (Leoni)</td>
<td>In progress</td>
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</tbody>
</table>
D. CONTINUING

EXTERNAL DEBT

1. Compilation of data for quarterly tables showing all foreign bonds and equities publicly-issued and privately-placed in various markets.

2. Preliminary checking and coding of ERS Forms 1.

3. Compilation of data on deposit rates and weighted average yields of Eurodollar.

4. All countries - semi-annual conversion of Treasurer's IBM cards to statistics IBM cards.

5. Preparation of current data on yields of IBRD bonds.


7. Maintenance of ERS files.

8. Highly technical drafting of manual of instructions for treatment and processing of external debt reported under debtor and creditor systems.


10. Compilation of debt outstanding and service payments by country and area for all developing and developed countries.

11. Compilation of debt statistics on selected countries.


13. Checking debt data in Economic Reports.

GENERAL STATISTICS

1. Maintenance of supplier vouchers on IBRD and IDA disbursements.

2. Maintenance of IBRD/IDA loans and credits by economic purpose.

PROGRAMMING

1. Maintenance of existing programs (such as revisions, updating, debugging and assistance in interpretation).

cc: Mr. Stevenson

/ra
**Mr. Andrew Kamarck**  
December 16, 1969

**George Kalmanoff**

**Progress Report of Economics of Industrialization Division**  
for the period December 1-15, 1969 (11 days)

<table>
<thead>
<tr>
<th>George Kalmanoff</th>
<th>Quarterly Activities Report of Division (2 days)</th>
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<tbody>
<tr>
<td></td>
<td>Review of Industry in Country Program (2½ days)</td>
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<td>Papers for Industrial Projects Department</td>
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<td></td>
<td>Review of Guidelines for Industrial Sector</td>
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<td>Preinvestment Study Programs for Industrial</td>
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<td>Projects Department</td>
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<td>Organization and Personnel Matters for</td>
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<td>Industrial Projects Department</td>
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<td>General supervision (2½ days)</td>
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<tr>
<td>J. Datas-Panero</td>
<td>Malagasy Republic mission (11 days)</td>
</tr>
<tr>
<td>Mrs. H. Hughes</td>
<td>Annual leave (10 days)</td>
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<tr>
<td></td>
<td>Miscellaneous (1 day)</td>
</tr>
<tr>
<td>A. Nowicki</td>
<td>Work on Korea mission report (11 days)</td>
</tr>
<tr>
<td>M. Schrenk</td>
<td>Work on Yugoslavia mission report (11 days)</td>
</tr>
<tr>
<td>B. Walstedt</td>
<td>Steel Price Study (3 days)</td>
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<td></td>
<td>Heggli Steel Mill Appraisal (memo on financial</td>
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<td>plan submitted)</td>
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<td></td>
<td>Turkish shipping and shipbuilding</td>
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<td>Guidelines for sector surveys (Industrial</td>
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<td>Projects Department)</td>
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<td></td>
<td>Techniques of Project Appraisal (Turkey)</td>
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<tr>
<td></td>
<td>Other (reading, meetings, etc.)</td>
</tr>
<tr>
<td>Miss L. Keough</td>
<td>Research on Exports of Cotton Textiles from</td>
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<td></td>
<td>Developing Countries to the United States (11</td>
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<tr>
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<td>days)</td>
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<tr>
<td>Mrs. H. Neufeld</td>
<td>Research for paper on Levels of Industrial</td>
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<td>Development in Latin America (6 days)</td>
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<td>Work on Statistical Indicators (4 days)</td>
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<td></td>
<td>ECIEL Seminar, Lima (1 day)</td>
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<tr>
<td>P. Ojinnaka</td>
<td>Trends in tonnages and ships launched (3 days)</td>
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<td>World production of ships 1958-1968 (4 days)</td>
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<td>Exports of capital goods compared to output of</td>
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<td>capital and other goods (1 day)</td>
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<td>Domestic prices for steel (3 days)</td>
</tr>
<tr>
<td>H.R. Ullmann</td>
<td>Korea mission work for Mr. Nowicki (11 days)</td>
</tr>
<tr>
<td>cc: Mr. A. Stevenson</td>
<td></td>
</tr>
</tbody>
</table>
Quarterly Operational Report for the Comparative Data Division for the Period September 1 - November 30, 1969

Country Missions

The special statistical mission to Pakistan arrived in that country in early October and returned to Washington towards the end of November. The mission carried out a thorough survey of the statistical information system including basic statistical series and national accounts, population, government sector accounts, data processing, and statistical organization. The detailed report and recommendations are now being written up and a first draft is expected by early January. Mr. Eory served as Deputy Chief of the mission. Mr. Novak participated as national accounts expert.

Mr. Franchat participated in the IBRD mission to Cambodia as national accounts and data expert. He has also assumed partial responsibility for the analysis of the government sector. The report, which is now being written up, will include revised and updated estimates of national income and expenditure.

Miss Vial participated as national accounts and data expert in the IBRD mission to Yugoslavia. A review was carried out of the basic statistical series and national accounts estimates, and revised and updated figures compiled. Special efforts were made to correct the estimates of inventory changes which have contributed in the past to a distortion of the Yugoslav product aggregates.

Country Program Paper Table

The revision and updating of the summary country data sheets for the CPP continued under the direction of Mr. Leoni.

Country Data Bank

Work was continued on the preparation of the basic data inputs, with particular emphasis on filling in the gaps for African and Asian countries.
Mr. Alexander Stevenson

Stanley Please


December 17, 1969

Major Studies

Mr. Gandhi - continued work on the Study on the Growth and Structure of Government Expenditure in Developing Countries (11 days).

Mr. Schaebeck - continued work on the study on the Interest Elasticity Deposits in India (6 days).

Mr. Stolber - started research work on the Public Expenditure Problems in French-Speaking African Countries (4 days).

Country and Project Mission Work

Mr. Joshi - completion of his contribution to the report of the DFC mission to China (7 days).

Mr. Baiser - preparation of his contribution to the report of the economic mission to Yugoslavia (10 days).

Mr. Ekland - preparation of his report for his economic work in Pakistan (9 days).

Other Activities

Mr. Joshi - revision of note on Development Banks and Mobilization of Savings (2 days); preparation of draft on Domestic Resource Mobilization in China (2 days).

Mr. Stolber - comments on the economic report on Mali (7 days); French lessons (one hour each day).

Mr. Schaebeck - comment on report "Industrialization of Pakistan: the Record, the Problem and the Prospects" (1 day); review and participation in discussions of "The Quantitative Impact of the Seed-Fertilizer Revolution in West Pakistan: An Exploratory Study" (1 day); comments on the resource mobilisation in India for the Agricultural Projects Department (1 day).

Miss Meldau - government expenditures in developing countries (4 days); disposition of increment to agricultural incomes (7 days).

Miss Bacunos - collection of data on banking companies in India (6 1/2 days); preparation of statistical data on Pakistan (4 days).

Mr. Please - supervision of Division activities.
Annual/Sick/Special Leave

Mr. Beier - sick leave (1 day)
Mr. Edlund - sick leave (2 days)
Mr. Stolber - special leave (1 day)
Miss Bacumos - sick leave (½ day)

cc: Messrs. Kenarck and Lowther
I. Mobilization of Private Savings in Developing Countries

1. The Division is attempting to redress the bias in Bank country economic work concerned with the mobilization of domestic resources. This has concentrated almost entirely -- and in some countries entirely -- on the mobilization of resources through the budget and through para-budgetary policy (autonomous enterprises, social security funds, etc.). Private savings mobilization is virtually ignored and previous experience with the Bank's Capital Markets Unit is regarded with skepticism. This is primarily because of the Unit's apparent emphasis on producing encyclopaedic reports rather than focussing on problems of private savings mobilization. The Division is now trying to make this work more meaningful and effective by approaching it in the several guises in which it arises in Bank operational activities and strengthening this with research which focuses on the policy variables which are relevant to private savings mobilization.

2. Firstly this problem is being approached as part of the Bank's regular country economic work. During the quarter under review the economic mission to Iran provided Schenck and myself with the opportunity of undertaking an initial examination of this problem as well as undertaking the fiscal work for the mission. This was presented in the Economics Department Report (EC-171) on "Aspects of the Problem of Internal Resource Mobilization in Iran" which is at present under review within the Bank.

3. Secondly the problem of private savings mobilization is being approached as it impinges on Bank lending particularly to the specialized lending institutions in the agricultural and industrial sectors. During this period Joshi and myself initiated work to be undertaken in collaboration with the Development Finance Companies Department, by linking up with an appraisal mission to Taiwan. In addition to assisting the mission in its immediate task of appraising an intended third loan to the China Development Corporation, we pursued more fully the role of the C.D.C. in mobilizing domestic resources and the wider aspects of this problem. The Division is preparing an independent report on its findings. As a consequence of this assignment the Chinese Government approached the Bank whilst we were in the field for advice in obtaining assistance in regard to the development of the capital market. I have drafted a reply to this request which is at present the subject of discussion in the Bank.

4. Finally we are pursuing research studies as the third aspect of our involvement in the private savings mobilization problem. These are at the moment focussed on an attempt to determine the interest elasticity of banking sector deposits. These studies are covering Taiwan (a draft of Miss Heldan's study was completed during this quarterly period), India (Schenck), and Pakistan (Edum in collaboration with the Pakistan Institute of Development Economics)
II. Mobilization of Agricultural Incomes

5. The Division has a continuing involvement in the problem of mobilizing agricultural incomes particularly in those countries in which heavy investment is taking place in support of major technological changes in the sector. Elund has been assigned to work for a predominant part of his time on this question in Pakistan. During this quarterly period he has completed his contribution to the report of the appraisal mission for the Chandpur Irrigation Project. This included the preparation of an annex on "Agricultural Taxes and Local Taxes in East Pakistan" which led to the preparation of a more general paper on "The Fiscal Situation and Investment in the Water Sector in East Pakistan during the Fourth Plan Period." In addition to the contribution of this paper to the technical discussion of the fiscal problem it raised the much wider problem of the Bank's attitude to regional as opposed to national development. Elund spent most of November in Pakistan developing his work in this area. He worked as a member of the Agricultural and Water Development Program team whilst in East Pakistan and I joined him during this period. We participated in the discussions the team had with the East Pakistan authorities on the financial resources problem in general and on certain technical problems of EMPEDA financing.

III. Tax and Other Fiscal Studies

6. The Division has a general responsibility for undertaking studies on problems in the field of taxation particularly of tax policy. At the request of the Europe, North Africa and Middle East Department a study was undertaken of the elasticity of the Tunisian tax system (Scièlli). This is a matter which the country economic mission had isolated as central to the budgetary and savings problem of the country and therefore as central to the Bank's operations in the country. During the quarter under review the study was completed and presented to the Economics Committee for comment.

7. During the quarter two requests for assistance in the fiscal field were undertaken which were regarded by the area departments as both urgent and complex. These were in Malawi and in Yugoslavia and both were undertaken by Beier. Reference was made to the Malawi assignment in the previous quarterly report. This assignment was completed in September. The Yugoslav fiscal situation was judged to require a special examination in view of (a) the fact that no previous study in depth of the problem had been undertaken by the Bank and (b) the difficulty in preparing a consolidated public sector picture in an economy which had intentionally decentralized the decision-making process.
Quantitative Techniques and Analysis Division: Quarterly Operations Report for the period to November 30, 1969

1. The main areas or problems that the Division has been concerned with in the past quarter are:
   (a) country economic projections and planning models;
   (b) the uses of dynamic simulation models in relation to developing countries;
   (c) the methods of analysis appropriate to tourist projects; and
   (d) the scope for increasing employment levels by means of deliberate economic policies.

2. (a) Country economic projections. Most members of the Division have been engaged in work which comes under this heading, in connection both with Bank Missions and with research activities.

3. Mr. Shourie has taken part in the recent mission to Ceylon, where his duties included a review of the rather ambitious input-output model that has been developed there by the Ministry of Planning. He has also completed a draft of a substantial paper on "The Relevance of Econometric Models for Policy Projections and Prescription". It is hoped to issue the final version early in 1970.

4. Mr. Carter has issued a Departmental Working Paper (No. 50) called "Notes on a Macroeconomic Model Used to Project the Possible Performance of the Jamaican Economy, 1968-73". This describes a piece of quantitative analysis that was specially tailored to the needs of a Bank mission. A further paper is almost completed which outlines a macroeconomic regression model of the Jamaican economy.

5. Mr. Cheetham has taken part in the recent mission to Korea as a planning economist. He has made medium-term projections of items in the Korean national accounts and balance of payments, and constructed a reduced input-output table for use in projecting the structure of industrial output and the demand for imports.

6. It is hoped to undertake further work in the near future on the methods of forecasting and of making projections that are currently used within the Bank, and the possible implications of these.

7. (b) Dynamic simulation models. Mr. Holland has continued to work in this area. He has prepared a paper on "Simulating the Dynamics of Development" for presentation this month at an international conference in Cairo. A revised and expanded version of this paper, with special reference...
to the possible uses of simulation models within the Bank, is under preparation. It is hoped that this too will be issued as a Working Paper early next year. In addition, Mr. Holland has continued to work on the macroeconomic model which forms part of the Harvard transportation simulation for Colombia. This work will also be the subject of a paper, outlining a critique of the model and a design for an alternative model of a less ambitious and more practical type.

8. (c) Analyzing tourist projects. Mr. Carter has continued his work on developing a methodology for assessing the effects of a particular tourist project, by means of a model which links the project, the region in which it is located, and the economy as a whole. This study, which deals with a case in Mexico, should be completed and issued fairly soon.

9. (d) Employment as an objective of policy. Mr. Carter has also continued his work on a linear programming model, using Jamaican data, which analyzes employment possibilities and the choices that may arise between growth of output and growth of employment. A revised but still not final version of a paper on this has just been presented at a conference in Paris held by the O.E.C.D. Development Centre, and further work is to be done in exploring the extent to which a wider range of possibilities is opened up when non-linear relations are introduced into the model.

cc: Mr. Alexander Stevenson
    Mr. J. Lowther
Mr. A. M. Kamarck

Shlomo Reutlinger

Second Quarterly Operations Report - Sector and Projects Studies Division

December 9, 1969

1. The report presented this time is longer than either past or future reports, because it is the first of its kind and I feel that in order to impart some flavor of the various research projects some description of the substance is essential.

AGRICULTURE

Sector Planning Models

2. Parallel with the expansion of sector studies and surveys in the Agricultural Projects Departments, the Sector and Projects Studies Division is examining the potential usefulness of inter-regional and inter-activity analysis models for analyzing sector investment priorities and sector policies. Messrs. Egbert and Ablasser are currently constructing such models for Portugal and Brazil. In collaborating on the collection and interpretation of sector data at the time the sector mission is in the field, they have made an immediate contribution to the ongoing impressionistic appraisal of the sector, while constructing a more elaborate data base to be used in subsequent in-depth, analytical studies. Eventually, it should become possible to evaluate the usefulness of various analytical approaches when the implications of alternative policies derived from applications of the analytical models are compared with the conclusions and recommendations contained in the sector mission reports.

Re-Evaluation of Projects

3. Messrs. Manning and Reutlinger collected data for re-evaluating loans ME-336 and ME-275 for irrigation projects in Mexico. The main objective of the study are to (a) compare projections of actual outcomes in the major variables affecting the project benefits and identify the reasons for projection errors, and (b) recommend how the appraisal model and data projections might be improved. Mr. Manning is now analyzing the data with the added objective that this first reappraisal study should provide us with a model for doing similar reappraisal studies of other projects and suggest data collection requirements for project experience to be analyzed in the future. Messrs. Manning and Duane have started to prepare proposals for reappraisal studies of irrigation projects in India and credit projects in the Philippines or Pakistan.

Computer Simulation Models

4. Mr. Husain has completed work on a simulation model for the cost-benefit evaluation of a beef-ranch livestock project. The model has been programmed for using a computer to calculate changes in a cattle herd composition and beef output over time and provide financial and economic projections for the project based on projected technical coefficients, costs
and prices. Use of the model during appraisal will make it possible to make more accurate projections in less time, to consider alternative plans for the project and answer questions on the riskiness of the project.

5. Mr. Husain has recently participated in the irrigation project appraisal mission to Ethiopia with the objective of developing simulation models for cost-benefit analysis of certain types of irrigation project.

**Evaluation Methodology for Grain Storage Programs**

6. In view of the growing demand for grain storage projects, the Division, at the request of the Agricultural Projects Department has started work on identifying procedures for evaluating benefits from large grain storage programs on a scale where the usual, simple cost-benefit analysis breaks down. So far a paper has been prepared by Messrs. Reutlinger and Wilde (Consultant, MIT) on storage demand arising from seasonal differences in supply and demand. The model considers simultaneously seasonal changes in production consumption and storage operations and the benefits attributable to storage. Work has been started on evaluation of buffer stock storage programs to counter random fluctuations in grain production.

**Agricultural Development Strategy**

7. The Division took the initiative in convening a seminar with Professor Bruce Johnston to discuss his research which sets forth the hypothesis that present agricultural policies favor an expansion path of agricultural output which is unnecessarily expensive in terms of capital investment, unemployment and income distribution in the rural sector.

**Social Cost-Benefit Accounting**

8. Mr. Reutlinger visited at Hufield College, Oxford to discuss with Dr. I. M. D. Little studies in progress applying the social cost-benefit accounting procedures suggested in the Littie-Mirrles Manual to agricultural projects. Tentative plans were made to collaborate with Dr. Little and his colleagues on the reappraisal of some projects in order to acquaint ourselves better with their proposed procedures for estimating shadow prices. If their procedures result in rates of return estimates substantially differing from ours, the feasibility and desirability of changing the Bank's cost-benefit accounting procedures will be further examined.
TRANSPORT

Transport Planning Model Study

9. The objectives of the study are to review currently available transportation models, to further develop and test such models on actual planning problems at the project and sector level, and to determine the feasible scope of such techniques as operational planning tools. The Harvard transport system model has been transferred and made operational on the Bank's computer. Descriptive write-ups of the models have been revised and expanded by Mr. Miller and Mr. Harral, who, with Mr. de Weille, will conduct seminars for Projects Department Professional staff in mid-December. Collection of data in Colombia and the task of setting up a transport planning model capability in the country is continuing and two representatives from Colombia spent five weeks with the group in October in a working session covering the models. Future efforts will be concerned with the revision and application of transport planning models in other countries.

Highway Design Study

10. This study focuses on the inter-relationships between vehicle operating costs, road maintenance costs, and construction costs with the objective to develop a computer model to be used by the Bank or its consultants to determine appropriate design standards for low traffic roads. CIM Systems, Inc., utilizing faculty from MIT, is the research contractor under the supervision of Messrs. de Weille and Harral in conjunction with various staff members in the Transportation Projects Department. A preliminary report is expected by January, 1970.

Central American Port Study

11. This study will determine the optimal program of port investment that the Bank should pursue in the five countries belonging to the Central American Common Market, viz. Guatemala, El Salvador, Honduras, Nicaragua and Costa Rica. Alternative programs are being evaluated to determine the minimum total cost plan from the point of view of the countries. The study is being undertaken by Mr. A. Ray (Economist) and Mr. J. Lowden (Consultant) for the Transportation Projects Department and the Western Hemisphere Department. Tentative results are expected at the end of December. The report will be finalized by March 1970 or earlier at which time the Bank's position on the matter may be communicated to other agencies which finance investment projects in those countries in order to arrive at a consistent lending program.

Re-Appraisal of Railway Project in Thailand

12. Mr. Israel has started on a re-appraisal study of this project, to ascertain the differences between actual outcomes and expectations in the important variables affecting the project's benefits and to try to explain these differences. Messrs. Israel and van der Tak have been in Thailand to collect relevant data.
Appraisal Methodology of Feeder Road Projects

13. Mr. Israel has completed a draft of a paper discussing methodologies of feeder road projects. The study highlights the distinction between feeder roads when complementary investments and activities are assured and feeder roads which constitute one of many components of an investment program.

EDUCATION

Kenya Case Study of Cost-Benefit Analysis

14. Mr. Kwita and Carnoy (Consultant) completed the Kenya case study applying rate of return analysis to investment in education. The study attempted to isolate the benefits directly attributable to education and to project the demand and supply of persons with various amounts of schooling. The study was issued as Economics Department Report, EC-173.

Re-Appraisal of Education Project in Tunisia

15. Data have been assembled through survey questionnaires and are now being analyzed to estimate contribution of schooling and extra-schooling variables on school performance and various purported objectives of education and to link these to subsequent performance in the labor market.

PUBLIC UTILITIES

Ex-Post Analysis of Electricity Demand Forecasts

16. Mr. Anderson has made a study comparing forecasts of electricity demand in IDB Bank and IDA loans with the actual demand. The forecasts were unbiased, the errors being Normally Distributed with zero mean. Approximately 75% of the forecasts of the change in demand lie within ± 40% of the actual change. Further analyses will be made to determine if forecasts are more accurate in countries where the Bank has had more experience with loans in electric power; if forecasting accuracy is improving with time, that is, if forecasts in the 1960's are better than forecasts in the 1950's; if the errors are larger for smaller countries; and if there tends to be any downward bias when growth rates are higher.

Econometric Analysis of Electricity Demand

17. Mr. Anderson has started on a study to determine whether forecasting accuracy can be increased by using econometric methods. The study will consider the effect of income, output, price, industrialisation, population, technical progress, various qualitative, and other economic and demographic variables on electricity demand. Cross-section and time-series data will be used for estimation. Then the forecasting properties of the econometric models will be compared with other methods of forecasting.
Investment and Simulation Models

18. Mr. Anderson is reviewing procedures for formulating investment and operating decisions in electricity supply. The important discovery so far is that standard linear programming packages can be used for every type of problem likely to be encountered, for overall power system development programs, for large multi-purpose projects (e.g., hydro), for joint programs such as water and electricity supply and for energy transport. A linear programming model is currently being tested with data for Mexico on the existing L.P. within the Bank. Other approaches will be also reviewed.

GENERAL

19. Other activities of the Division included comments on drafts of project appraisal reports, economic reports, a memorandum on pre-investment studies and research proposals in the Basic Research Center, participation at the FAO sponsored Protein Advisory Group Meeting in Geneva and lectures at the E. D. I.

SReutlinger:bsc

cc. Messrs. A. Stevenson
     H. G. van der Tak
Mr. Alexander Stevenson

December 3, 1969

Stanley Please


Major Studies

Mr. Gandhi - continued work on the Study on the Growth and Structure of Government Expenditure in Developing Countries (8 days).

Mr. Schebeck - continued work on the study on the Interest Elasticity Deposits in India (5 days).

Country and Project Mission Work

Mr. Schebeck - revision of the report "Aspects of the Problem of Internal Resource Mobilization in Iran" (1 day).

Mr. Joshi - preparation of his contribution to the report of the DFC mission to China (9 days). Arrived in Washington from China on November 14.

Mr. Beier - preparation of his contribution to the report of the economic mission to Yugoslavia (7 days). Arrived in Washington from Yugoslavia on November 19.

Mr. Eklund - has been in Pakistan for his economic work in that country. Arrived in Washington on November 30.

Other Activities

Mr. Please - supervision of Division activities. Arrived in Washington from China/Pakistan on November 17.

Mr. Stolber - attended orientation of new staff members (2 days); orientation meeting on "Case Study on Jamaica" (1 day); preparation of comment on the economic report on Mali (4 days); worked on public expenditures (2 days).

Mr. Gandhi - orientation of new staff members (1 day).

Mr. Schebeck - review of report on "Industrialisation of Pakistan: the Record, the Problem and the Prospects" (1 day).

Miss Holdau - interest rate in Brazil (1 day); government expenditures in developing countries (7 days).

Miss Bacumas - collection of data on banking companies in India (9 days).

Annual/Sick Leave

Mr. Schebeck - sick leave (1 day)
Mr. Please - sick leave (4 days)
Miss Holdau - annual leave (1 day)

cc: Messrs. Kazark and Lowther
Work Progress Report for the Cooperative Data Division for the Period
November 16-30, 1969

Computer Data Bank

1. Work continued on the collection of basic data and the preparation of estimates for the Data Bank.

Five-Year Projection Exercise

2. This project has occupied a considerable part of the time of the professionals as well as of the research assistants.

3. Very often the Area Departments revise their own basic data after its processing and printing. Any such revision implies added work in terms of changing footnotes, typing and reprinting.

4. The tables for the following countries have been either prepared for the first time or revised: Brazil, Chad, Ethiopia, Iran, Mexico, Singapore, Turkey, Trinidad and Tobago, and Uganda.

Mission to Yugoslavia

5. The first thing that Miss Vial did on her arrival in the Bank was to prepare a series on real change in inventories (the official series show nominal changes) to adjust the national accounts of Yugoslavia.

6. A GDP series in current and constant dinars has been prepared for internal use of the mission. A GDP series is being computed. The two series incorporate the inventory adjustments.

Miscellaneous

7. On Friday, the 26th, Nasara, Bory and Novak returned to the Bank from the Statistical Mission to Pakistan, and Mr. Franchot from the Economic Mission to Cambodia.

Joséfina Vial

cc: Mr. Stevenson
Mr. Louther
<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Data</th>
<th>5-Year Plan</th>
<th>Mission to Cambodia &amp; Philippines</th>
<th>Mission to Pakistan</th>
<th>Mission to Yugoslavia</th>
<th>Misc.</th>
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\(a\) On mission to Pakistan up to November 26.

\(b\) On mission to Cambodia and the Philippines up to November 26.
Activities of Sector and Projects Studies Division, November 16-30

### Agriculture

<table>
<thead>
<tr>
<th>Name</th>
<th>Activities</th>
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<tbody>
<tr>
<td>Ablaser</td>
<td>Brasil agriculture mission (9 days).</td>
</tr>
<tr>
<td>Duane</td>
<td>Indian irrigation reappraisal study (5 days); review of grain storage paper (1(\frac{1}{2}) days); review of livestock appraisal paper (2 days); orientation course (1(\frac{1}{2}) day).</td>
</tr>
<tr>
<td>Egbert</td>
<td>Portugal agriculture sector study (5 days); Brasil agriculture mission (4 days).</td>
</tr>
<tr>
<td>Haissman (Consultant)</td>
<td>Planning skilled manpower deployment in irrigation projects (part time).</td>
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<tr>
<td>Hussain</td>
<td>Ethiopia irrigation project appraisal mission (1 day); Ethiopia irrigation appraisal study (7 days); memorandum on computer use in project appraisal (1 day).</td>
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<tr>
<td>Manning</td>
<td>Mexico irrigation reappraisal study (4 days); preparation of comments on 1969 Uruguay economic report as principal outside reader (2 days); preparation of comments on FAO Indicative World Plan for Agriculture (1(\frac{1}{2}) days); manpower requirements in irrigation projects (1(\frac{1}{2}) day); annual leave (1 day).</td>
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<tr>
<td>Reutlinger</td>
<td>Wheat storage projects criteria (2 days); manpower requirements in irrigation projects (1 day); preparation of meeting with Prof. Johnston on food grain policies (1 day); general supervision (5 days).</td>
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<tr>
<td>Seagraves (Consultant)</td>
<td>Revision of agriculture supply research paper (part time, Raleigh, N.C.).</td>
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<tr>
<td>Carr</td>
<td>Mexico irrigation reappraisal study: analysis and standardization of regional production cost and return data (7 days); sick leave (1 day); annual leave (1 day).</td>
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<tr>
<td>Kim</td>
<td>Analysis of demand for food in Portugal (2 days); Portugal agriculture sector study (7 days).</td>
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<tr>
<td>King</td>
<td>Portugal agriculture sector study (8 days); annual leave (1 day).</td>
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<tr>
<td>Wilde (Consultant)</td>
<td>Grain storage projects criteria (part time, Boston, Mass.). In office November 20 and 21.</td>
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Education

Carney (Consultant): Tunisia education study (part time, Stanford, Calif.)

Thais: Kenya education study (1 day); Tunisia education study (5 days).

Brandenburg: Tunisia education study; analysis of education budget and review of Bank education loan (6 days); EDI seminar on techniques for allocating education expenditures (½ day); French (1 day); leave (½ days).

Transportation

de Weille: Transport planning models study (3 days); annual leave (1 day); sick leave (5 days).

Harral: Transport planning models study (3½ days); highway design standards study (3 days); comments and advice to Western Hemisphere Department (½ day); annual leave (2 days).

Israel: Thailand railway reappraisal mission (9 days).

Miller: Central American ports study (2 days); Thailand railway reappraisal study (2 days); transport planning models study (3 days); annual leave (2 days).

Cort (Consultant): Regulation of road transport study (part time, Utrecht, Neth.).

Ray: Central American ports study (8 days); optimum depth of a port paper (1 day).

Isaac: Transport planning models study (9 days).

Hijares: Transport planning models study (7 days); linear programming for Central American ports study (1 day); familiarisation with linear programming material (1 day).

Pernia: Central American ports study; domestic origin of exports and destination of imports analysis (6 days); French (1 day).

Public Utilities

Anderson: Further analysis of investment and operating decisions in electricity supply (6 days); ex-post analysis of electricity demand (3 days).

Villaflores: Computations for analysis of electricity demand forecasts for Mr. Anderson (9 days).
General

Snell: Revision of Kenya education study (1/2 day); editing M. Hesse's paper on project appraisal methodology (2/3 day); collecting progress report (1 day); annual leave (1 day).

van der Tak: On mission to Thailand (7 days); general supervision (2 days).

S. H. Seutlinger: smc

cc: Mr. Kamarck
    Mr. Lowther
Mr. Andrew M. Kamarck  
Arthur E. Tiemann  

Progress Report of Statistical Services Division  
for the period November 16 - 30, 1969

December 1, 1969

<table>
<thead>
<tr>
<th>Work</th>
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<th>Status</th>
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<tbody>
<tr>
<td>Posting, coding and preparation of debt tables; see monthly report prepared by External Debt Section for most recent status of tables.</td>
<td>Europe, Middle East and No.Africa (Payson)</td>
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<tr>
<td>Tunisia - projections of external debt as of December 31, 1968 according to maturity dates</td>
<td>Europe, Middle East and No.Africa</td>
<td>Completed</td>
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<td>South Africa - preparation of memorandum on debt submission as of December 1968</td>
<td>W. H. (Suber)</td>
<td>In progress</td>
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<tr>
<td>Nicaragua - preparation of debt tables as of December 31, 1968 broken down by sectors</td>
<td>W. H. (Roessler)</td>
<td>Completed</td>
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<tr>
<td>Colombia - preparation of amortization schedule for joint lending project</td>
<td>W. Africa (Wilkinson)</td>
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<td>Cameroon - preparation of amortization schedule for proposed IBRD loan</td>
<td>E.Asia &amp; Pacific</td>
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<tr>
<td>Indonesia - preparation of memorandum on debt submission as of December 31, 1968</td>
<td>E.Asia &amp; Pacific (Jentgen)</td>
<td>Completed</td>
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<td>Singapore - preparation of amortization schedule for proposed IBRD loan</td>
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<td>Pakistan - examination of debt data</td>
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<td>Ceylon - preparation of amortization schedule for proposed IBRD loan</td>
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<td>Preparation of creditors lists by country</td>
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<td>Turkey - preparation of debt data for reconciliation purposes</td>
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<td>Calculations on proposal to subsidize IBRD interest through IDA credit</td>
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<td>Brazil - private guaranteed export credits for several countries</td>
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<td>Work</td>
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<tr>
<td>1. Moderately complicated tabulations: IBRD and IDA commitments in Africa by country, for fiscal years 1947/1965</td>
<td>Eco. (Kundu)</td>
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<td>2. Moderately complicated data collection: Pakistan - detailed industrial data, input of imported goods etc.</td>
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<td>3. Complicated statistical and regression analysis: Port of Mombasa Study - determination of service time of ships in the port (loading and unloading), identification and quantification of the various factors involved with special focus on the average number of gangs working simultaneously on a ship. Testing ship arrival patterns and service time distribution</td>
<td>Eco. (de Weille)</td>
<td>In abeyance</td>
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<tr>
<td>4. Complicated analysis: Classifications of developing countries - selection of criteria, their measurement and an index for classification</td>
<td>Eco. (Kamarck)</td>
<td>In progress</td>
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<tr>
<td>5. Complicated analysis: Preparation of factors and data for the projections of the &quot;IBRD Financial Model&quot; and the &quot;Five Year Plan&quot;. Testing disbursement projections of IBRD loans in total and by purpose</td>
<td>Eco. (Goor)</td>
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<td>6. Complicated analysis: Sensitivity analysis of IBRD and IDA lending operations</td>
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<td>7. Moderately complicated calculations: Stages of industrial development. Various inter-relationships among income, industrial output, exports, imports, share of manufactured goods, etc.</td>
<td>Eco. (Balassa/Hughes)</td>
<td>In progress</td>
</tr>
<tr>
<td>8. Moderately complicated data handling and statistical analysis: Portugal - livestock production, percentages of annual total production, average yield, time series analysis of yield by districts and for the whole country during 1952-67</td>
<td>Eco. (Egbert)</td>
<td>In progress</td>
</tr>
<tr>
<td>9. Complicated analysis: Linear and non-linear programming models of the output and employment possibilities of the economy of Jamaica</td>
<td>Eco. (Carter)</td>
<td>In progress</td>
</tr>
<tr>
<td>10. Moderately complicated regression analysis: Portugal - food demand analysis</td>
<td>Eco. (Egbert)</td>
<td>In progress</td>
</tr>
<tr>
<td>Work</td>
<td>Requested by</td>
<td>Status</td>
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<tr>
<td>----------------------------------------------------------------------</td>
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</tr>
<tr>
<td>11. Complicated analysis:</td>
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<tr>
<td>Mexico - linear programming model of electric power system</td>
<td>Eco. (Anderson)</td>
<td>In progress</td>
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<tr>
<td>12. Complicated analysis:</td>
<td></td>
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<tr>
<td>Linear programming model for IDA programming systems</td>
<td>Eco. (Henderson)</td>
<td>In progress</td>
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<td>13. Moderately complicated calculations and tabulations:</td>
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<tr>
<td>Ceylon Economic Report - capacity utilization, proportion of domestic and imported inputs in production, etc.</td>
<td>Eco. (Shourie)</td>
<td>In progress</td>
</tr>
<tr>
<td>14. Moderately complicated regression analysis:</td>
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<tr>
<td>Guayaquil Port Study</td>
<td>Eco. (Ray)</td>
<td>In progress</td>
</tr>
<tr>
<td>15. Moderately complicated data handling and statistical analysis:</td>
<td></td>
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<tr>
<td>Portugal - crop production, percentages of annual total production, total acreage, time series analyses for each crop by districts, regions, and for the whole country during 1952-67</td>
<td>Eco. (Egbert)</td>
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<td>16. Moderately complicated regression analysis:</td>
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<td>A cross section analysis of government expenditure patterns in developing countries</td>
<td>Eco. (Gandhi)</td>
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<td>17. Moderately complicated tabulations and regressions:</td>
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<tr>
<td>Central American countries trade and commodity data</td>
<td>Eco. (Ray)</td>
<td>In progress</td>
</tr>
<tr>
<td>18. Moderately complicated regression analysis and statistical calculations:</td>
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<tr>
<td>Kenya econometric model involving calculations of increment in agriculture, manufacturing etc. projection of GDP, exports, imports, capital to 1978</td>
<td>Eco. (Shourie)</td>
<td>In progress</td>
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<td>19. Moderately complicated regression and statistical calculations:</td>
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<td>Brasil - calculation of seasonal index for coffee during 1959-1969</td>
<td>Eco. (Singh)</td>
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<tr>
<td>20. Moderately complicated step-wise regression analysis:</td>
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<tr>
<td>Ludhiana wheat production model - weather index as dependent variables</td>
<td>Basic Research (Oury)</td>
<td>In progress</td>
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<tr>
<td>Work</td>
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<td>Status</td>
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<td>----------------------------------------------------------------------</td>
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<tr>
<td>21. Moderately complicated statistical calculations:Buffer stock project</td>
<td>Basic Research(Goreux)</td>
<td>Completed</td>
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<tr>
<td>22. Complicated calculations:</td>
<td>Public Util.Proj. (Hinnig)</td>
<td>In progress</td>
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<tr>
<td>Liberia - project calculation of rate of return, given certain level of probabilities</td>
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<td>23. Moderately complicated calculations:</td>
<td>Agric.Proj. (Knobel)</td>
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<td>Latin America livestock projects</td>
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<tr>
<td>a) calculation of amortization schedules</td>
<td></td>
<td></td>
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<tr>
<td>b) calculation of exports of animals, technical service budget etc. for various countries</td>
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<tr>
<td>24. Moderately complicated statistical calculations:Interrelations of GNP and index of development variables for a number of countries</td>
<td>Dev. Prog.Studies (Sundrum)</td>
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<tr>
<td>25. Moderately complicated data handling and tabulations:</td>
<td>E. Asia &amp; Pacific (Reif)</td>
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<tr>
<td>Korean Mission</td>
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<td>26. Moderately complicated statistical analysis:</td>
<td>Sc. Asia (Lee)</td>
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<tr>
<td>India fertilizer demand study by states and districts</td>
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<tr>
<td>27. Moderately complicated statistical calculations and tabulations:</td>
<td>W. H. (Pilvin)</td>
<td>In progress</td>
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<tr>
<td>Bolivia - country report</td>
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<td>IERD and IDA commitments for October 1969</td>
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<td>Nr.</td>
<td>A. X.</td>
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<td>1</td>
<td>gmnrek</td>
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<td>soeber</td>
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<td>3</td>
<td>!Z W2s</td>
<td>Eco. (Stat.Serv.)</td>
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<td>Eco. (de Weille)</td>
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<td>7</td>
<td>In progress</td>
<td>Eco. (Kundu)</td>
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<td>8</td>
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<td>In progress</td>
<td>Eco. (Ray)</td>
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<td>10</td>
<td>Eco. (Husain)</td>
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<td>Eco. (Thias/Carnoy)</td>
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<td>Eco. (Stat.Serv.)</td>
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<td>14</td>
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<td>15</td>
<td>Eco. (Ray)</td>
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</tr>
<tr>
<td>16</td>
<td>Transp.Proj. (Pouliquen)</td>
<td>In abeyance</td>
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</table>
Work | Requested by | Status
--- | --- | ---
17. Further development of existing road analysis program | Transp.Proj.(Pouliquen) | In progress
18. Evaluation of the transport part of the Gabes project | Transp.Proj.(Pouliquen) | In progress
20. Klengtoi Wharf Study - testing ship arrival patterns and distributions for tonnages | Transp.Proj.(Pouliquen) | In progress
21. Production of Bank Portfolio | P & B (Blaxall) | In progress
22. Debt model | P & B (Colago) | In progress
23. Preparation of input to Portfolio | P & B (Blaxall) | Completed
24. Net Transfer Model | Creditworthiness (de Vries) | In progress
25. Average term calculation | Creditworthiness (Devaux) | In progress
26. Estimates of National Accounts | Comparative Data(Leoni) | In progress
27. Buffer Stocks Financial Model | Basic Research(Coreux) | Completed
28. Modified net transfer model (Turkey) | Europe, Middle East and No.Africa(Billington) | Completed
D. CONTINUING

EXTERNAL DEBT

1. Compilation of data for quarterly tables showing all foreign bonds and equities publicly-issued and privately-placed in various markets.

2. Preliminary checking and coding of ERS Forms 1.

3. Compilation of data on deposit rates and weighted average yields of Eurodollar.

4. All countries - semi-annual conversion of Treasurer's IBM cards to statistics IBM cards.

5. Preparation of current data on yields of IBRD bonds.


7. Maintenance of ERS files.

8. Highly technical drafting of manual of instructions for treatment and processing of external debt reported under debtor and creditor systems.


10. Compilation of debt outstanding and service payments by country and area for all developing and developed countries.

11. Compilation of debt statistics on selected countries.


13. Checking debt data in Economic Reports.

GENERAL STATISTICS

1. Maintenance of supplier vouchers on IBRD and IDA disbursements.

2. Maintenance of IBRD/IDA loans and credits by economic purpose.

PROGRAMMING

1. Maintenance of existing programs (such as revisions, updating, debugging and assistance in interpretation).

cc: Mr. Stevenson
The professional staff of the Statistical Services Division carried out the activities indicated below during the period November 16 to 30, 1969:

Tiemann - Mission to Peru.

McFheeters - Discussions with U.S. Treasury officials on forthcoming review of Expanded Reporting System (ERS); with U.S. State Department and Presidential Task Force personnel on external debt data; with Creditworthiness Studies and Programming and Budgeting personnel on data requirements and analysis; with representatives of GATT and IMF on statistical coordination. Presentation of revised External Debt System to Data Processing Committee. Completed benefit/cost analysis of revised debt system. Preparation of plans and strategy for annual review of ERS. Supervision of Division in absence of Division Chief; attention to administrative matters, including personnel and organization.

Goor - Completed administrative work in connection with evaluations. Directing the preparation of new estimates of disbursements in the next five fiscal years. Reviewing validity of disbursements rates as applied to new commitments. Preparing for the changeover to the new base fiscal year for the "Financial Model" projections.

External Debt Section


Slappey - For the external debt system project: continued work on debtor reporting forms (forms design, instructions, card layout) and provided specifications for generating files from the existing files. Provided specifications for special projections. Leave.

Parrella - Compilations of Western Hemisphere data for a net transfer model. Wrote memorandum on external debt report of Argentina. General supervision.


Caden - Discussions with Mr. Bitterman of U.S. Treasury on implications for U.S. reporting of proposals for change in the ERS. Survey of reporting practices of all participants in the ERS. General supervision of ERS group.

Douletsinos - Wrote memorandum on Indonesia's external public debt report. Checked UNR's debt submission and prepared data for processing. Met with area economist to discuss updating of Yugoslavia's debt tables. Attended Section's staff meeting. Training of new staff member. General supervision. Leave.

Helna - Mission to Ghana.

General Statistics Section

Kundu - Classification of developing countries. Discussions on spurious correlation in regressions of deflated variables - interpretation of regression results of share of educational expenditure in Govt. expenditure related to per capita GNP etc. in African countries. Discussions on data and estimation problems in relating loan disbursements to population, GNP etc. Discussion on aggregation of storage and production facilities of Indian Fertilizer Plants, optimisation of stock requirements. Discussion on interpretation of residuals in regression mentioned in "Patterns of Govt. spending in Developing Countries" by Lutz (EI/69/36). Discounted cash flow of Bolivia Gulf oil proceeds. Calculation of input-output matrix and supply requirements for construction sector from Jamaica, input-output table for 1965. Meeting with Mr. Till (GATT) on the usefulness to the Bank of his data on tariff rates and imports of industrial countries; memo on the meeting. Miscellaneous reading. General supervision of the Section.


Al-Sharbati - Portugal Study: crop and livestock data - regression and statistical analysis. Evaluation of job requests handled by General Statistics Section during 1967-69 according to their complexity and manpower requirement. Time series analysis on the Korean Industrial production
Al-Sharbati (Cont.)

- Meeting to discuss the Tunisian Education Project.
- Preparation of progress reports. Partial supervision.


Lejano - Stages of Industrial Development: involves moderately complicated calculation of various economic indicators to measure industrial development. Liberia Power Project: involves complicated rate of return calculation given certain level of probabilities. India Fertiliser Study: continuation of familiarization of the subject. This project will eventually involve complicated model building to project fertilizer demand in India by state and district. Miscellaneous reading. Leave.

Gistrakos - Statistical calculations including interrelations of GDP and index of development variables for a number of countries. Food Demand Analysis in Portugal: regression analysis between 150 variables. Ceylon Country Report. Leave.

Lara - Report on Ceylon: regression analysis; calculation of the ratio of intermediate product (excluding imports and including imports) for 11 commodities. Labor Study of Less Developed Countries: graphing manufacture, service and agricultural labor to per capita income for 60 countries. Livestock Project in Latin America: calculation of amortization schedules; calculation of exports of animals, technical service budget etc. for various countries.


Programming Section

Angel - Continued debugging Portfolio Program; continued preparation of data to run Net Transfer Model. Wrote a modified Net Transfer Model for Turkey. Started writing an Average Term calculation program; started writing a new debt model. Continued conversion of Cash Flow program to 25500. Attended Data Processing Committee meeting. Supervision of the Section.

Abellon - Modified and completed Buffer Stocks Financing Model program and ran it several times using different data sets. Modified U.S. Waterborne Trade with Central American Countries program. Continued work on DAM.

Bradley - Continued work on new External Debt System.

Comer - Continued work on the Bangkok Port Simulation program.
Condliffe - System analysis and programming of the Education Model. Continued work on the Risk Analysis for the Livestock Model. Made minor changes on the input-output analysis package. Revised the Econometric Simulation Model to calculate average loan terms. Revised the present value routine.

Pan - Worked on estimates of National Accounts. Completed Port of Guayaquil Study. Modified Port of Guayaquil program to test ship arrival patterns and distributions for tonnages for Longloii Wharf.

Krishna - Home leave.

Kieser - Diagrammed and began coding the program which will generate table 1 and 2 in the new external debt system. Preparation for a presentation of the system to the computer steering committee and also preparing a cost-benefit analysis of the system.

Schneider - Continued work on Transportation Model: created a new version of model, which cuts off macro-economic model, disaggregation of supplies and demands and which reads in data on supplies and demands for each subcommodity, supply and demand made.

Slade - Continued work on the external debt system. This involved giving a presentation of the system to the computer steering committee, and working on a cost-benefit summary. In addition, began the file creation program, made modifications to systems and data base design, and coordinated efforts of others working on the system. Continued monitoring the progress of staff members taking the FORTRAN course.

Yen - Home leave.

Attil

cc: Mr. McPherson
    Mr. Lowther (2)
## PROFESSIONAL STAFF

### TIME DISTRIBUTION - PERCENTAGE

**November 16-30, 1969**

<table>
<thead>
<tr>
<th>I - Research</th>
<th>10.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>II - Service</td>
<td>53.3</td>
</tr>
<tr>
<td>III - Supervision</td>
<td>9.4</td>
</tr>
<tr>
<td>IV - International meetings and report writing</td>
<td>6.3</td>
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<tr>
<td>V - Other activities</td>
<td>9.5</td>
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<tr>
<td>VI - Training</td>
<td>0.5</td>
</tr>
<tr>
<td>VII - Leave</td>
<td>10.7</td>
</tr>
</tbody>
</table>

### Total: 100.0%

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*Statistical Services Division*

*Economics Department*

*December 1, 1969*
George Kalmanoff

Progress Report of Economics of Industrialization Division
for the period November 16-30, 1969 (9 days)

George Kalmanoff

Memorandum for Mr. McNamara on Rockefeller Proposal for Tariff Preferences for IDC's (2½ days)
Work on mission scheduling and content for Preinvestment Study Programs on Industry General supervision (3 days)

J. Datas-Panero

Preparation for mission to the Malagasy Republic Malagasy Republic Mission (1 day)

Mrs. H. Hughes

Industrialisation in Southeast Asia Request of Executive Director (Mr. Ramirez-Eva) on Tariff Rates for Manufactures in Developed Countries (8 days)

A. Nowicki

Work on Korea mission report (9 days)

B. Walstedt

Eregli steel mill appraisal Steel prices (2 days)
Turkish shipbuilding (3 days)
Reading and sundry tasks (½ day)
Sick leave (¼ day)

Miss L. Keough

Research on OECD progress on negotiations for tariff preferences for developing countries (3 days)
Preliminary Research on "Exports of Cotton Textiles from Developing Countries to the United States" (6 days)

Mr. H. Neufeld

Tariff Rates for Manufactured Products in Developed Countries (3 days)
Research for paper on Levels of Industrial Development in Latin America (4 days)
Work on Statistical Indicators (2 days)

P. Ojinnaka

Economics of shipping and shipbuilding: comments on Turkey (5 days)
Eregli steel plant expansion (2 days)
Belgium: Comparison of quoted export base prices and average annual export prices for steel products (2 days)

H.R. Ullmann

Korea mission work for Mr. Nowicki (9 days)

cc: Mr. Stevenson
Mr. Alexander Stevenson

Samir K. Bhatia

Economics of Urbanization Division: Progress Report - November 17-30

Miss Briggs


Mr. Bhatia

1. Continued work on Pakistan research project.

2. Delivered a lecture on "The National Costs Approach for Urban Planning" to the participants of the General Projects Course of the E.D.I.

3. Meeting with Mr. Guillermo Caissie, Director, Center for Urban and Regional Studies, Catholic University of Chile, and prepared a note on the meeting.

4. Discussed the urban problems of Djakarta with Mr. W. Tims of the Area Department before his departure to Indonesia.

5. General administration.

Mr. Mera

1. On mission to India.

Mr. Westebbe

1. On mission to India.

SKBhatia

cc: Mr. Kamarck
OFFICE MEMORANDUM

TO: FILES
FROM: Shlomo Reutlinger

DATE: November 25, 1969

SUBJECT: Meeting with Mr. E. N. Elliot Regarding Cost-Benefit Analysis of Postal Services

1. Mr. Stevenson and I met briefly today with Mr. Elliot of the U. K. Postal Service.

2. Mr. Elliot is interested in promoting a methodological study on the use of cost-benefit analysis for evaluating postal services in developing countries. He knew of several organizations which might be interested in giving financial backing and supervision to such a study; however, he felt that the Bank may be more qualified to supervise a study of this kind and more effective in creating cost-benefit consciousness in this field in developing countries.

3. We suggested that UNDP may be the most appropriate organization for initiating such a study. While we recognize the possibility that postal services may be a legitimate concern, we would not be able to rank this area high among our research priorities at the present time.

SReutlinger: bso

cc. Messrs. A. Stevenson
H. G. van der Tak
Work Progress Report for the Comparative Data Division for the Period
November 1-15, 1969

Computer Data Bank

1. Work continued on the preparation of the basic data for national accounts and other indicators for the Data Bank. Mr. Leoni and Mrs. Pan from Statistics have been working on computer programming for various estimates.

Five-Year Projection Exercise

2. The volume of work on this project has increased considerably. Mr. Leoni, as supervisor of the project, has held numerous meetings with the area departments. Tables have been finished and reproduced for Chad, Thailand, Iran, Uganda, Singapore, Mexico, and Panama.

Miscellaneous

3. On November 14, Miss Vial returned to the Bank from a mission to Yugoslavia and took over the acting direction of the Division.

cc: Mr. Stevenson
    Mr. Louther
## Comparative Data Division

### Man-Days Worked

**November 1-15, 1969**

<table>
<thead>
<tr>
<th>I. Professionals</th>
<th>Total</th>
<th>Data Bank</th>
<th>5-Year Plan</th>
<th>Mission to Yugoslavia</th>
<th>Misc.</th>
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<tr>
<td>J. Bory /a</td>
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<td>I. Franchet /b</td>
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<tr>
<td>L. Laffey</td>
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<td>A. Leoni</td>
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<td>O. Novak /a</td>
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<td>R. Aspinwall</td>
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<td>G. Baird</td>
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<td>R. de Campos</td>
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<td>L. Francisco</td>
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<td>T. Khalil</td>
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<td>L. Kendall</td>
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</table>

| Total                  | 89.5  | 52        | 26          | 1.5                    | 10    |

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/\a On mission to Pakistan.

/\b On mission to Cambodia and the Philippines.

/\c On mission to Yugoslavia up to November 13.
Mr. A. Stevenson                      November 19, 1969

S. Reutlinger

Activities of Sector and Projects Studies Division, November 1-15

Agriculture

Ablasser: Brazil agriculture mission (9 days).

Duane: Selection and discussion of Indian irrigation projects for reappraisal (4 days); orientation course (2 days); review of grain storage projects criteria study (2 days); review of livestock appraisal paper (1 day).

Egbert: Portugal agriculture sector study (8 days); Spanish (1 day).

Husain: Ethiopia irrigation project appraisal mission (9 days).

Manning: Mexico irrigation reappraisal study (7 days); commenting on grain storage projects criteria study (1 day); commenting on feeder road projects appraisal paper (1 day).

Reutlinger: Visit and delivery of seminar, Oxford University and Institute of Development Studies, Sussex, England (7 days); program development (2 days).

Seagraves: (Consultant) Revision of agriculture supply research paper (part time, Raleigh, N.C.).

Carr: Helping to prepare for Mr. Reutlinger’s Oxford seminar (4 days); Mexico irrigation reappraisal study (5 days).

Kim: Analysis of demand for food in Portugal (4 days); Portugal agriculture sector study (5 days).

King: Analyzing computer output for Portugal agriculture sector model (7 days); proofreading Techniques for Project Appraisal under Uncertainty (1 day); annual leave (1 day).

Wilde: (Consultant) Grain storage projects criteria (part time, Boston, Mass.)

Education

Carnoy: (Consultant) Tunisia education study (part time, Stanford, Calif.)

Thiss: Revision of Kenya education study (7 days); Tunisia education study (1 day); education financing research proposal for division and for International Institute of Education Planning (1 day).

Brandenburg: Tunisia education study (8 days); French (1 day).
Transportation

de Veille: Administration (2 days); optimum timing of investment paper (2 days); highway design standards study (1 day); transport planning models study (1 day); comments and advice (1 day); sick leave (2 days).

Harral: Transport planning models study (3 days); highway design standards study (½ day); discussion on Thailand railway reappraisal (1 day).

Israel: Thailand railway reappraisal study (9 days).

Miller: Transport planning models study (7 days); Thailand railway reappraisal study (2 days).

Corti: (Consultant) Regulation of road transport study (part time, Utrecht, Math.); in office November 3-7.

Ray: Central American ports study (8 days); sick leave (1 day).

Isaac: Transport planning models study (9 days).

Mijares: Transport planning models study (6 days); railway model sensitivity analysis for railway reappraisal study (2 days); minimum path routine for Mr. Ray (1 day).

Pernia: Central American ports study; export projection, domestic origin study, communications with Central American officials, and consultations with USDA (8 days); French (1 day).

Public Utilities

Anderson: Linear programming statements of investment and operating decisions in electricity supply; writing paper (5 days); computer testing of formulas (1 day).

Villalobos: Computations for analysis of electricity demand forecasts for Mr. Anderson (4 days); regressions for electricity demand forecast in Guatemala (5 days).

General

Snell: Revision of Kenya education study (½ day); progress report (½ day).

van der Tak: Regulation of road transport study (3 days); education program development (1 day); Thailand railway reappraisal study (2 days); general supervision (3 days).

Scheutlinger: PR.

cc: Mr. Kamarek
Mr. Lowther
Mr. Alexander Stevenson

November 16, 1969

Emilrich M. Schaebeck

Report on the Activities of the Domestic Finance Division for the Period
November 7-14, 1969.

Major Studies

Mr. Gandhi - worked on public expenditures on education, especially
teachers' salaries in Africa, as part of the Study on the Growth and Structure
of Government Expenditure in Developing Countries (9 days).

Mr. Schaebeck - research study on the Interest Elasticity Deposits
in India (6 days).

Country and Project Mission Work

Mr. Joshi - has been to China in connection with the DFC's mission
to China on the reappraisal of the OED. Arrived in Washington on November 14.

Mr. Beier - has been in Yugoslavia as a member of the economic
mission. Arrived in Washington on November 12.

Mr. Eklund - has been in Pakistan for his economic work in that
country regarding fiscal and financial policies to increase domestic resource
mobilization in West Pakistan, the resource position of East Pakistan, and the
IBRD/PIIE research project.

Mr. Please - has been in China to assist the DFC mission in its
examination of OED's role in the mobilization of domestic resources, and to
East Pakistan to assist Mr. Eklund in his work on the resource position of the
COEP. Arrived in Washington on November 17.

Other Activities

Mr. Stolper - attended discussions on problems of public expenditures
with the Area Department and has been reading Economics Department staff papers
and publications.

Miss Meldau - collecting data for the monetary model for India (5 days);
worked on government expenditures in developing countries (4 days).

Miss Decous - regression analysis of government tax revenues in
Iran (5 days); collection of data on banking companies in India (4 days).

Mr. Schaebeck - worked on five-year projection for Iran (3 days).

Eichmebeck/lo
Mr. Alexander Stevenson

Robert A. McPheters, Jr.

Progress Report - Professional Staff - November 1-15, 1969

The professional staff of the Statistical Services Division carried out the activities indicated below during the period November 1 to 15, 1969:

Tiemann - Preparation for meetings of Central Bank Technicians of the Western Hemisphere. Negotiations with OECD for date of DAC review of ERS. Discussions with Creditworthiness Group and Programming and Budgeting Department to provide staff to meet their statistical and programming needs. Preparation and review of personnel evaluations. Other administrative and supervisory responsibilities, including interviewing of job applicants.

McPheters - Extensive discussions with representatives of Programming and Budgeting Department in preparation for long-run debt and capital flow analysis of selected member countries. Continued consideration and planning for revision of external debt reporting systems. Discussion with Education Projects Department staff and consultants on project appraisal and analysis methodology. Discussions with various area department and studies groups personnel on country data problems. General supervision and administration, including attention to certain personnel matters.

Goor - Administrative work in connection with "evaluations". Directing the preparation of new estimates of disbursements in the next five fiscal years. Preparing for the changeover to the new base fiscal year for the "Financial Model" projections. Sick leave.

External Debt Section


Slappey - For external debt system project: continued work on designing reporting forms and writing instructions for using the forms; continued instructing programmer analysts in projection techniques.
Perella - Reconciliation of Colombia debt data comparing IBRD and Bank of Colombia data. Supervision of preparation of list of all creditors to Western Hemisphere countries. Directing preparation of Chile debt tables broken down by sector. Directing and supervising several amortization schedules for a proposed joint-lending project to Colombia. Training of new staff member. General supervision. Annual leave.


Samonte - Finalized tables on comparison of data reported by creditors on insured and guaranteed private lending and by debtors on suppliers' credits as of 12/31/68. Prepared a listing of creditor and debtor country codes and their corresponding currency symbols. General supervision.

Caden - Preparation of materials for ERS Annual Review meeting. General survey of status of reporting of all participants in the ERS. Writing of personal evaluations. General supervision of ERS group.

Douletsinos - Wrote memoranda on external debt reports of Belgium, Japan and South Africa. Met with Mr. de Wit, Mr. Armstrong and Mrs. Paulson to discuss Syria's reporting requirements on external debt. Prepared debt data for mission to Syria. Drafted memorandum on Indonesia's debt submission. Updated reports on status of debt information for all countries. General supervision. Sick leave.

Hulme - Preparation for Ghana debt mission.

General Statistics Section

Kundu - Classification of developing countries (Kumarck). Discussion with Mr. Bohr on Indian fertilizer demand study. Country data on IBRD and IDA loans and credits by purpose - programming corrections. Discussion with Mr. Sundrum about relation of GNP with "Barry"(Chicago) Index of Development. Miscellaneous reading. General supervision.

Al-Sharbaty - Portugal Study - crop and livestock data.
Evaluation of job requests handled by General Statistics Section during 1967-69 according to their complexity and man power requirement. Preparation of progress reports. Partial supervision.

Fairall - Survey of hotel rates paid by IDA for business trips. IBRD, IDA and Bilateral aid to India. OECD aid to LDC. Balance of payments for classification of LDC. IBRD and IDA disbursements in Canada. Loans to India by purpose. Checking computer runs, IBRD and IDA commitments. Annual leave.

Lejano - Stages of industrial development: involves moderately complicated calculation of various economic indicators to measure industrial development. Kenya Model: moderately complicated regression analysis involving GNP, exports, imports, etc. Liberia Power Project: involves complicated rate of return calculation given certain level of probabilities. India fertilizer demand study: brushing up on fertilizer readings. Miscellaneous readings. Special leave.

Giatrakos - Portugal food demand analysis for Mr. Egbert. Statistical calculations including interrelations of GNP and index of development variables for a number of countries for Mr. Sundrum.

Lava - Seasonal index for coffee in Brazil for Mr. Singh. Kenya Econometric Model for Mr. Shourie. General readings. Sick leave.


Programming Section

Angel - Continued preparing input data to Portfolio; ran some grant elements; ran projection of loan disbursements based on June 69 data; wrote a net transfer model and prepared data to run the model on 30 countries. General supervision. Writing of Annual Reviews.

Comer - Completed sensitivity analysis on the highway and transfer models of the Harvard Transportation Model. Started writing the Ethiopian Irrigation Risk Analysis Program. Modified the program previously developed for the Rehob Irrigation Project to include unirrigated as well as irrigated land. Completed a port analysis project. Wrote small program to generate a trapezoidal
Coman  -(Cont.)
distribution. Started development of a port simulation program for the Bangkok port project.

Concliffe - Continued analysis of the education model and wrote a program to forecast teacher salaries. Continued work on the Risk Analysis for the Livestock Model. Prepared data for the evaluation of a livestock project in Guatemala. Revised the rate of return program for electrification of Korean railroads. Revisited the econometric simulation model for a debt study of Pakistan to make it more flexible. Added a grant element calculation to the econometric simulation model.

Fon - Continued work on Guayaquil Port Study - additional work as requested. Worked on estimates of National Accounts.

Abellon - Worked on Waterborne U.S. Trade with Central America countries program; on Buffer Stock Financing Model; gave assistance to Statistical Section on use of DAM and rate of return program.

Bradley - Continued work on new external debt system.

Krishna - Home leave.

Slade - Continued work on the external debt system. This included making final adjustments to the systems and data base design, meeting with other members of the team to iron out problems, and starting programming specifications for the programs I will be writing. Additionally prepared detailed program specifications for one of the system's simpler programs which will be written by a beginning programmer under my supervision. Continued monitoring the progress of students taking the FORTRAN programming course. Wrote a random number generator which produces random integers over the range from zero to N-1.

Kiesar - Developed program specification for external debt system. Helped Harvard Transportation Model team with redesign of present system.

Schneider - Continued work on Harvard Transportation Model; Created new version of Macro-model; made changes in cost-performance model. Step-regression analysis on BASIS.

Yen - Home leave.

Att:1

cc: Mr. Lowther

/sra
**PROFESSIONAL STAFF**

**TIME DISTRIBUTION - PERCENTAGE**

**November 1-15, 1969**

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I - Research</td>
<td>15.8</td>
</tr>
<tr>
<td>II - Service</td>
<td>54.5</td>
</tr>
<tr>
<td>III - Supervision</td>
<td>10.8</td>
</tr>
<tr>
<td>IV - International meetings and report writing</td>
<td>1.7</td>
</tr>
<tr>
<td>V - Other activities</td>
<td>5.1</td>
</tr>
<tr>
<td>VI - Training</td>
<td>0.7</td>
</tr>
<tr>
<td>VII - Leave</td>
<td>11.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Statistical Services Division  
Economics Department  
November 18, 1969
### A. EXTERNAL DEBT

<table>
<thead>
<tr>
<th>Work</th>
<th>Requested by</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Posting, coding and preparation of debt tables; see monthly report prepared by External Debt Section for most recent status of tables.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. South Africa - preparation of memorandum on debt submission as of December 1968</td>
<td>Europe, Middle East and No. Africa</td>
<td>In progress</td>
</tr>
<tr>
<td>3. Morocco - preparation of amortization schedule for proposed IBRD loan</td>
<td>Europe, Middle East and No.Africa (Mendiola)</td>
<td>Completed</td>
</tr>
<tr>
<td>4. Cyprus - preparation of amortization schedule for proposed IBRD loan</td>
<td>Europe, Middle East and No.Africa (Richardson)</td>
<td>Completed</td>
</tr>
<tr>
<td>5. Colombia - preparation of amortization schedule for joint lending project</td>
<td>W. H. (Roeissler)</td>
<td>In progress</td>
</tr>
<tr>
<td>6. Dominican Republic - preparation of amortization schedule for proposed IBRD loan</td>
<td>W. H. (Ruffini)</td>
<td>Completed</td>
</tr>
<tr>
<td>7. Indonesia - preparation of memorandum on debt submission as of December 31, 1968</td>
<td>E. Asia &amp; Pacific</td>
<td>In progress</td>
</tr>
<tr>
<td>8. Japan - preparation of memorandum on debt submission as of December 31, 1968</td>
<td>E. Asia &amp; Pacific</td>
<td>Completed</td>
</tr>
<tr>
<td>9. Pakistan - preparation of special tables including local currency historical tables and projection of major additions on fiscal basis</td>
<td>So. Asia (Niebuhr)</td>
<td>Completed</td>
</tr>
<tr>
<td>10. Preparation of creditors lists by country</td>
<td>Eco.</td>
<td>In progress</td>
</tr>
<tr>
<td>11. Compilation of bond tables for the Ad Hoc Group of Financial Statisticians</td>
<td>Eco.</td>
<td>Completed</td>
</tr>
<tr>
<td>12. Calculations on proposal to subsidize IBRD interest through IDA credit</td>
<td>Off.Pres. (Cope)</td>
<td>In progress</td>
</tr>
<tr>
<td>14. Tables on bond issues of developing countries</td>
<td>P &amp; B (Colago)</td>
<td>Completed</td>
</tr>
</tbody>
</table>
### B. GENERAL STATISTICS

<table>
<thead>
<tr>
<th>Work</th>
<th>Requested by</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderately complicated tabulations: IBRD and IDA commitments in Africa by country, for fiscal years 1967/1968</td>
<td>Eco. (Kundu)</td>
<td>In abeyance</td>
</tr>
<tr>
<td>Moderately complicated data collection: Pakistan - detailed industrial data, input of imported goods etc.</td>
<td>Eco. (Schrenk)</td>
<td>In abeyance</td>
</tr>
<tr>
<td>Complicated statistical and regression analysis: Port of Mombasa Study - determination of service time of ships in the port (loading and unloading), identification and quantification of the various factors involved with special focus on the average number of gangs working simultaneously on a ship. Testing ship arrival patterns and service time distribution</td>
<td>Eco. (de Weille)</td>
<td>In abeyance</td>
</tr>
<tr>
<td>Complicated analysis: Classifications of developing countries - selection of criteria, their measurement and an index for classification</td>
<td>Eco. (Kamarck)</td>
<td>In progress</td>
</tr>
<tr>
<td>Complicated analysis: Preparation of factors and data for the projections of the &quot;IBRD Financial Model&quot; and the &quot;Five Year Plan&quot;. Testing disbursement projections of IBRD loans in total and by purpose</td>
<td>Eco. (Goor)</td>
<td>In progress</td>
</tr>
<tr>
<td>Sensitivity analysis of IBRD and IDA lending operations</td>
<td>Eco. (Goor)</td>
<td>In progress</td>
</tr>
<tr>
<td>Moderately complicated calculations: Stages of industrial development. Various interrelationships among income, industrial output, exports, imports, share of manufactured goods, etc.</td>
<td>Eco. (Balassa/Hughes)</td>
<td>In progress</td>
</tr>
<tr>
<td>Moderately complicated data handling and statistical analysis: Portugal - livestock production, percentages of annual total production, average yield, time series analysis of yield by districts and for the whole country during 1952-67</td>
<td>Eco. (Egbert)</td>
<td>In progress</td>
</tr>
<tr>
<td>Linear and non-linear programming models of the output and employment possibilities of the economy of Jamaica</td>
<td>Eco. (Carter)</td>
<td>In progress</td>
</tr>
<tr>
<td>Moderately complicated regression analysis: Portugal - food demand analysis</td>
<td>Eco. (Egbert)</td>
<td>In progress</td>
</tr>
<tr>
<td>Work</td>
<td>Requested by</td>
<td>Status</td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
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</tr>
<tr>
<td>11. Moderately complicated regression analysis: Guayaquil Port Study</td>
<td>Eco. (Ray)</td>
<td>In progress</td>
</tr>
<tr>
<td>12. Moderately complicated data handling and statistical analysis:</td>
<td>Eco. (Egbert)</td>
<td>In progress</td>
</tr>
<tr>
<td>Portugal - crop production, percentages of annual total production,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>total acreage, time series analysis for each crop by districts, regions, and for the whole country during 1952-67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Moderately complicated regression analysis:</td>
<td>Eco. (Gandhi)</td>
<td>In progress</td>
</tr>
<tr>
<td>A cross section analysis of government expenditure patterns in developing countries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Moderately complicated tabulations and regressions:</td>
<td>Eco. (Ray)</td>
<td>In progress</td>
</tr>
<tr>
<td>Central American countries trade and commodity data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Moderately complicated regression analysis and statistical calculations:</td>
<td>Eco. (Shourie)</td>
<td>In progress</td>
</tr>
<tr>
<td>Kenya econometric model involving calculations of increment in agriculture, manufacturing etc. projection of GDP, exports, imports, capital to 1978</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Moderately complicated regression and statistical calculations:</td>
<td>Eco. (Singh)</td>
<td>In progress</td>
</tr>
<tr>
<td>Brazil - calculation of seasonal index for coffee during 1959-1969</td>
<td></td>
<td></td>
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<tr>
<td>17. Moderately complicated step-wise regression analysis:</td>
<td>Basic Research (Oury)</td>
<td>In progress</td>
</tr>
<tr>
<td>Ludhiana wheat production model - weather index as dependent variable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Moderately complicated regression analysis:</td>
<td>Basic Research (Singh)</td>
<td>Completed</td>
</tr>
<tr>
<td>Unemployment problem of the world - econometric model with labor force etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Complicated calculations:</td>
<td>Public Util.Proj. (Minnig)</td>
<td>In progress</td>
</tr>
<tr>
<td>Liberia - project calculation of rate of return, given certain level of probabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Optimum cost model of an education project</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Moderately complicated tabulations:</td>
<td>AID (Rucker)</td>
<td>Completed</td>
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<tr>
<td>IBRD and IDA and bilateral aid to India</td>
<td></td>
<td></td>
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<tr>
<td>Work</td>
<td>Requested by</td>
<td>Status</td>
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<tr>
<td>---------------------------------------------------------------------</td>
<td>-----------------------</td>
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<tr>
<td>Simple statistical calculations:</td>
<td>Adm. (Gregory)</td>
<td>Completed</td>
</tr>
<tr>
<td>Mean and standard deviation of grouped data of school building costs</td>
<td></td>
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<tr>
<td>Moderately complicated tabulations:</td>
<td>Adm. (Gantt)</td>
<td>Completed</td>
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<tr>
<td>Survey of hotel costs, rates and disbursements for IBRD travel</td>
<td></td>
<td></td>
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<tr>
<td>Moderately complicated statistical calculations:</td>
<td>Dev. Program Studies</td>
<td>In progress</td>
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<tr>
<td>Interrelations of GNP and index of development variables for a number of countries</td>
<td>(Sundrum)</td>
<td></td>
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<tr>
<td>Moderately complicated regression analysis:</td>
<td>IFC (Cohn)</td>
<td>Completed</td>
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<tr>
<td>Projection of IFC commitments 1960-67 to 1975</td>
<td></td>
<td></td>
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<tr>
<td>Moderately complicated tabulations:</td>
<td>Controller's (Verheyen)</td>
<td>Completed</td>
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<tr>
<td>IBRD and IDA disbursements in Canada</td>
<td></td>
<td></td>
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<tr>
<td>Moderately complicated data handling and tabulations:</td>
<td>R. Asia &amp; Pacific (Reif)</td>
<td>In progress</td>
</tr>
<tr>
<td>Korean Mission</td>
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<tr>
<td>Moderately complicated statistical analysis:</td>
<td>So. Asia (Lee)</td>
<td>In progress</td>
</tr>
<tr>
<td>India fertilizer demand study by states and districts</td>
<td></td>
<td></td>
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<tr>
<td>Moderately complicated tabulations:</td>
<td>So. Asia (Cassen)</td>
<td>Completed</td>
</tr>
<tr>
<td>Loans to India by purpose</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work</td>
<td>Requested by</td>
<td>Status</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>----------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>1. Highly complex system analysis - planning a new system for coding, punching, assembling, editing, adjusting, external debt data in the form of a disk oriented data base and the required retrieval and processing procedures</td>
<td>Eco. (Stat.Serv.)</td>
<td>In progress</td>
</tr>
<tr>
<td>2. Complex systems analysis to plan and program a macroeconomic data bank</td>
<td>Eco. (Levy)</td>
<td>In progress</td>
</tr>
<tr>
<td>3. Highly complex system analysis and programming (OECD/IBRD Joint Reporting System) to produce tapes for OECD and summary tables for participants</td>
<td>Eco. (Stat.Serv.)</td>
<td>In progress</td>
</tr>
<tr>
<td>4. Moderately complex computer program to produce cash flow tables of World Bank operations</td>
<td>Eco. (Goor)</td>
<td>In progress</td>
</tr>
<tr>
<td>5. Harvard Transportation Model (analysis and debugging of a complex computer program including input, equations, output and FORTRAN conversion)</td>
<td>Eco. (Miller)</td>
<td>In progress</td>
</tr>
<tr>
<td>6. Port of Mombasa Study - testing ship arrival patterns and service time distributions</td>
<td>Eco. (de Weille)</td>
<td>In progress</td>
</tr>
<tr>
<td>7. Preparation of an input-output matrix program</td>
<td>Eco. (Kundu)</td>
<td>In progress</td>
</tr>
<tr>
<td>8. World tables summary - several programs to calculate and to print the annual growth rates of the aggregate amounts of national accounts by areas and by years</td>
<td>Eco. (Levy)</td>
<td>In progress</td>
</tr>
<tr>
<td>9. Port of Guayaquil Study - testing ship arrival patterns and distributions for waiting time, berthing time, etc. and to analyse the relationships between different variables</td>
<td>Eco. (Ray)</td>
<td>In progress</td>
</tr>
<tr>
<td>10. Risk analysis of an irrigation project</td>
<td>Eco. (Husain)</td>
<td>In progress</td>
</tr>
<tr>
<td>11. Tunisian education evaluation study</td>
<td>Eco. (Thiss/Carnoy)</td>
<td>In progress</td>
</tr>
<tr>
<td>12. Generalised debt model</td>
<td>Eco. (Stat.Serv.)</td>
<td>In progress</td>
</tr>
<tr>
<td>13. Imports of Persian Gulf countries</td>
<td>Eco. (Stat.Serv.)</td>
<td>In progress</td>
</tr>
<tr>
<td>14. Livestock Model</td>
<td>Eco. (Husain)</td>
<td>In progress</td>
</tr>
<tr>
<td>15. Waterborne U.S. trade with Central American countries</td>
<td>Eco. (Ray)</td>
<td>In progress</td>
</tr>
<tr>
<td>16. Population Model I</td>
<td>Eco. (Miller)</td>
<td>Completed</td>
</tr>
<tr>
<td>17. Basis - Burroughs advanced statistical inquiry system. Testing for B5500 system</td>
<td>Eco.</td>
<td>Completed</td>
</tr>
<tr>
<td>Work</td>
<td>Requested by</td>
<td>Status</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>----------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>18. Education Model</td>
<td>Transp.Proj. (Pouliquen)</td>
<td>In abeyance</td>
</tr>
<tr>
<td>19. Further development of existing road analysis program</td>
<td>Transp.Proj. (Pouliquen)</td>
<td>In progress</td>
</tr>
<tr>
<td>20. Evaluation of the transport part of the Gabes project</td>
<td>Transp.Proj. (Pouliquen)</td>
<td>In progress</td>
</tr>
<tr>
<td>22. Production of Bank Portfolio</td>
<td>P &amp; B (Blazall)</td>
<td>In progress</td>
</tr>
<tr>
<td>23. Preparation of input to Portfolio</td>
<td>P &amp; B (Blazall)</td>
<td>In progress</td>
</tr>
<tr>
<td>24. Net Transfer Model</td>
<td>Creditworthiness (de Vries)</td>
<td>In progress</td>
</tr>
<tr>
<td>25. Program to compute Grant Element of loans contracted by 88 countries over the period 1965-67</td>
<td>Creditworthiness (de Vries)</td>
<td>Completed</td>
</tr>
<tr>
<td>26. Estimates of National Accounts</td>
<td>Comparative Data (Leoni)</td>
<td>In progress</td>
</tr>
<tr>
<td>27. Buffer Stocks Financing Model</td>
<td>Basic Research Center (Goreux)</td>
<td>In progress</td>
</tr>
</tbody>
</table>
D. CONTINUING

EXTERNAL DEBT

1. Compilation of data for quarterly tables showing all foreign bonds and equities publicly-issued and privately-placed in various markets.

2. Preliminary checking and coding of ERS Forms 1.

3. Compilation of data on deposit rates and weighted average yields of Eurodollar.

4. All countries - semi-annual conversion of Treasurer's IBM cards to statistics IBM cards.

5. Preparation of current data on yields of IBRD bonds.


7. Maintenance of ERS files.

8. Highly technical drafting of manual of instructions for treatment and processing of external debt reported under debtor and creditor systems.


10. Compilation of debt outstanding and service payments by country and area for all developing and developed countries.

11. Compilation of debt statistics on selected countries.


13. Checking debt data in Economic Reports.

GENERAL STATISTICS

1. Maintenance of supplier vouchers on IBRD and IDA disbursements.

2. Maintenance of IBRD/IDA loans and credits by economic purpose.

PROGRAMMING

1. Maintenance of existing programs (such as revisions, updating, debugging and assistance in interpretation).

cc: Mr. Stevenson

/ra
<table>
<thead>
<tr>
<th>Name</th>
<th>Task Description</th>
<th>Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>George Kalmanoff</td>
<td>Position paper for Pearson Commission recommendation on industrial parks</td>
<td>2½</td>
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<tr>
<td></td>
<td>Review of outside candidates for staffing of Industrial Projects Department</td>
<td>2</td>
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<tr>
<td></td>
<td>Role of Economics Department vis-a-vis Industrial Projects Department</td>
<td>1</td>
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<td></td>
<td>General supervision</td>
<td>3½</td>
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<tr>
<td>J. Datas-Panero</td>
<td>Preparation for economic mission to the Malagasy Republic</td>
<td>6</td>
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<td></td>
<td>French class</td>
<td>1</td>
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<tr>
<td></td>
<td>Sick leave</td>
<td>2</td>
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<tr>
<td>Mrs. Hughes</td>
<td>Industrialization in Southeast Asia</td>
<td>8</td>
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<tr>
<td></td>
<td>Editing paper on Textiles Exports from LDC's to Europe by G. Shepherd</td>
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<tr>
<td>A. Nowicki</td>
<td>Work on Korea mission report</td>
<td>9</td>
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<tr>
<td>M. Schrenk</td>
<td>Sick leave</td>
<td>9</td>
</tr>
<tr>
<td>B. Walstedt</td>
<td>Ereğli Steel Project</td>
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<tr>
<td></td>
<td>Outlook for world steel prices</td>
<td>7</td>
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<tr>
<td></td>
<td>Other (meetings, reading, etc.)</td>
<td>1</td>
</tr>
<tr>
<td>Miss L. Keough</td>
<td>Preliminary Research on &quot;Exports of Cotton Textiles from Developing Countries to the United States&quot;</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Editing paper on Textiles Exports from LDC's to Europe by G. Shepherd</td>
<td>2</td>
</tr>
<tr>
<td>Mrs. N. Neufeld</td>
<td>Work on Statistical Indicators</td>
<td>5</td>
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<tr>
<td></td>
<td>Research for paper on Levels of Industrial Development in Latin America</td>
<td>4</td>
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<tr>
<td>P. Ojinnaka</td>
<td>Financial and operational data of selected steel producers in France</td>
<td>4</td>
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<tr>
<td></td>
<td>Steel prices in the U.S. 1958-1969</td>
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<td>Steel prices in Japan 1958-1969</td>
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<tr>
<td>H.R. Ullmann</td>
<td>Korea mission work for Mr. Nowicki</td>
<td>8½</td>
</tr>
<tr>
<td></td>
<td>Work on German steel market for Mr. Walstedt</td>
<td>½</td>
</tr>
</tbody>
</table>

cc: Mr. Stevenson
Economics of Urbanisation Division: Progress Report - November 1-16

Miss Brigg

1. Attendance at AID sponsored workshop on squatter housing in Latin America, November 3-7, and prepared a memo on the outcome of the seminar.

2. Worked on Pakistan study.

Mr. Bhatia:

1. Returned from mission to Pakistan and Iran on November 10.

2. While on mission to Iran, in addition to our terms of reference, prepared jointly with Mr. Westebbe, a briefing memorandum on the Iranian urban situation for Mr. McNamara.

3. Prepared a lecture for the participants of the General Projects Course of the EDI to be delivered on November 18.

Mr. More:

1. Prepared for India Mission and departed November 5.

Mr. Westebbe:

1. On missions to Iran and India.

cc: Mr. Kamarok
Distribution of the Economic Report on Indonesia

The attached report has been prepared primarily for use at the next meeting of the Inter-Governmental Group on Indonesia to be held in Amsterdam, December 8-10, 1969. The Indonesian Government wanted this meeting to be held before the end of 1969 because of its desire to present a 15-month aid request, covering the first quarter of 1970 and the subsequent fiscal year 1970/71. This has necessitated taking some short cuts both in the drafting and in the clearance of the report.

In view of the tight constraint, the report was entirely drafted in the field, discussed with the Resident Staff which also participated in the drafting, and subsequently with the Indonesian authorities. Clearance in the Bank has consisted of circulation for comments to the Economic Committee and discussion of its conclusions with Mr. Friedman. Detailed discussions with the IMF took place last week. In order to circulate the report to NCI members as soon as possible, we have asked the print shop to make every effort to get the report ready before the weekend.

Under these circumstances, I hope you will agree to authorize the distribution of the report on the basis of the attached Summary and Conclusions.

The main conclusions of the report affecting Bank group operations are:

(a) Indonesia should receive aid on the softest possible terms. The proposals of Dr. Abis for a long-term rescheduling of the pre-1967 debt has not as yet been accepted by Indonesia's creditors; therefore the possible debt service burden in the 1970's could still be very high, probably ranging around 30 per cent of export earnings. Even with a settlement on the terms suggested by Dr. Abis, the debt service burden would rise above 13 per cent of exports in the early 1970's.

(b) In the 15 months from January 1, 1970, to March 31, 1971, Indonesia requires aid commitments amount to $600 million, $200 million of commodity aid, $150 million of food aid, and $260 million of project aid. (This compares with a total of $550 million of aid commitments for calendar 1969.)

(c) With the degree of stability now achieved, the shift towards relatively more project aid appears to reflect appropriately
the increased emphasis on development rather than stabilisation. The mission has, together with the Resident Staff, identified projects totalling about $345 million as likely to be ready for commitment in 1970/71, thus fully supporting the project aid request of $260 million.

(d) The project aid mentioned above includes some local cost financing, which is considered to be necessary in order to alleviate the strain on local currency resources.

I would appreciate your authorisation for the Secretary's Department to distribute the report.

Attachment

cc: Mr. Shoab
     Mr. Friedman

WTims:OJMoDiarmid:hy
Mr. A. Stevenson

H. G. van der Tak

Activities of Sector and Projects Studies Division, October 16-31

Agriculture

Ablasser: Brazil agriculture mission (12 days).

Duane: Program development (6 days); review of railway line closure paper (4 days); review of Parsons Company irrigation model (2 days).

Egbert: Brazil agriculture mission (12 days).

Husain: Preparation for Ethiopia mission (3 days); preparation and delivery of EBI lecture (2 days); Ethiopia irrigation project appraisal mission (6 days); annual leave (1 day).

Manning: Mexico irrigation reappraisal study (5½ days); exploratory review of agriculture credit appraisals (2 days); Mexico agriculture sector report (1½ days); assisting in revision of Kenya education study (1 day); Mexico sectoral model, Basic Research Center (1 day).

Reutlinger: Grain storage projects criteria (7 days); administration (2 days); commenting on grain storage proposal for Agricultural Projects Department (1 day); program development (1 day); Spanish (1 day).

Seagraves: Revision of agriculture supply research paper (part time, Raleigh, N.C.)

Carr: Analysis of Bank agriculture loans to Kenya and Malaysia (5 days); review of Bank agriculture loans in preparation for Mr. Reutlinger’s trip to Oxford, England (4 days).

Kim: Analysis of demand for food in Portugal (6 days); Portugal sector study (6 days).

King: Grain storage projects criteria (12 days).

Wilde: Grain storage projects criteria (part time, Boston, Mass.)
Education

Carnoy:  Revision of Kenya education study and work on Tunisia education study (part time; Stanford, California); in office October 20 and 21.

Thias:  Tunisia education study (10 days); revision of Kenya education study (2 days).

Brandenburg:  Tunisia education study (11 days); including conference with Statistics Division and programming; French (1 day).

Transportation

de Weille:  Transport planning models study (3 days); highway design standards study (1 day); railway reappraisal study (1 day); feeder roads study (1 day); administration (2 days); program development (2 days); ongoing port research (1 day); NASA feeder roads system analysis (1 day).

Harral:  Transport planning models study (11 days); highway design standards study (1 day).

Israel:  Feeder roads appraisal study (6 days); railway reappraisal study (5 days); comments and advice (1 day).

Miller:  Conducting discussions on Colombia transport model with Colombian Government representatives (12 days).

Cort:  Regulation of road transport study (part time, Utrecht, Neth.)

(Consultant)

Ray:  Central American ports study (8 days); ongoing port research, ports of Guayaquil and Karachi (3 days); revision of optimum depth of port paper.

Isaac:  Transport planning models study (11 days), including participation in meetings with Colombian Government representatives; sick leave (1 day).

Mijares:  Participation in meetings with Colombian Government representatives (1 day); other transport planning models study work (9 days); minimum path program for Mr. Ray (2 days).

Pernia:  Central American ports study (11 days), including export and import projections, discussions with Statistics Division, and contacting government officials in Central America; French (1 day).
Public Utilities

Anderson: Investasent decision models in electricity supply (5 days); ex-post analysis of electricity demand (4 days); preparation and delivery of EWH lecture (3 days).

Villaflora: Vilma Villaflora joined division October 28; familiarisation with Bank public utilities literature (1 day); computations on ex-post analysis of electricity demand forecasts for Mr. Anderson (3 days).

General

Snell: Revision of Kenya education study (2 days); progress report and administrative charts (2 1/2 days).

van der Tak: Railway reappraisal study in Thailand (3 days); regulation of road transport study (2 days); Kenya education study (1 1/2 days); general supervision (3 1/2 days).

cc: Mr. Kamarck
    Mr. Lowther
OFFICE MEMORANDUM

TO: Mr. Andrew M. Kamarck

FROM: Bela Balassa

DATE: November 8, 1969

SUBJECT: Report on Activities - October 1969

Continuing Projects

Structure of Protection in Developing Countries
- Completed revision of Malayan study
- Started revision of Pakistan study
- Prepared paper on "Effective Protection in Developing Countries" incorporating some of the results of the project

Development Strategies in Semi-Industrial Countries
- Prepared project description for circulation and comment
- Correspondence with prospective contributors

Other Studies
- Prepared a comment on "Tariffs, Intermediate Goods and Domestic Protection" by Roy Ruffin for the American Economic Review

Other Activities
- Commented on "The Impact of Economic Integration Among Developing Areas on World Trade: The Case of Central America" at the request of The Journal of Developing Areas
- Review of "The Economics of Foreign Aid" by R. F. Mikesell at the request of The Journal of Finance
- Review of "Economic Planning and Policies in Britain, France and Germany" by Malcolm MacLennan at the request of The Annals
- Participated in the meetings of the Advisory Committee
- Participated in discussions on Project I of the Basic Research Center
- Participated in the Economic Seminar Committee Meeting
- Revised comment on Travis (February 1969) for The Journal of Political Economy
- Prepared a note on the attitude of GATT towards export subsidies by developing countries
Notes on Bank Studies and Papers

- Commented on "Industrialization of Iran" by Dragoslav Avramovic at the request of Peter Cargill
- Commented on report on Indonesian manufacturing by Helen Hughes

cc. Messrs. Stevenson
    Kalmanoff

BBalassa:alj
November 5, 1969

Professor Bruce F. Johnston
Food Research Institute
Stanford University
Stanford
CALIFORNIA 94305

Dear Professor Johnston:

Thanks for your letter of October 22, 1969, and Discussion Paper No. 69-9. I am looking forward to meeting with you on December 4 to further discuss common grounds for research. I have also passed on the contents of your letter to other interested persons in the Bank. If you are interested, we could discuss your central thesis and research proposals in a small forum at the time of your visit here. My telephone number is DUL - 3994.

Sincerely yours,

Shlomo Reutlinger
Sector and Projects Studies Division
Economics Department

SReutlinger:bs

cc. Mr. A. M. Kanarck
Mr. H. G. van der Tak
November 4, 1969

Mr. Andrew M. Kasarok

Andre Leoni

Work Progress Report for the Comparative Data Division for the Period
October 16-31, 1969

Computer Data Bank

1. Mr. Leoni and the research assistants continued to work on
the basic time series. Efforts have been made to complete the time
series in order to computerize the data.

Five-Year Projection Exercise

2. Revised tables have been completed through numerous meetings
with the areas concerned for Nigeria, China, Iran, Spain, Gambia,
Democratic Republic of Congo, Botswana, Papua and New Guinea.

Miscellaneous

3. A number of requests for urgent information have been handled.

cc: Mr. Stevenson
    Mr. Lowther
### Comparative Data Division

#### Man-Days Worked

**October 16-31, 1969**

<table>
<thead>
<tr>
<th>I. Professionals</th>
<th>Total</th>
<th>Data Bank</th>
<th>5-Year Plan</th>
<th>Miscellaneous</th>
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<tr>
<td>J. Bory</td>
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<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Y. Franchet</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>A. Leoni</td>
<td>13</td>
<td>3</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>G. Novak</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>J. Vial</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td></td>
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<table>
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<tr>
<th>II. Research Assistants</th>
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<tr>
<td>O. M. Amoskie</td>
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<td>13</td>
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<tr>
<td>R. Aspinwall</td>
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<td>10</td>
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<tr>
<td>G. Baird</td>
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<td>5</td>
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<tr>
<td>L. Francisco</td>
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<tr>
<td>T. Khalil</td>
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<td>-</td>
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<tr>
<td>L. Kendall</td>
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<td>-</td>
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<tr>
<td>L. Laffey</td>
<td>12</td>
<td>12</td>
<td>-</td>
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<td><strong>Total</strong></td>
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<td>75</td>
<td>27</td>
<td>3</td>
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</table>

\(\text{\textsuperscript{a}}\) On mission to Pakistan.

\(\text{\textsuperscript{b}}\) On mission to Cambodia and the Philippines.

\(\text{\textsuperscript{c}}\) On Mission to Yugoslavia.
Mr. Andrew Kamarc 

George Kalmanoff

Progress Report of Economics of Industrialisation Division
for the period October 16-31, 1969 (12 days)

November 3, 1969

George Kalmanoff

Review of draft appraisal of Industrial Estates Project, Pakistan (1 1/2 days)
Work for preparation of position paper for Pearson Commission recommendation on industrial parks (1 day)
Preparation of position paper for Pearson Commission recommendation on Bank advisory role re - industrial and foreign investment policies (2 days)
Review of IMF study for UNCTAD of Commercial Credits (1/3 day)
Turkish steel mill project (1/3 day)
Advisory Committee on Preferences for Domestic Suppliers (1/3 day)
Review of outside candidates for staffing of Industrial Projects Department (2 days)
General supervision (4 days)

J. Datas-Panero

Continued work on "Consumer Spending Patterns and Income Elasticities of Demand" (7 1/3 days)
Malagasy Republic - Pre-mission work (1 day)
Miscellaneous (1 day)
French class (1 1/3 days)
Special leave (1 day)

Mrs. Hughes

Industrialisation in Southeast Asia (12 days)

A. Nowicki

Work on Korea mission report (12 days)

M. Schrenk

Yugoslavia mission (part on sick leave) (12 days)

B. Walstedt

Eregli Steel Project (1 1/3 days)
Project Appraisal (2 1/3 days)
Outlook for World Steel Prices (3 days)
Other (meetings, reading, etc.) (2 days)

Miss L. Keough

Preliminary research on "Exports of Cotton Textiles from Developing Countries to the United States" (6 days)
Assembling data for Mr. Kalmanoff concerning economic policy recommendations in country economic reports for Turkey; analysis of industrial sector coverage in country economic reports - January-September 1969; participation by other international and bilateral development agencies in industrial estates (6 days)
<table>
<thead>
<tr>
<th>Name</th>
<th>Activity</th>
<th>Duration</th>
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<tbody>
<tr>
<td>Mrs. H. Neufeld</td>
<td>Preliminary research on Paper on the levels of industrial development in Latin America (4 days)</td>
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<tr>
<td></td>
<td>Revision of the Report on Statistical Indicators of Levels of Industrial Development (8 days)</td>
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<tr>
<td>P. Ojinnaka</td>
<td>Work on World Steel Market in France, Belgium, Luxembourg for Mr. Walstedt (5 days)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Annual leave (7 days)</td>
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<tr>
<td>H.R. Ullmann</td>
<td>Korea Mission work for Mr. Nowicki (5 days)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Work on German steel market for Mr. Walstedt (6 days)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Annual leave (1 day)</td>
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</table>

cc: Mr. Stevenson
Mr. Alexander Stevenson

Arthur E. Tiemann

November 3, 1969

Progress Report - Professional Staff - October 16 - 31, 1969

The professional staff of the Statistical Services Division carried out the activities indicated below during the period October 16 to 31, 1969:

Tiemann - Worked on problems of establishing an early warning system, as recommended by Pearson Commission. Data preparation for Mr. Friedman's speech in Denver. Discussions with Mr. deVries on data preparation and programming for creditworthiness debt model. Administrative duties, including resolution of problems on use of computer, preparing personnel evaluations and handling salary and space problems.

McSheeters - Extensive discussions with staff of Creditworthiness Studies Unit and Programming and Budgeting Department on data and data processing requirements. Continued work on revision of external debt reporting systems and debt analysis. Assistance to area department economists on trade and capital flow data. Attention to administrative and personnel matters. Leave.

Coor - Sick leave.

External Debt Section

Paulson - Calculations on proposal to subsidize IBRD interest through IDA credit. Meetings on creditworthiness projections. Meetings on new debt system. Preparation for meeting of Ad Hoc Group of Financial Statisticians. Preparation for Annual Review of ERS (including drafting of papers, correspondence, etc.). Writing personnel performance reports. Supervision and administration.

Slappey - For the external debt system project: continued work on designing reporting forms; completed work on user's survey; instructed programmer analysts in projection techniques; reviewed forms for accessing system. I also drafted a section of the report for the Annual Review of the creditor reporting system.
Pereira - Study of Bolivian external debt report and of material brought back from mission by Mr. Burke. Research into a question on Dominican Republic report. Comparison of Jamaican external debt figures between our tables and figures prepared by Mr. Carter. Writing of personal evaluations for three statistical assistants for Personnel full review. Study of material brought back from mission to Colombia by Mr. Leibart. Worked on preparation of debt tables as of December 31, 1968 for Chile. General supervision. Leave.

Martin - Wrote memoranda on debt reports of Ivory Coast, Mauritania, Morocco and Tunisia. Compiled listing of creditors for African and South Asian countries. Wrote evaluations for five statistical assistants. General supervision. Leave.

Serebanto - Preparation of tables by creditor country, on the comparison of data reported by creditors on insured and guaranteed lending and by debtors on suppliers credits as of December 31, 1968 (for 2nd EES Annual Review).

Preparation of a table on 1967 and 1968 flows of guaranteed suppliers credits to the private sector of 27 developing countries based on creditor reports. General supervision. Leave.

Caden - Preparation of support materials for annual meeting of the EES. General supervision.

Doultsinos - Wrote memoranda on external debt for Iran, Lebanon and Fiji. Met with Mrs. Paulson and Mr. Billington to discuss Turkey's external debt reporting. Drafted letter for Turkey's debt data sent to OECD for cross-checking purposes. General supervision.

Helne - Continued working on the study of deficiencies in Ghana reporting. Preparation for the external debt data reconciliation mission to Ghana. Leave.

General Statistics Section


Mr. A. Stevenson


Fairall - Research on rates paid by Bank to hotels for personnel on business trips, missions, etc. Computations, IBRD and IDA commitments, quarterly - September 30, 1969. Supervision, preparation of IBRD and IDA disbursements in Canada tables, third quarter 1969.


Programming Section

Angel - Completed corrected version of Salary Equivalent Program. Started converting an IBM 360 Cash Flow program to the 3600. Wrote a program to calculate grant element of IBRD loans and IDA credits by recipient country (by source of funds, by year and by period). Completed running the Gross flow model. Started running a Net flow model. Ran grant element of theoretical loans. Continued preparing input data for the portfolio program.
Comer - Continued work for a project scheduling using PROMIS and other small programs designed to ease the repetitive calculations in project appraisal. Started a part project sensitivity analysis. Made minor modifications to the highway submodel of the Harvard Transportation Model and made several sensitivity runs.

Condliffe - Designed the Risk Analysis for the Livestock Model. Worked on design of Education Model. Wrote a rate of return program with sensitivity analysis for electrification of Korean Railroads. Revised Econometric Simulation Model. Worked on translation of stepwise Linear Regression with Bayesian Analysis for use on Burroughs 5500. Designed data forms for livestock model and trained staff personnel in use of these forms.

Pan - Continued worked on Port of Guayaquil; revised the existing program to make Chi-square test on the actual frequency distribution of an equal number of ships versus the Erlang distribution. Continued worked on Macroeconomic Data Bank: completed a draft of descriptive write-up.

Abellon - Worked on U.S. trade with Central American countries program. Worked on DAM. Modified rate of return program. Attended two-day orientation session.

Bradley - Continued work on new External Debt System. Prepared several runs using ALPS for Mr. Reutlinger.

Krishna - Home leave.

Slade - External Debt System: continued work on the new system. Drafted several forms to be used by External Debt Section personnel in communicating with the system. In addition, worked extensively with other team members in ironing out problems arising as the programming phase of the system begins. Fortran courses: continued to monitor the progress of those Bank staff who are taking the Fortran programming course.


Schneider - Continued work on the Harvard Transportation Model. Continued to test BASIS on 5500. Run stepwise regression analysis.

Yen - Home leave.
### Time Distribution - Percentage

**October 16-31, 1969**

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I - Research</td>
<td>13.7</td>
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<tr>
<td>II - Service</td>
<td>50.3</td>
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<td>III - Supervision</td>
<td>14.2</td>
</tr>
<tr>
<td>IV - International meetings and report writing</td>
<td>0.3</td>
</tr>
<tr>
<td>V - Other activities</td>
<td>6.6</td>
</tr>
<tr>
<td>VI - Training</td>
<td>1.2</td>
</tr>
<tr>
<td>VII - Leave</td>
<td>13.7</td>
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</tbody>
</table>

100.0

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Statistical Services Division  
Economics Department  
November 3, 1969
Progress Report of Statistical Services Division
for the period October 16 - 31, 1969

A. EXTERNAL DEBT

1. Posting, coding and preparation of debt tables; see Annex I for details.

<table>
<thead>
<tr>
<th>Work</th>
<th>Requested by</th>
<th>Status</th>
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</thead>
<tbody>
<tr>
<td>2. South Africa - preparation of memorandum on debt submission as of December 1968</td>
<td>Europe, Middle East and No. Africa</td>
<td>In progress</td>
</tr>
<tr>
<td>3. Tunisia - preparation of memorandum on debt report as of December 31, 1968</td>
<td>Europe, Middle East and No. Africa</td>
<td>Completed</td>
</tr>
<tr>
<td>4. Belgium - preparation of memorandum on debt submission as of December 31, 1968</td>
<td>Europe, Middle East and No. Africa</td>
<td>Completed</td>
</tr>
<tr>
<td>5. Portugal - preparation of memorandum on debt submission as of December 31, 1968</td>
<td>Europe, Middle East and No. Africa</td>
<td>Completed</td>
</tr>
<tr>
<td>6. Morocco - preparation of memorandum on debt report as of December 31, 1968</td>
<td>Europe, Middle East and No. Africa</td>
<td>Completed</td>
</tr>
<tr>
<td>7. Fiji - preparation of memorandum on debt submission</td>
<td>Europe, Middle East and No. Africa</td>
<td>Completed</td>
</tr>
<tr>
<td>8. Lebanon - preparation of memorandum on debt submission</td>
<td>Europe, Middle East and No. Africa</td>
<td>Completed</td>
</tr>
<tr>
<td>9. Turkey - preparation of list of loans and other debt data as of December 31, 1968 for the purpose of cross-checking the available information with that of OECD's</td>
<td>Europe, Middle East and No. Africa (Millington)</td>
<td>Completed</td>
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<tr>
<td>10. Turkey - comparison of OECD and IDRD external debt data as of December 31, 1968</td>
<td>Europe, Middle East and No. Africa</td>
<td>Completed</td>
</tr>
<tr>
<td>12. Ivory Coast - preparation of memorandum on debt report as of December 31, 1968</td>
<td>W. Africa</td>
<td>Completed</td>
</tr>
<tr>
<td>13. Information on export credit terms of 5 major lender countries</td>
<td>W. H. (Nelson)</td>
<td>Completed</td>
</tr>
<tr>
<td>Work</td>
<td>Requested by</td>
<td>Status</td>
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<tr>
<td>---------------------------------------------------------------------</td>
<td>--------------------</td>
<td>------------</td>
</tr>
<tr>
<td>14. Indonesia - preparation of memorandum on debt submission as of December 31, 1968</td>
<td>E. Asia &amp; Pacific</td>
<td>In progress</td>
</tr>
<tr>
<td>15. Pakistan - preparation of special tables including local currency historical tables and projection of major additions on fiscal basis</td>
<td>So. Asia (Niebuhr)</td>
<td>In progress</td>
</tr>
<tr>
<td>16. Iran - preparation of memorandum on debt submission as of September 22, 1968</td>
<td>So. Asia</td>
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<tr>
<td>17. Compilation of bond tables for the Ad Hoc Group of Financial Statisticians</td>
<td>Eco.</td>
<td>In progress</td>
</tr>
<tr>
<td>18. Preparation of creditors lists by country</td>
<td>Eco.</td>
<td>In progress</td>
</tr>
<tr>
<td>19. Coding of IDA loans for programming and budgeting</td>
<td>Eco.</td>
<td>Completed</td>
</tr>
<tr>
<td>20. Preparation of a table on 1967 and 1968 flows of guaranteed suppliers' credits to the private sector of 27 developing countries based on creditor reports</td>
<td>IFC (Cohn)</td>
<td>Completed</td>
</tr>
<tr>
<td>21. Panama - preparation of amortization schedule for IFC credit</td>
<td>IFC (Mills)</td>
<td>Completed</td>
</tr>
<tr>
<td>22. Calculations on proposal to subsidize IBRD interest through IDA credit</td>
<td>Off. Pres. (Cope)</td>
<td>In progress</td>
</tr>
<tr>
<td>23. Calculations on alternative IBRD, DAC and IDA terms</td>
<td>Prog. &amp; Budg. (Blaxall)</td>
<td>Completed</td>
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</table>
### B. GENERAL STATISTICS

<table>
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<th>Status</th>
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</thead>
<tbody>
<tr>
<td>1. Moderately complicated tabulations:</td>
<td>Eco. (Kundu)</td>
<td>In abeyance</td>
</tr>
<tr>
<td>IBRD and IDA commitments in Africa by country, for fiscal years 1947/1965</td>
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</tr>
<tr>
<td>2. Moderately complicated data collection:</td>
<td>Eco. (Schrenk)</td>
<td>In abeyance</td>
</tr>
<tr>
<td>Pakistan - detailed industrial data, input of imported goods etc.</td>
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<tr>
<td>3. Complicated statistical and regression analysis:</td>
<td>Eco. (de Weille)</td>
<td>In abeyance</td>
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<tr>
<td>Port of Mombasa Study - determination of service time of ships in the port (loading and unloading), identification and quantification of the various factors involved with special focus on the average number of gangs working simultaneously on a ship. Testing ship arrival patterns and service time distributions</td>
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<tr>
<td>4. Classifications of developing countries:</td>
<td>Eco. (Kamark)</td>
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<tr>
<td>Selection of criteria, their measurement and an index for classification</td>
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<tr>
<td>5. Complicated analysis:</td>
<td>Eco. (Goor)</td>
<td>In progress</td>
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<tr>
<td>Preparation of factors and data for the projections of the &quot;IBRD Financial Model&quot; and the &quot;Five Year Plan&quot;. Testing disbursement projections of IBRD loans in total and by purpose</td>
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<tr>
<td>6. Sensitivity analysis of IBRD and IDA lending operations</td>
<td>Eco. (Goor)</td>
<td>In progress</td>
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<tr>
<td>7. Moderately complicated calculations:</td>
<td>Eco. (Balassa/Hughes)</td>
<td>In progress</td>
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<tr>
<td>Stages of industrial development. Various inter-relationships among income, industrial output, exports, imports, share of manufactured goods etc.</td>
<td></td>
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<tr>
<td>8. Moderately complicated data handling and statistical analysis:</td>
<td>Eco. (Egbart)</td>
<td>In progress</td>
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<tr>
<td>Portugal - livestock production, percentages of annual total production, average yield, time series analysis of yield by districts and for the whole country during 1952-67</td>
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<tr>
<td>9. Linear and non-linear programming models of the output and employment possibilities of the economy of Jamaica</td>
<td>Eco. (Carter)</td>
<td>In progress</td>
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<tr>
<td>Work</td>
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<td>10. Moderately complicated regression analysis: Portugal - Food demand analysis</td>
<td>Eco. (Egbert)</td>
<td>In progress</td>
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<tr>
<td>11. Moderately complicated regression analysis: Guayaquil Port Study</td>
<td>Eco. (Ray)</td>
<td>In progress</td>
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<tr>
<td>12. Moderately complicated data handling and statistical analysis: Portugal - crop production, percentages of annual total production, total acreage, time series analysis for each crop by districts, regions, and for the whole country during 1952-67</td>
<td>Eco. (Egbert)</td>
<td>In progress</td>
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<tr>
<td>13. Moderately complicated regression analysis: A cross section analysis of government expenditure patterns in developing countries</td>
<td>Eco. (Gandhi)</td>
<td>In progress</td>
</tr>
<tr>
<td>16. Moderately complicated data handling: Input-output analysis for the industrial sector of the economy of Mexico - aggregation and distribution of value added from the input-output matrix</td>
<td>Eco. (Carter)</td>
<td>Completed</td>
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<tr>
<td>17. Routine checking: Review of IDA replenishment for accounting consistency</td>
<td>Eco. (Hulley)</td>
<td>Completed</td>
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<tr>
<td>18. Simple regression analysis: Kenya - educational project</td>
<td>Eco. (Thiss)</td>
<td>Completed</td>
</tr>
<tr>
<td>19. Simple tabulations and calculations: Imports and exports of coffee of the World</td>
<td>Eco. (Ryan)</td>
<td>Completed</td>
</tr>
<tr>
<td>20. Moderately complicated regression and calculations: Electricity demand forecasting - computations for past record analysis including chart drawings</td>
<td>Eco. (Anderson)</td>
<td>Completed</td>
</tr>
<tr>
<td>21. Moderately complicated step-wise regression analysis: Ludhiana wheat production model - weather index as dependent variable</td>
<td>Basic Research (Oury)</td>
<td>In progress</td>
</tr>
<tr>
<td>Work</td>
<td>Requested by</td>
<td>Status</td>
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<tr>
<td>---------------------------------------------------------------------</td>
<td>---------------------------</td>
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</tr>
<tr>
<td>22. Moderately complicated regression analysis:</td>
<td>Basic Research (Singh)</td>
<td>In progress</td>
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<tr>
<td>Unemployment problem of the world - econometric model with labor force etc.</td>
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<tr>
<td>23. Simple regression analysis:</td>
<td>Basic Research (Oury)</td>
<td>Completed</td>
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<tr>
<td>Cocoa model</td>
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<tr>
<td>24. Moderately complicated data compilation:</td>
<td>Public Util.Proj.(Saeed)</td>
<td>In progress</td>
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<tr>
<td>Evaluation of progress reports</td>
<td></td>
<td></td>
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<tr>
<td>25. Complicated calculations:</td>
<td>Public Util.Proj.(Minnig)</td>
<td>In progress</td>
</tr>
<tr>
<td>Liberia - project calculation of rate of return, given certain level of probabilities</td>
<td></td>
<td></td>
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<tr>
<td>Optimum cost model of an education project</td>
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<tr>
<td>Preparation of tables, IBRD loans and IDA credits for agricultural purposes, by loan number, country, amount and purpose</td>
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<tr>
<td>28. Simple statistical calculations:</td>
<td>Adm. (Gregory)</td>
<td>In progress</td>
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<tr>
<td>Mean and standard deviation of grouped data of school building costs</td>
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<tr>
<td>29. Moderately complicated tabulations:</td>
<td>Adm. (Gantt)</td>
<td>In progress</td>
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<tr>
<td>Survey of hotel costs, rates and disbursements for IBRD travel</td>
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<tr>
<td>30. Moderately complicated statistical calculations:</td>
<td>Dev.Program Studies(Sundrum)</td>
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<tr>
<td>Computation of mean, variance, correlation coefficients of IMF and index of development variables for a number of countries</td>
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<td>31. Moderately complicated regression analysis:</td>
<td>IFC (Cohn)</td>
<td>In progress</td>
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<tr>
<td>Projection of IFC commitments 1960-67 to 1975</td>
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<tr>
<td>32. Moderately complicated data collection:</td>
<td>Off.Pres. (Friedman)</td>
<td>Completed</td>
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<tr>
<td>Monetary and Fiscal indicators (1960-66 actual values and growth rates for about 10 variables) of economic development for a number of developing countries</td>
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<tr>
<td>33. Moderately complicated computations:</td>
<td>Dev.Serv. (Hoffman)</td>
<td>Completed</td>
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<tr>
<td>Calculations of the distribution of S.D.R. privileges to developing countries</td>
<td></td>
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<tr>
<td>34. Moderately complicated data handling and tabulations:</td>
<td>E.Asia &amp; Pacific (Reif)</td>
<td>In progress</td>
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<tr>
<td>Korean Mission</td>
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</table>
## PROGRAMMING

<table>
<thead>
<tr>
<th>Work</th>
<th>Requested by</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly complex system analysis - planning a new system for coding, punching, assembling, editing, adjusting, external debt data in the form of a disk oriented data base and the required retrieval and processing procedures</td>
<td>Eco. (Stat.Serv.)</td>
<td>In progress</td>
</tr>
<tr>
<td>Complex systems analysis to plan and program a macroeconomic data bank</td>
<td>Eco. (Levy)</td>
<td>In progress</td>
</tr>
<tr>
<td>Highly complex system analysis and programming (OECD/IMF Joint Reporting System) to produce tapes for OECD and summary tables for participants</td>
<td>Eco. (Stat.Serv.)</td>
<td>In progress</td>
</tr>
<tr>
<td>Moderately complex computer program to produce cash flow tables of World Bank operations</td>
<td>Eco. (Goor)</td>
<td>In progress</td>
</tr>
<tr>
<td>Harvard Transportation Model (analysis and debugging of a complex computer program) including input, equations, output and FORTRAN conversion</td>
<td>Eco. (Miller)</td>
<td>In progress</td>
</tr>
<tr>
<td>Port of Mombasa Study - testing ship arrival patterns and service time distributions</td>
<td>Eco. (de Weille)</td>
<td>In progress</td>
</tr>
<tr>
<td>Preparation of an input-output matrix program</td>
<td>Eco. (Kundu)</td>
<td>In progress</td>
</tr>
<tr>
<td>World tables summary - several programs to calculate and to print the annual growth rates of the aggregate amounts of national accounts by areas and by years</td>
<td>Eco. (Levy)</td>
<td>In progress</td>
</tr>
<tr>
<td>Port of Guayaquil Study - testing ship arrival patterns and distributions for waiting time, berthing time, etc. and to analyse the relationships between different variables</td>
<td>Eco. (Ray)</td>
<td>In progress</td>
</tr>
<tr>
<td>Risk analysis of an irrigation project</td>
<td>Eco. (Husain)</td>
<td>In progress</td>
</tr>
<tr>
<td>Population Model I</td>
<td>Eco. (Miller)</td>
<td>In progress</td>
</tr>
<tr>
<td>Tunisian education evaluation study</td>
<td>Eco. (Thies/Carnoc)</td>
<td>In progress</td>
</tr>
<tr>
<td>Generalized debt model</td>
<td>Eco. (Stat.Serv.)</td>
<td>In progress</td>
</tr>
<tr>
<td>Imports of Persian Gulf countries</td>
<td>Eco. (Stat.Serv.)</td>
<td>In progress</td>
</tr>
<tr>
<td>Livestock Model</td>
<td>Eco. (Husain)</td>
<td>In progress</td>
</tr>
<tr>
<td>Work</td>
<td>Requested by</td>
<td>Status</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>----------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>17. Education Model</td>
<td>Transp.Proj. (Pouliquen)</td>
<td>In abeyance</td>
</tr>
<tr>
<td>18. Further development of existing road analysis program</td>
<td>Transp.Proj. (Pouliquen)</td>
<td>In progress</td>
</tr>
<tr>
<td>19. Evaluation of the transport part of the Cabes project</td>
<td>Transp.Proj. (Pouliquen)</td>
<td>In progress</td>
</tr>
<tr>
<td>21. Production of Bank Portfolio</td>
<td>Prog. &amp; Budg. (Blaxall)</td>
<td>In progress</td>
</tr>
<tr>
<td>22. Preparation of input to Portfolio</td>
<td>Prog. &amp; Budg. (Blaxall)</td>
<td>In progress</td>
</tr>
<tr>
<td>23. Program to compute Grant Element of loans contracted by 88 countries over the period 1965-1967</td>
<td>Creditworthiness (devries)</td>
<td>In progress</td>
</tr>
<tr>
<td>24. Program to compute Grant Element of IBRD loans and IDA credit by loan or credit, by country, by period</td>
<td>Creditworthiness (devries)</td>
<td>Completed</td>
</tr>
<tr>
<td>25. Gross Flow Model</td>
<td>Creditworthiness (devries)</td>
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</tbody>
</table>
C. CONTINUING

EXTERNAL DEBT

1. Compilation of data for quarterly tables showing all foreign bonds and equities publicly-issued and privately-placed in various markets.

2. Preliminary checking and coding of BRS Forms 1.

3. Compilation of data on deposit rates and weighted averages yields of Eurodollar.

4. All countries - semi-annual conversion of Treasurer's IBM cards to statistics IBM cards.

5. Preparation of current data on yields of IBRD bonds.


7. Maintenance of BRS files.

8. Highly technical drafting of manual of instructions for treatment and processing of external debt reported under debtor and creditor systems.


10. Compilation of debt outstanding and service payments by country and area for all developing and developed countries.

11. Compilation of debt statistics on selected countries.


13. Checking debt data in Economic Reports.

GENERAL STATISTICS

1. Maintenance of supplier vouchers on IBRD and IDA disbursements.

2. Maintenance of IBRD/IDA loans and credits by economic purpose.

PROGRAMMING

1. Maintenance of existing programs (such as revisions, updating, debugging and assistance in interpretation).

cc: Mr. Stevenson

/ra
## ANNEX I: POSTING, CODING AND PREPARATION OF DEBT TABLES - PROJECTION AND HISTORICAL

<table>
<thead>
<tr>
<th>Country</th>
<th>Projection and date</th>
<th>Historical and date</th>
<th>Requested by</th>
<th>Status</th>
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<tr>
<td><strong>EASTERN AFRICA</strong></td>
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<td>Mauritius</td>
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<tr>
<td>Swasiland</td>
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<tr>
<td><strong>WESTERN AFRICA</strong></td>
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<tr>
<td>Chad</td>
<td>-</td>
<td>12/31/68</td>
<td></td>
<td>In progress</td>
</tr>
<tr>
<td>Côte d'Ivoire (Brassaville)</td>
<td>-</td>
<td>12/31/68</td>
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<td>In abeyance</td>
</tr>
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<td>Ghana</td>
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<td></td>
<td>In abeyance</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>-</td>
<td>12/31/68</td>
<td></td>
<td>Completed</td>
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<tr>
<td><strong>EAST ASIA AND PACIFIC</strong></td>
<td></td>
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<tr>
<td>Australia</td>
<td>-</td>
<td>12/31/68 (new)</td>
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<td>Indonesia</td>
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<td>Japan</td>
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<tr>
<td>Korea</td>
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<td><strong>SOUTH ASIA</strong></td>
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<td>Afghanistan</td>
<td>12/31/68 (new) (rev.)</td>
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<td>India</td>
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<td>Iran</td>
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<td>Iran</td>
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<td>Pakistan</td>
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<td><strong>WESTERN HEMISPHERE</strong></td>
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<td>Argentina</td>
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<td>Bolivia</td>
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<td>Chile</td>
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<tr>
<td>Colombia</td>
<td>-</td>
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</table>
### ANNEX I: POSTING, CODING AND PREPARATION OF DEBT TABLES - PROJECTION AND HISTORICAL (CONT.)

<table>
<thead>
<tr>
<th>Country</th>
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<tr>
<td>Algeria</td>
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<tr>
<td>Austria</td>
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<td>-</td>
<td>In progress</td>
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<td>Belgium</td>
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<td>12/31/68</td>
<td>-</td>
<td>In progress</td>
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<tr>
<td>Denmark</td>
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<td>12/31/68</td>
<td>-</td>
<td>In progress</td>
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<tr>
<td>Finland</td>
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<td>12/31/68</td>
<td>-</td>
<td>In progress</td>
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<tr>
<td>Greece</td>
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<td>12/31/68</td>
<td>-</td>
<td>In progress</td>
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<tr>
<td>Iraq</td>
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<td>12/31/68</td>
<td>-</td>
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<tr>
<td>Portugal</td>
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<td>12/31/68</td>
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<td>South Africa</td>
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<td>In progress</td>
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<tr>
<td>Spain</td>
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<td>In progress</td>
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<td>Turkey</td>
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<td>U.A.R.</td>
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<tr>
<td>United Kingdom</td>
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<td>12/31/68</td>
<td>-</td>
<td>In absence</td>
</tr>
<tr>
<td>Yugoslavia</td>
<td>12/31/68</td>
<td>12/31/68</td>
<td>-</td>
<td>In absence</td>
</tr>
</tbody>
</table>

**EUROPE, MIDDLE EAST AND NORTH AFRICA**
Mr. Alexander Stevenson

Koichi Nara

Economics of Urbanisation Division: Progress Report - October 17-31

Miss Briggs:
1. Draft on Pearson Commission recommendation on country economic reports.
3. Attendance at test run of Envirometrics City Model.

Mr. Bhatia:
1. On missions to Pakistan and Iran.

Mr. Nara:
1. Preparation for missions to India, Hong Kong and Japan.
2. Participated in the Envirometrics City Model test run.
3. Revisions of the manuscript "Efficiency and Welfare Equalisation Policies."
4. Discussion on the urban transportation studies with several Bank economists.
5. Meeting with a representative of the Chilean urban planning department for possible Bank participation in an urban renewal project.
6. Attendance at the Advanced Orientation Sessions.
7. Supervision of the Division.

Mr. Westobbe:
1. On missions to Pakistan and Iran.

Mr. Kamarek
Mr. Alexander Stevenson

Stanley Please


Major Studies

Mr. Gandhi - preparation of draft paper on "Government Administration Expenditure and the Size of the Nation" and collection of data on government expenditure as part of the study on the Growth and Structure of Government Expenditure in Developing Countries (9 days).

Country and Project Mission Work

Mr. Joshi - preparatory work for his assignment to the Development Finance Companies' mission to China (3 days). Departed for China on October 25.

Mr. Boier - has been in Yugoslavia as a member of the economic mission.

Mr. Eklund - preparatory work for his economic work in Pakistan (5 days). Departed for Pakistan on October 23.

Mr. Schaebeck - completion of his contribution to the report of the economic mission to Iran (12 days).

Other Activities

Mr. Gandhi - attendance at orientation meetings (2 days).

Mr. Joshi - preparation of note on Symposium on Capital Markets in Latin America (4 days). Spanish lessons (1½ hours each day).

Mr. Stolber - joined the Division on October 20.

Mr. Please - supervision of Division activities.

Research

Miss Moldau - preparation of data for economic report on Iran (12 days).

Miss Dacuace - collection and analysis of data relating to direct agricultural tax burden in East and West Pakistan (6 days); research on tax structure and development expenditures in West Pakistan (3 days); extracts of public finance and capital market issues (3 days).

Leave

Mr. Gandhi - special leave (1 day)

Please/lo

cc: Messrs. Kanarck and Lowther
Mr. Kenneth Bohr

October 28, 1969

Alexander Stevenson

Attached Quarterly Operations Report of Economics Department

No. 342

Further to my letter of yesterday, it has occurred to me that you might like to see the Quarterly Report of the Department's activity. This was to some extent an experimental report but there are parts of it which I think you will find interesting.

With best personal wishes,

AStevenson/vhw
Mr. A. Stevenson

H. C. van der Tak

Activities of Sector and Projects Studies Division, October 1-15

Agriculture

Ablasser: Preparation for Brasil agriculture mission (11 days).

Duane: Review and critique of Mr. Sam's paper on rail line closure (2 days); comments on appraisal report for Agriculture Projects Department (2 days); familiarisation with Mr. Hirschman's review of World Bank projects (3 days); program development (4 days).

Egbert: Portugal agriculture mission report and sector study (6 days); preparation for Brasil agriculture mission (5 days).

Husain: Preparation and delivery of EMI lecture on mathematical programming (2 days); preparation for Ethiopia appraisal mission (6 days); livestock appraisal and risk analysis paper (2 days).

Manning: Mexico irrigation reappraisal study (6 days); commenting on Kenya education study (2 days); exploratory review of agriculture credit appraisals (1 day); meeting with Mr. Seagraves on agriculture supply; Mexico agriculture sector report (5 days); Mexico sectoral model, Basic Research Center (2 days).

Neutlinger: Grain storage projects criteria (5 days); program revision and supervision (2 days); revision of agriculture supply research paper (1 day); preparation and delivery of EMI lecture on the treatment of uncertainty (1 day); Spanish (1 day).

Seagraves: Revision of agriculture supply research paper (part time, Raleigh, N.C.); in office October 2 and 3.

(Consultant)

Carr: Preparation of data for Brasil agriculture mission (11 days).

Kim: Analysis of demand for food in Portugal (11 days).

King: Grain storage projects criteria (10 days; annual leave (1 day).

Wilde: Grain storage projects criteria (part time, Boston, Mass.); in office two days.
Mr. A. Stevenson

October 23, 1969

Education

Carney: Revision of Kenya education study and work on Tunisia education (Consultant) study (part time, Stanford, California).

Thijs: Revision of Kenya education study (9 days); preparatory discussions on financial aspects of education study (1 1/2 days); program development (1 1/2 day).

Brandenburg: Tunisia education study (11 days).

Transportation

de Weille: Highway design standards study (7 days); transport planning models study (2 days); feeder roads study (1 day); comments and advice (1 day).

Harrel: Transport planning models study (5 days); highway design standards study (6 days).

Israel: Feeder road study (4 days); railway appraisal study (2 days); commenting and conferring with Transportation Projects Department on appraisal of Trans-Chaco road in Paraguay (1 day); annual leave (4 days).

Miller: Transport planning models study (11 days), including 5 1/2 days in meetings with Colombian Government representatives on Colombia transport model.

Oort: Submitted draft, regulation of road transport study, Part I (Consultant) (part time, Utrecht, Netherlands).

Ray: Central American ports study (11 days).

Issac: Participation in meetings with Colombian Government representatives on Colombian transport model (1 1/2 days); rewriting SYSTAN transportation planning model (6 days); model input categorization, macro-economic model (3 1/2 days).

Mijares: Participation in meetings with Colombian Government representatives on Colombian transport model (4 days); other transport planning models study work (6 days); sick leave (3 1/2 day).

Fernia: Central American ports study, data organization and export-import projections (6 days); annual leave (5 days).
Public Utilities

Anderson: Ex-post analysis of electricity demand supply (10 days); familiarisation with material on investment decision models in electricity supply (1 day).

General

Snell: Revision of Kenya education study (11 days).

van der Tak: Kenya education study (2 days); review of Mr. Oort's paper on road transport regulation (2 days); revision of railway reappraisal study in Thailand (1 day); general supervision (6 days).

cc: Mr. Kamarck
Mr. Lowther
### Progress Report of Statistical Services Division
for the period October 1 - 15, 1969

#### A. EXTERNAL DEBT

1. Posting, coding and preparation of debt tables; see Annex I for details.

<table>
<thead>
<tr>
<th>Work</th>
<th>Requested by</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tunisia - preparation of memorandum on deb</td>
<td>Europe, Middle East and No. Africa</td>
<td>In progress</td>
</tr>
<tr>
<td>report as of December 31, 1968</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belgium - preparation of memorandum on debt</td>
<td>Europe, Middle East and No. Africa</td>
<td>In progress</td>
</tr>
<tr>
<td>submission as of December 31, 1968</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portugal - preparation of memorandum on debt</td>
<td>Europe, Middle East</td>
<td>In progress</td>
</tr>
<tr>
<td>submission as of December 31, 1968</td>
<td>and No. Africa</td>
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<tr>
<td>South Africa - preparation of memorandum on debt</td>
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</tr>
<tr>
<td>submission as of December 31, 1968</td>
<td>and No. Africa</td>
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<tr>
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<td>report as of December 31, 1968</td>
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<td>submission</td>
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<tr>
<td>Greece - preparation of list of loans contracted</td>
<td>Europe, Middle East</td>
<td>Completed</td>
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<tr>
<td>during 1967-1968</td>
<td>and No. Africa (Nijhof)</td>
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<td>Greece - table on private borrowing</td>
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<tr>
<td>and No. Africa (Billington)</td>
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<td>U.A.R. - preparation of memorandum on debt</td>
<td>Europe, Middle East</td>
<td>Completed</td>
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<tr>
<td>submission as of December 31, 1968 and June 30, 1969</td>
<td>and No. Africa</td>
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</tr>
<tr>
<td>Yugoslavia - preparation of memorandum on debt</td>
<td>Europe, Middle East</td>
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<td>submission as of December 31, 1968</td>
<td>and No. Africa</td>
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<tr>
<td>Finland - preparation of list of loans contracted</td>
<td>Europe, Middle East</td>
<td>Completed</td>
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<td>during January 1, 1968 and June 30, 1969</td>
<td>and No. Africa (Gallo)</td>
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<td>Mauritania - preparation of memorandum on debt</td>
<td>W. Africa</td>
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<td>report as of December 31, 1968</td>
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<td></td>
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<td>Work</td>
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<td>Status</td>
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<tr>
<td>16. Congo (Brasaville) - preparation of memorandum on debt report as of December 31, 1968</td>
<td>W. Africa</td>
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</tr>
<tr>
<td>17. Ivory Coast - preparation of amortisation schedule for proposed IBRD loan</td>
<td>W. Africa (Basin)</td>
<td>Completed</td>
</tr>
<tr>
<td>18. E. African Community - preparation of amortisation schedule for proposed IBRD loan</td>
<td>E. Africa (Clements)</td>
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</tr>
<tr>
<td>19. Indonesia - preparation of memorandum on debt submission as of December 31, 1968</td>
<td>E. Asia &amp; Pacific</td>
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<tr>
<td>20. Tables on private and public borrowing in Iran</td>
<td>So. Asia (Baneth)</td>
<td>Completed</td>
</tr>
<tr>
<td>21. India - preparation of memorandum on debt submission as of March 31, 1969</td>
<td>So. Asia</td>
<td>Completed</td>
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<tr>
<td>22. Iran - preparation of amortisation schedule for proposed IBRD loan</td>
<td>So. Asia (Feldman)</td>
<td>Completed</td>
</tr>
<tr>
<td>23. Pakistan - preparation of several special tables: local currency, debts repayable in goods, major additions through June 30, 1969 and tables on fiscal basis</td>
<td>So. Asia (Niebuhr)</td>
<td>Completed</td>
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<tr>
<td>24. Colombia - preparation of revised tables as of December 31, 1968</td>
<td>So. America/IDB</td>
<td>Completed</td>
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<tr>
<td>27. Compilation of bond tables for the Ad Hoc Group of Financial Statisticians</td>
<td>Eco.</td>
<td>In progress</td>
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<tr>
<td>28. New Zealand - coding debt submission as of December 31, 1968</td>
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<tr>
<td>29. Preparation of compound interest schedule for proposed bond issue</td>
<td>Treas. (Vu)</td>
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<tr>
<td>30. Preparation of table on debt service of developing countries to international organisations, 1960-1968</td>
<td>Dev.Fin.Co. (Gulhati)</td>
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</table>
B. GENERAL STATISTICS

1. Moderately complicated tabulations: IBD and IDA commitments in Africa by country, for fiscal years 1947-1965
   Requested by: Eco. (Kundu)  Status: In abeyance

2. Moderately complicated data collection: Pakistan - detailed industrial data, input of imported goods etc.
   Requested by: Eco. (Schrenk)  Status: In abeyance

3. Complicated statistical and regression analysis:
   Port of Mombasa Study - determination of service time of ships in the port (loading and unloading), identification and quantification of the various factors involved with special focus on the average number of gangs working simultaneously on a ship. Testing ship arrival patterns and service time distributions
   Requested by: Eco. (de Weille)  Status: In abeyance

4. Classifications of developing countries:
   Selection of criteria, their measurement and an index for classification
   Requested by: Eco. (Kamarck)  Status: In progress

5. Complicated analysis:
   Preparation of factors and data for the projections of the "IBRD Financial Model" and the "Five Year Plan". Testing disturbmove projections of IBRD loans in total and by purpose
   Requested by: Eco. (Goor)  Status: In progress

6. Sensitivity analysis of IBRD and IDA lending operations
   Requested by: Eco. (Goor)  Status: In progress

7. Moderately complicated calculations:
   Stages of industrial development. Various inter-relationships among income, industrial output, exports, imports, share of manufactured goods etc.
   Requested by: Eco. (Balassa/Hughes)  Status: In progress

8. Moderately complicated data handling and statistical analysis:
   Portugal - livestock production, percentages of annual total production, average yield, time series analysis of yield by districts and for the whole country during 1952-67
   Requested by: Eco. (Egbert)  Status: In progress

9. Linear and non-linear programming models of the output and employment possibilities of the economy of Jamaica
   Requested by: Eco. (Carter)  Status: In progress
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<th>Requested by</th>
<th>Status</th>
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<td>10. Moderately complicated regressions:</td>
<td>Eco. (Gear)</td>
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<tr>
<td>Projections of per capita rubber consumption in U.S., U.K. EEC and the rest of the World</td>
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<tr>
<td>11. Moderately complicated data handling:</td>
<td>Eco. (Carter)</td>
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<tr>
<td>Input-output analysis for the industrial sector of the economy of Mexico - aggregation and distribution of value added from the input-output matrix</td>
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<tr>
<td>12. Routine checking:</td>
<td>Eco. (Hulley)</td>
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<tr>
<td>Review of IDA replenishment for accounting consistency</td>
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<td>13. Simple regression analysis:</td>
<td>Eco. (Thias)</td>
<td>In progress</td>
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<tr>
<td>Kenya - educational project</td>
<td></td>
<td></td>
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<tr>
<td>14. Moderately complicated data handling and statistical analysis:</td>
<td>Eco. (Egbert)</td>
<td>In progress</td>
</tr>
<tr>
<td>Portugal - crop production, percentages of annual total production, total acreage, time series analysis for each crop by districts, regions, and for the whole country during 1952-67</td>
<td></td>
<td></td>
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<td>15. Moderately complicated regression analysis:</td>
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<td>In progress</td>
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<tr>
<td>A cross section analysis of government expenditure patterns in developing countries</td>
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<tr>
<td>16. Moderately complicated tabulations:</td>
<td>Eco. (Ray)</td>
<td>In progress</td>
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<tr>
<td>Trade data tabulation for Central American countries, 1967</td>
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<td>17. Simple regression analysis:</td>
<td>Eco. (Shourie)</td>
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<td>India - time series analysis of rainfall by region</td>
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<td>18. Simple regression analysis:</td>
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<td>In progress</td>
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<tr>
<td>Cocoa model</td>
<td></td>
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<td>19. Moderately complicated regression analysis:</td>
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<tr>
<td>Unemployment problem of the world - econometric model with labor force etc.</td>
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<tr>
<td>20. Moderately complicated data compilation:</td>
<td>Public Util.Proj. (Sawed)</td>
<td>In progress</td>
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<tr>
<td>Evaluation of progress reports</td>
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<td>Optimum cost model of an education project</td>
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<tr>
<td>Work</td>
<td>Requested by</td>
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<tr>
<td>---------------------------------------------------------------------</td>
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<tr>
<td>23. Moderately complicated tabulations:</td>
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<td></td>
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<tr>
<td>preparation of tables, IBRD loans and IDA credits for agricultural purposes, by loan number, country, amount and purpose</td>
<td>Agric.Proj. (Wapenhaus)</td>
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<tr>
<td>24. Rate of return calculations:</td>
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<tr>
<td>a) India - 18 projects</td>
<td>Agric.Proj. (Berg)</td>
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<tr>
<td>b) Panama - Steam and hydropower projects</td>
<td>Agric.Proj. (Stahl)</td>
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<td>25. Moderately complicated tabulations:</td>
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<td>Iran - financial credit and loans for the Iranian economy</td>
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<td>26. Moderately complicated tabulations:</td>
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<td>Exports to countries in Persian Gulf area</td>
<td>So. Asia (Avramovic)</td>
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<td>27. Moderately complicated tabulations:</td>
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<tr>
<td>Survey of hotel costs, rates and disbursements for IBRD travel</td>
<td>Adm. (Gantt)</td>
<td>In progress</td>
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<td>Requested by</td>
<td>Status</td>
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<td>------------------------</td>
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<tr>
<td>Eco. (Stat. Serv.)</td>
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<tr>
<td>Eco. (Levy)</td>
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<td>Eco. (Stat. Serv.)</td>
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<td>Eco. (Miller)</td>
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<tr>
<td>Eco. (de Weille)</td>
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<td>Eco. (Kundu)</td>
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<td>Eco. (Levy)</td>
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<td>Eco. (Husain)</td>
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<td>Eco. (Miller)</td>
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<td>Eco. (Thias/Carnoy)</td>
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<td>Eco. (Stat. Serv.)</td>
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<tr>
<td>Eco. (Husain)</td>
<td>In progress</td>
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</tr>
</tbody>
</table>

C. PROGRAMMING

1. Highly complex system analysis - planning a new system for coding, punching, assembling, editing, adjusting, external debt data in the form of a disk oriented data base and the required retrieval and processing procedures

2. Complex systems analysis to plan and program a macroeconomic data bank

3. Highly complex system analysis and programming (OECD/IBRD Joint Reporting System) to produce tapes for OECD and summary tables for participants

4. Moderately complex computer program to produce cash flow tables of World Bank operations

5. Harvard Transportation Model (analysis and debugging of a complex computer program) including input, equations, output and FORTRAN conversion

6. Port of Mombasa Study - testing ship arrival patterns and service time distributions

7. Preparation of an input-output matrix program

8. World tables summary - several programs to calculate and to print the annual growth rates of the aggregate amounts of national accounts by areas and by years

9. Port of Guayaquil Study - testing ship arrival patterns and distributions for waiting time, berthing time, etc. and to analyse the relationships between different variables

10. Risk analysis of an irrigation project

11. Population Model I

12. Tunisian education evaluation study

13. Generalized debt model

14. Imports of Persian Gulf countries

15. Livestock Model
Work

16. Basis - Burroughs advanced statistical inquiry system. Testing for B5500 system

17. Further development of existing road analysis program

18. Evaluation of the transport part of the Gabes project

19. Education Model

20. Conversion to B5500 of Discounted Cash Flow Economic Evaluation Program

21. Production of Bank Portfolio

22. Preparation of input to Portfolio

23. Modification of Gross Equivalent Salary Program

24. Program to compute Grant Element of IBRD loans and IDA credit by loan or credit, by country, by period

Requested by

Eco.
Transp.Proj. (Pouliquen)
Transp.Proj. (Pouliquen)
Transp.Proj. (Pouliquen)
Transp.Proj. (Bain)
Prog. & Budg. (Blaxall)
Prog. & Budg. (Blaxall)
Adm. (Duncan)
Creditworthiness (devries)

Status
In progress
In progress
In progress
In progress
In progress
In progress
In progress
Completed
In progress

cc: Mr. Stevenson

/ra
## Annex I: Posting, Coding and Preparation of Debt Tables - Projection and Historical

<table>
<thead>
<tr>
<th>Country</th>
<th>Projection and date</th>
<th>Historical and date</th>
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<th>Status</th>
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<tr>
<td><strong>WESTERN AFRICA</strong></td>
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<tr>
<td>Chad</td>
<td>-</td>
<td>12/31/68</td>
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<td>In progress</td>
</tr>
<tr>
<td>Congo (Brazzaville)</td>
<td>12/31/68</td>
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<td>Ivory Coast</td>
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<td>Ghana</td>
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<td>-</td>
<td></td>
<td>In abeyance</td>
</tr>
<tr>
<td>Mauritania</td>
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<td></td>
<td>Completed</td>
</tr>
<tr>
<td>Niger</td>
<td>-</td>
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<td>Sierra Leone</td>
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<td><strong>EAST ASIA AND PACIFIC</strong></td>
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<td>Australia</td>
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<td>12/31/68</td>
<td></td>
<td>In progress</td>
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<td>Japan</td>
<td>12/31/68</td>
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<td>Korea</td>
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</tr>
<tr>
<td>琉球</td>
<td>-</td>
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<td>India</td>
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<td>3/31/69</td>
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**SOUTH AMERICA**

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The professional staff of the Statistical Services Division carried out the activities indicated below during the period October 1 to 15, 1969:

Tiemann - Preparation of material for Bank's response to Pearson Commission recommendation on "early warning system." Finished work on speech to be given to IX Meeting of Central Bank Technicians in Lima, Peru. Review of international and foreign bond data sent to OECD. Supervisory and administrative duties, including interviewing new applicants and dealing with personnel problems generated by the new classification system.

McPheeters - Discussion of creditworthiness criteria and analysis with representatives of major creditors attending Annual Meeting. Discussion of debt-balance of payments reconciliation with members of Western Hemisphere Department of IMF. Preparation of note on aid, trade and private capital movements in 1960's for forthcoming conference of SID. General supervision and administration.

Goor - Sick leave.

General Statistics Section

Kundu - Classification of developing countries. Discussions on regression analysis problem, maximisation of revenue given prices, elasticity and indications of demand on Yugoslavia. Rate of return program; ranking of developing countries. Memo on "Growth rates in Bank Publications". Close supervision of Portugal Agricultural Study. Attended Mr. Pearson's speech at the Annual Meeting. Miscellaneous reading. General supervision of the Section.

Gholl - Representation of an education research study in some developing countries. Series of the Unit Value Index. Updating and changes of Mr. Friedman's paper on economic development. Chartbook: Reprint of charts and reprint of charts and reprint of tables. Classification of developing countries: collection of data on population.

Fairall - Research pertaining to balance of payments, imports and exports of goods and services. Survey of hotel costs, rates and disbursements for IBRD travel. Records of IBRD loans, IDA credits, etc. Annual leave.

Lejano - Wheat production study for the District of Ludhiana in India - complicated statistical calculation involving step-wise regression. Study of stages of industrial development - revision involving analysis of quality of data and regression analysis. Analysis of progress reports - analysis of activity of the Public Utilities Projects to be used as basis for staffing pattern, recruitment and career development for the next fiscal year. Sick leave.

Gi atrakos - Input-output analysis for the industrial sector of the economy of Mexico, aggregation and distribution of value added from the input-output matrix. Balance of payments summaries - reclassification of items in the balance of payments statements for the less developed areas of the World. Study on cost of education project for selected countries - preparation of graphs for three different types of education systems for a number of countries.

Lara - World Labor Study - collection, computation and regression analysis.

Hui - Preparing input data for the Bank Financial Model which include group breakdown into Part I, II, III and IFC of the following: Repayments from past loans; loan disbursements from past lending; interest from past loans and commitment charges from past loans.

External Debt Section


Slappey - For debt system project: completed summarizing results of users' survey; worked on design of debtor reporting forms. Participated in meeting with IMF representatives on cooperation in collection of debt data and provision of processed statistics. Supervised preparation of special projections for Creditworthiness Studies. Leave.


Caden - Preparation of proposals for changes in ERS procedures for presentation at ERS Annual Review meeting. General review of reporting status of our ERS participants. General supervision.

Doultsinos - Wrote memoranda on debt submissions of Yugoslavia, United Arab Republic and Indonesia. Met with Mr. Hartwick and discussed UAR's debt submission. Attended Section's staff meeting. Continued reconciliation of external debt data for Turkey as prepared by IBRD and OECD. General supervision.

Halne - Continued working on the study of deficiencies in Ghana reporting commenced during last period. Preparation for the external debt data reconciliation mission to Ghana.

Programming Section

Angel - Made several runs of Creditworthiness Model; modified Gross Equivalent Salary Program to obtain accurate results when combination of salary level and surtax prevented convergence through regular iteration procedure; ran debt projection for 33 countries using the generalised debt model; continued work on preparing input data to the Bank's portfolio; started planning a program to compute Grant Elements and Average Terms of IBRD loans and IDA credits by loan or credit, by country and by period. Attended CUBS meeting. General supervision.

Comer - Made minor changes to the Project Analyser of the Harvard Transportation Model and made several sensitivity runs. Continued work on Irrigation Risk Analysis Model. Investigated Port Capacity and Ship waiting time. Used PROMIS to determine a schedule for a well-drilling project being appraised. Also writing various small programs. Highway analysis. Completed plotting.

Concliffe - Worked on the Livestock Model. Designed data forms for the Livestock Model so that it can be implemented by the users. Trained someone in the use of these forms. Revisions of the Econometric Simulation Model. Worked on a revision of a rate of return program for the electrification of Korean Railways. Designed data forms to be used for the Public Utilities Balance Sheet, Income Statement and Cash Flow program. Gave lessons on advanced programming. Converted the econometric model to the IBRD computer.
Pan - Continued work on Port of Guayaquil Study - after debugging and testing, the fourth program of the series has been operational. Attended a meeting to discuss the process of forecast of National Accounts. Revised IBRD/IDA commitments to print out quarterly tables classified by countries for each area.

Abellon - Finished conversion of DPC Financial Forecasting Program. Continued work on DAM. Started work on a program to extract exports to and imports from U.S. - Central American countries for a Census Bureau tape.

Bradley - Worked on the new External Debt Data System. Prepared several runs using ALPS. Prepared runs to produce special debt tables.


Slade - Continued work on new external debt system, including systems programs, data base and forms design, coordination of the efforts of others who are working on the system, and making arrangements to assure that adequate hardware and software for the system are procured. Continued to provide support for the existing external debt system such as program maintenance and helping external debt section personnel with special problems. Continued to supervise the students taking the FORTRAN programming course, to monitor their progress, and to advise the personnel office upon a student's successful completion. Wrote a program for updating the Portugal crop data file, and instructed the statistical assistant in the use of the program and the preparation of data for it. Supervision of the Section for 3 days.

Kieser - Worked with Harold Schneider on transferring responsibility to him for Harvard Transportation Model System. Developed tape file for Portfolio System based on input from General Accounting System. Developed keypunch form for new External Debt System. Turned over Population Model to David Miller.


Attil

cc: Mr. McPheeters
Mr. Lowther
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<th>Category</th>
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<td>III - Supervision</td>
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<td>IV - International meetings and report writing</td>
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<td>V - Other activities</td>
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Statistical Services Division  
Economics Department  
October 20, 1969
Mr. Alexander Stevenson

October 16, 1969

Mr. Koichi Mera

Economics of Urbanisation Division: Progress Report - October 1-16

Miss Begg:

1. Collection, organisation and analysis of statistical data on Iran as background for Messrs. Westebbe and Bhatia's mission.
2. Collection of material on land development corporations.
3. Editorial work.

Mr. Bhatia:

1. Prepared for missions to Iran and Pakistan. Departed October 7 for these missions.

Mr. Mera:

1. Completion of a draft for a working paper "On the Concentration of Urbanisation and Economic Efficiency".
2. Attendance at the Doxiadis-System Development Corporation - Eelectronics Application Program and wrote a memo assessing the desirability of the Bank Group's involvement in it.
3. Two days' leave to deliver lectures on urbanization at Northwestern University.

Mr. Westebbe:

1. Memo on meeting with Dr. James Singleton, Doxiadis-System Development Corporation.
2. Memo on meeting with the Mauritanian Minister of Plan and Rural Development.
3. Memo on meeting with Mr. Gorhan, President, Urban Institute.
4. Memo on visit of the Director and staff of the Institute of Urban Environment, Columbia University.
5. Memo on work program of the Division.

6. Prepared for missions to Iran, Pakistan and India. Departed October 8 for these missions.
Mr. Alexander Stevenson

October 17, 1969

Stanley Please

Report on the Activities of the Domestic Finance Division for the period October 1-15, 1969

Major Studies

Mr. Scioli - completion of study on Tunisian Tax Structure (9 days).
(Mr. Scioli has resigned from the Bank effective October 15.)

Mr. Gandhi - preparation of draft paper on "Civil Consumption Expenditure and the Size of the Nation" as part of the study on the growth and structure of government expenditure in developing countries (8 days).

Country and Project Mission Work

Mr. Eier - preparatory work for the economic mission to Yugoslavia (7 days). Departed for Yugoslavia on October 11 as a member of the economic mission.

Mr. Ellund - preparation of his contribution to the report of the Chandpur Irrigation Project appraisal mission (3 days); preparatory work for his economic work in Pakistan (5 days).

Mr. Schebeck - preparation of his contribution to the report of the economic mission to Iran (11 days).

Other Activities

Mr. Ellund - discussions on East Pakistan with the East Pakistan Group, Agriculture Projects Department (3 days).

Mr. Gandhi - preparation of draft paper for discussion of future work (2 days); re-draft and discussion of note on copper taxation in Zambia (1 day).

Mr. Joshi - attendance at Symposium on Capital Markets in Latin America (3 days); preparation of note on mobilization of domestic resources in China (2 days); work on Incentive Schemes for Household Savings (3 days); Spanish lessons (3 days).

Mr. Please - supervision of Division activities.

Research Assistants

Miss Besu - assistance in the preparation of public finance tables for Iran (4 days); collection of data relating to agricultural tax burden of East and West Pakistan (3 days); extracts of public finance and capital market issues (4 days).
Miss Haldau - review of comments on draft of interest elasticity of preferential interest rate time deposits in Taiwan (4 days); preparation of data for economic report on Iran (6 days).

Sick/Annual Leave

Miss Haldau - annual leave (1 day)
Mr. Beier - sick leave (1 day)
Mr. Scioli - sick leave (2 days)

cc: Messrs. Kasarck and Lowther
Mr. Andrew M. Kazanck
Andrea Leoni

Work Progress Report for the Comparative Data Division for the Period
October 1-15, 1969

October 16, 1969

Computer Data Bank

1. The work on the preparation of input data sheets for the Data Bank has steadily continued.

Five-Year Projection Exercise

2. The number of requests for revising and updating basic data sheets is increasing regularly: Brazil, Mexico, Greece, Ethiopia, Turkey and Cyprus have been completed.

Miscellaneous

3. In addition, a number of requests for information (always urgently needed) have been handled.

4. Mr. Levy left on October 15 for consultations with some members of the missions to Pakistan and Yugoslavia.

cc: Mr. Stevenson
    Mr. Lowther
## Comparative Data Division

### Man-Days Worked

**October 1-15, 1959**

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<td>J. Vial /c</td>
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/a On mission to Pakistan.
/b Left October 12 on mission to Cambodia and the Philippines.
/c Left October 8 on mission to Yugoslavia.
Progress Report - Professional Staff - September 16-30, 1969

The professional staff of the Statistical Services Division carried out the activities indicated below during the period September 16 to 30, 1969:


McPheeters - Preparation of testing alternate terms distribution for Creditworthiness Studies, discussions with Creditworthiness Studies Unit on various data, projection and analytical problem. Discussions with Western Hemisphere Department economists on Brazilian debt reporting and Peruvian debt reorganization. Review of various macro-economic-debt models. General supervisory and administrative duties, including review of division staffing and organizational requirements.

Goor - Sick leave.

General Statistics Section

Kundu - Classification of Developing countries. Discussions with Messrs. Gandhi, Geer, Egbert, Maleppa and Fennell on their data processing and regression analysis problems. Discussions with Mr. Avramovic on tabulation of export trade statistics to Persian Gulf countries. Discussions with Mr. Ray on trade data tabulation of Central American countries. Close supervision of Portugal Agricultural Study data processing. Attending seminar on Risk and Sensitivity analysis. Attending discussion of "TRANSIM" project (a general purpose transportation simulation program) with Mr. Feiter and writing a memo to files on it. Miscellaneous reading. General supervision of the Section.

Al-Sharbaty - Portugal crop and livestock study - statistical analysis for Mr. Egbert. Memorandum for Mr. Tiemann concerning the progress on the Portugal study. Trade relations of developed countries - regression analysis for Mr. Asama. Preparation of Progress Reports. Partial supervision. Sick leave.

External Debt Section


Slappey - For ERS: completed re-design of reporting forms. For debt system project: drafted terms of reference; wrote part of the report on current status of the project; worked on summarising results of users' survey. For Bank Portfolio: participated in specification of input requirements. Sick leave.


Caden - Examination of current status of reporting in the ERS. Annual leave. General supervision of ERS group.


Helme - Wrote a follow-up memo to the Economic Affairs Division, Government of Pakistan, regarding the recent data reconciliation mission. Met with Mr. J. Schmctje of Western Africa Department to discuss the forthcoming external debt data reconciliation mission to Ghana. Wrote a memorandum outlining in general terms the problems and omissions
Helme (Cont.)

found in Ghana reporting. Concluded the analysis of the
Ghana bilateral rescheduling agreements of medium-term
suppliers' credits and commenced a detailed study of
deficiencies in Ghana reporting.

Ahluwalia - Further work on draft proposal for Resource Gap
estimation models.

Programming Section

Angel - Changed the Creditworthiness program and made several
runs of Tunisia and Morocco data. Ran the gross equivalent
salary program on a new set of net salaries. Continued
work on preparation of Portfolio. Started two sets of
debt model projections for Creditworthiness group.
Special leave. Supervision of the Section.

Conor - Made minor changes to the Irrigation Model Program.
Making several production runs using this program. Making
several production runs on the Land Settlement Program.
Did frequency distributions and plotting of rainfall data
for Mr. Curry; also plotting for Mr. Shourie. Briefed
Mr. Bannan on the Highway Program. Started work on a
PERT problem for Mr. Allison and completed the same type
job for Mr. Sirset. Continued work on the Tunisian Education
Evaluation Project. Continued work on the Harvard Trans-
portation Model.

Concliffe - Continued work on the Livestock Model. Worked on the
Education Model. Made minor changes in the Economic
Simulation program.

Pan - Continued work on Port of Guayaquil. Completed two programs
of the series: (a) Analysis of the relationships between
service time and modified service time and total volume
loaded and unloaded in tons; (b) preparation of a table
and computer-made graph of the number of ships arriving
and ships leaving the port per day. Assisted Mr. Rundu to
prepare data cards for IERD/IDA commitments. Met with
Mr. Novak, Mr. Leoni and others to discuss the forecast
of national accounts.

Abellon - Completed work on exports to Persian Gulf countries program.
Completed work on conversion of a nonlinear regression
program. Continued work on conversion of a different
non-linear regression program. Started work on DAF.
Started work on conversion of the DFC Financial Forecasting
Program. Wrote user's guide to the Forecast program to be
run in the COMNET remote system.

Bradley - Worked on the new External Debt Expanded Reporting System.
Prepared several runs using ALPSI for Mr. Reutlinger's
Grain Storage Model. Assisted General Statistics Section
with use of DAF.
Krishna - Continued working on the Project Analyzer part of the Harvard Transportation Model making modifications to it. Made flow-charts and input layout as part of documentation. Assisted other programmers and other Bank staff on ALPSI usage. Attended meeting with Mr. Harold Luft of the Harvard University.

Slade - Continued work on the external debt system. Continued monitoring the progress of Bank staff taking the FORTRAN programming course.

Kieser - Continued testing Harvard Transportation Model as a whole. Prepared input specifications for entire model. Wrote program to interface Portfolio system with General Accounting System. Met with External Debt team on overall design characteristics of the new system to be programmed. Met with Harvard consultant on problem concerning the model. Reviewed with Harold Schneider the overall logic of the Transportation Model.


Yen - Several computer runs on simple correlation. Computer runs on Farm Development Model for Mr. Rossi. Continued work and write-up of input requirements for the latest revision of IREX Financial Model program.

Attn: 1

cc: Mr. McFeters
    Mr. Lowther

/ra
PROFESSIONAL STAFF
TIME DISTRIBUTION - PERCENTAGE
September 16 - 30, 1969

I - Research 12.2
II - Service 53.3
III - Supervision 15.0
IV - International meetings and report writing 2.0
V - Other activities 6.8
VI - Training 1.4
VII - Leave 9.3

100.0

Statistical Services Division
Economics Department
October 6, 1969
Mr. Andrew M. Kamarck

Emanuel Levy

Work Progress Report for the Comparative Data Division for the Period
September 16-30, 1969

Computer Data Bank

1. Most of the research assistants continued to work on input
data for the Data Bank.

Five-Year Projection Exercise

2. The basic data sheet for Iceland was revised, typed, and
printed. The data for Greece, Turkey, and Cyprus are being updated.

Statistical Mission to Pakistan

3. A number of informal briefing discussions were held by Mr.
Levy with the Chief of the Statistical Mission to Pakistan and other
Mission members.

4. Mr. Levy left for Pakistan, together with the Mission Chief,
on September 26. After a brief stop over in Oslo for discussions,
they are due to arrive in Pakistan on October 1. They will be joined
by the remaining members of the Mission on October 12.

Miscellaneous

5. Special tabulations were prepared at the request of Mr.
Kamarck.

6. Mr. Franchet gave two lectures on national accounting systems
to participants in the IMF Institute course.

E Levy: prr

cc: Mr. Stevenson
## Comparative Data Division

### Man-Days Worked

**September 16-30, 1969**

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<th>I. Professionals</th>
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<td>J. A. Belt /d</td>
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<td>L. Francisco</td>
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<td>T. Khalil</td>
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<td>L. Laffey</td>
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<td><strong>16.5</strong></td>
<td><strong>13</strong></td>
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</tbody>
</table>

/a Departed for Pakistan on September 26.
/b Preparation for Mission to Cambodia and lectures in the IMF Institute.
/c Preparation for Mission to Yugoslavia and supervision of the work on special tabulations requested by Mr. Kamarck.
/d Transferred to the Agriculture Projects Department on September 22.
## Progress Report of Statistical Services Division

**for the period September 16 - 30, 1969**

### A. EXTERNAL DEBT

1. Posting, coding and preparation of debt tables; see Annex I for details.

<table>
<thead>
<tr>
<th>Work</th>
<th>Requested by</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Belgium - preparation of memorandum on debt report as of December 31, 1968</td>
<td>Europe, Middle East and No. Africa</td>
<td>In progress</td>
</tr>
<tr>
<td>3. Portugal - preparation of memorandum on debt report as of December 31, 1968</td>
<td>Europe, Middle East and No. Africa</td>
<td>In progress</td>
</tr>
<tr>
<td>4. South Africa - preparation of memorandum on debt report as of December 31, 1968</td>
<td>Europe, Middle East and No. Africa</td>
<td>In progress</td>
</tr>
<tr>
<td>5. Morocco - preparation of memorandum on debt report as of December 31, 1968</td>
<td>Europe, Middle East and No. Africa</td>
<td>In progress</td>
</tr>
<tr>
<td>7. India - preparation of table showing external public debt outstanding to major creditor countries</td>
<td>So.Asia (Dunn)</td>
<td>Completed</td>
</tr>
<tr>
<td>8. Guinea - preparation of memorandum on debt report as of December 31, 1968</td>
<td>W. Africa</td>
<td>In progress</td>
</tr>
<tr>
<td>Congo (Brassaville) - preparation of memorandum on debt report as of December 31, 1968</td>
<td>W. Africa</td>
<td>In progress</td>
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<tr>
<td>10. Ivory Coast - preparation of amortization schedule for proposed IBRD loan</td>
<td>W. Africa (Bassin)</td>
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<tr>
<td>11. Colombia - preparation of revised tables as of December 31, 1968</td>
<td>W.H./IDB</td>
<td>In progress</td>
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<tr>
<td>13. Peru - reconciliation of debt data as of December 31, 1968</td>
<td>W.H. (Abbatte)</td>
<td>In progress</td>
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<td>Work</td>
<td>Requested by</td>
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<td>--------------------------------------------------------------------</td>
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<tr>
<td>15. Disbursements, amortization, net disbursements, interests and net flow on IBRD loans and IDA credits to Western Hemisphere</td>
<td>W.H. (Weiner)</td>
<td>Completed</td>
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<tr>
<td>16. Compilation of bond tables for the Ad Hoc Group of Financial Statisticians</td>
<td>Eco.</td>
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<tr>
<td>17. New Zealand - coding debt submission as of December 31, 1968</td>
<td>Eco.</td>
<td>In progress</td>
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<tr>
<td>18. Preparation of list of names of borrowers for all countries</td>
<td>Eco. (Stat.Serv.)</td>
<td>Completed</td>
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<tr>
<td>19. Indonesia - preparation of memorandum on debt submission as of December 31, 1968-</td>
<td>E.Asia &amp; Pacific</td>
<td>In progress</td>
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<tr>
<td>20. Terms distribution calculations for creditworthiness studies unit</td>
<td>Creditworthiness (McGibbon)</td>
<td>Completed</td>
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<tr>
<td>21. Preparation of table on debt service of developing countries to international organisations, 1960-1968</td>
<td>Dev.Fin.Co. (Gulhati)</td>
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</table>
### B. GENERAL STATISTICS

<table>
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<tr>
<th>Work</th>
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<tr>
<td>1. Moderately complicated tabulations:</td>
<td>Eco. (Kundu)</td>
<td>In abeyance</td>
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<tr>
<td>IBRD and IDA commitments in Africa by country, for fiscal years 1967-1965</td>
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<tr>
<td>2. Moderately complicated data collection:</td>
<td>Eco. (Schrenk)</td>
<td>In abeyance</td>
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<tr>
<td>Pakistan - detailed industrial data, input of imported goods etc.</td>
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<tr>
<td>3. Complicated statistical and regression analysis:</td>
<td>Eco. (de Weille)</td>
<td>In abeyance</td>
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<tr>
<td>Port of Mombasa Study - determination of service time of ships in the port (loading and unloading), identification and quantification of the various factors involved with special focus on the average number of gangs working simultaneously on a ship. Testing ship arrival patterns and service time distributions</td>
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<td>4. Classifications of developing countries:</td>
<td>Eco. (Kamarck)</td>
<td>In progress</td>
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<tr>
<td>Selection of criteria, their measurement and an index for classification</td>
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<tr>
<td>5. Complicated analysis:</td>
<td>Eco. (Goor)</td>
<td>In progress</td>
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<tr>
<td>Preparation of factors and data for the projections of the &quot;IBRD Financial Model&quot; and the &quot;Five Year Plan&quot;. Testing disbursement projections of IBRD loans in total and by purpose</td>
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<tr>
<td>6. Sensitivity analysis of IBRD and IDA lending operations</td>
<td>Eco. (Goor)</td>
<td>In progress</td>
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<tr>
<td>Moderately complicated calculations:</td>
<td>Eco. (Salassa/Hughes)</td>
<td>In progress</td>
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<tr>
<td>Stages of industrial development. Various inter-relationships among income, industrial output, exports, imports, share of manufactured goods etc.</td>
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<tr>
<td>8. Moderately complicated data handling and statistical analysis:</td>
<td>Eco. (Egbert)</td>
<td>In progress</td>
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<tr>
<td>Portugal - livestock production, percentages of annual total production, average yield, time series analysis of yield by districts and for the whole country during 1952-67</td>
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<tr>
<td>9. Simple regression analysis:</td>
<td>Eco. (Shourie)</td>
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<tr>
<td>India - time series analysis of rainfall by region</td>
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<tr>
<td>10. Routine checking: Review of IDA replenishment for accounting</td>
<td>Eco. (Mullay)</td>
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<td>consistency</td>
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<td>11. Simple regression analysis: Kenya - educational project</td>
<td>Eco. (Thias)</td>
<td>In progress</td>
</tr>
<tr>
<td>12. Moderately complicated data handling and statistical analysis:</td>
<td>Eco. (Egbert)</td>
<td>In progress</td>
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<tr>
<td>Portugal - crop production, percentages of annual total production,</td>
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<td>total acreage, time series analysis for each crop by districts,</td>
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<td>regions, and for the whole country during 1952-67</td>
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<td>13. Moderately complicated regression analysis: A cross section</td>
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<td>In progress</td>
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<td>analysis of government expenditure patterns in developing countries</td>
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<td>14. Moderately complicated tabulations: Trade data tabulation for</td>
<td>Eco. (Ray)</td>
<td>In progress</td>
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<td>Central American countries, 1967</td>
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<tr>
<td>15. Simple regression analysis: Survey on Indian, Ceylonese and</td>
<td>Eco. (Elia)</td>
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<td>African tea industries</td>
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<td>16. Simple regression analysis: World copper consumption</td>
<td>Eco. (Takeuchi)</td>
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<td>17. Moderately complicated calculations: Projection of World rubber</td>
<td>Eco. (Geer)</td>
<td>Completed</td>
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<td>consumption</td>
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<td>18. Simple regression analysis: Cocoa model</td>
<td>Basic Research (Gry)</td>
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<td>19. Moderately complicated regression analysis: Unemployment problem</td>
<td>Basic Research (Singh)</td>
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<td>of the world - econometric model with labor force etc.</td>
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<td>20. Moderately complicated data compilation: Evaluation of progress</td>
<td>Public Util.Proj. (Saeed)</td>
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<td>education project</td>
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<td>data</td>
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<td>23. Moderately complicated tabulations: preparation of tables,</td>
<td>Agric.Proj. (Wapenhaus)</td>
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<td>IRRD loans and IDA credits for agricultural purposes, by loan number,</td>
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<td>country, amount and purpose</td>
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<td>Rate of return calculations:</td>
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<td>Portugal - eucalyptus project and sheep pasture project</td>
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<td>Simple regression analysis:</td>
<td>IFC (Dixon)</td>
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<td>Paper consumption in some Eastern African countries - Kenya, Tansania and Uganda</td>
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<td>Moderately complicated regression analysis:</td>
<td>E.Asia &amp; Pacific(Asamuna)</td>
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<td>Trade relations of developed countries - industrial production and imports during 1950-68; regional trade selected national income component</td>
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<td>Moderately complicated tabulations:</td>
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<td>Exports to countries in Persian Gulf area</td>
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<tr>
<td>1. Highly complex system analysis - planning a new system for coding, punching, assembling, editing, adjusting, external debt data in the form of a disk oriented data base and the required retrieval and processing procedures</td>
<td>Eco. (Stat.Serv.)</td>
<td>In progress</td>
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<tr>
<td>2. Complex systems analysis to plan and program a macroeconomic data bank</td>
<td>Eco. (Levy)</td>
<td>In progress</td>
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<tr>
<td>3. Highly complex system analysis and programming (OECD/IMF Joint Reporting System) to produce tapes for OECD and summary tables for participants</td>
<td>Eco. (Stat.Serv.)</td>
<td>In progress</td>
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<tr>
<td>4. Moderately complex computer program to produce cash flow tables of World Bank operations</td>
<td>Eco. (Goor)</td>
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<tr>
<td>5. Harvard Transportation Model (analysis and debugging of a complex computer program) including input, equations, output and FORTRAN conversion</td>
<td>Eco. (Miller)</td>
<td>In progress</td>
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<tr>
<td>6. Port of Mombasa Study - testing ship arrival patterns and service time distributions</td>
<td>Eco. (de Weille)</td>
<td>In progress</td>
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<tr>
<td>7. Preparation of an input-output matrix program</td>
<td>Eco. (Kundu)</td>
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<tr>
<td>8. World tables summary - several programs to calculate and to print the annual growth rates of the aggregate amounts of national accounts by areas and by years</td>
<td>Eco. (Levy)</td>
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<td>Port of Guayaquil Study - testing ship arrival patterns and distributions for waiting time, berthing time, etc. and to analyse the relationships between different variables</td>
<td>Eco. (Ray)</td>
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<tr>
<td>10. Risk analysis of an irrigation project</td>
<td>Eco. (Husain)</td>
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<tr>
<td>11. Population Model I</td>
<td>Eco. (Miller)</td>
<td>In progress</td>
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<tr>
<td>12. Tunisian education evaluation study</td>
<td>Eco. (Thias/Carnoy)</td>
<td>In progress</td>
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<tr>
<td>13. Generalized debt model</td>
<td>Eco. (Stat.Serv.)</td>
<td>In progress</td>
</tr>
<tr>
<td>14. Imports of Persian Gulf countries</td>
<td>Eco. (Stat.Serv.)</td>
<td>In progress</td>
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<tr>
<td>15. Livestock model</td>
<td>Eco. (Husain)</td>
<td>In progress</td>
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<tr>
<td>16. Basis - Burroughs advanced statistical inquiry system. Testing for B-5500 system</td>
<td>Eco.</td>
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<td>Work</td>
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<tr>
<td>17. Further development of existing road analysis program</td>
<td>Transp.Proj. (Pouliquen)</td>
<td>In progress</td>
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<tr>
<td>18. Evaluation of the transport part of the Gables project</td>
<td>Transp.Proj. (Pouliquen)</td>
<td>In progress</td>
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<tr>
<td>19. Education model</td>
<td>Transp.Proj. (Pouliquen)</td>
<td>In progress</td>
</tr>
<tr>
<td>20. Production of Bank Portfolio</td>
<td>Prog. &amp; Budg. (Blaxall)</td>
<td>In progress</td>
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<tr>
<td>21. Preparation of input to Portfolio</td>
<td>Prog. &amp; Budg. (Blaxall)</td>
<td>In progress</td>
</tr>
<tr>
<td>22. Projection of national accounts, balance of payments and external debt</td>
<td>Creditworthiness (de Vries)</td>
<td>Completed</td>
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</table>
C. CONTINUING

EXTERNAL DEBT

1. Compilation of data for quarterly tables showing all foreign bonds and equities publicly-issued and privately-placed in various markets.

2. Preliminary checking and coding of ERS Forms 1.

3. Compilation of data on deposit rates and weighted averages yields of Eurodollar.

4. All countries - semi-annual conversion of Treasurer's IBM cards to statistics IBM cards.

5. Preparation of current data on yields of IBRD bonds.


7. Maintenance of ERS files.

8. Highly technical drafting of manual of instructions for treatment and processing of external debt reported under debtor and creditor systems.


10. Compilation of debt outstanding and service payments by country and area for all developing and developed countries.

11. Compilation of debt statistics on selected countries.


13. Checking debt data in Economic Reports.

14. Preparing backlog of Tables A, B and C for ERS participants.

GENERAL STATISTICS

1. Maintenance of supplier vouchers on IBRD and IDA disbursements.

2. Maintenance of IBRD/IDA loans and credits by economic purpose.

PROGRAMMING

1. Maintenance of existing programs (such as revisions, updating, debugging and assistance in interpretation).

cc: Mr. Stevenson

/ra
<table>
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<th>Country</th>
<th>Projection and date</th>
<th>Historical and date</th>
<th>Requested by</th>
<th>Status</th>
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<td>Mauritius</td>
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<tr>
<td>Swaziland</td>
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<td><strong>WESTERN AFRICA</strong></td>
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<td>Chad</td>
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<td>Congo (Brassaville)</td>
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<td>Ivory Coast</td>
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<td>-</td>
<td>In progress</td>
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<td>Ghana</td>
<td>12/31/68</td>
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<tr>
<td>Liberia</td>
<td>12/31/68</td>
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<tr>
<td>Niger</td>
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<td><strong>EAST ASIA AND PACIFIC</strong></td>
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<td>Australia</td>
<td>12/31/68</td>
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<td>Indonesia</td>
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<td>Japan</td>
<td>12/31/68 (new)</td>
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<td>Korea</td>
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<td>Ceylon</td>
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<td>Iran</td>
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<td>Pakistan</td>
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<td>In abeyance</td>
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<td>Austria</td>
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<td>Austria</td>
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<td>12/31/68</td>
<td>-</td>
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<tr>
<td>Belgium</td>
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<td>-</td>
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<tr>
<td>Denmark</td>
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<td>12/31/68</td>
<td>-</td>
<td>In progress</td>
</tr>
<tr>
<td>Finland</td>
<td>12/31/68</td>
<td>12/31/68</td>
<td>-</td>
<td>In progress</td>
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<tr>
<td>Greece</td>
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<td>12/31/68</td>
<td>-</td>
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<td>12/31/68</td>
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<td>Paraguay</td>
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</tr>
</tbody>
</table>
Mr. Alexander Stevenson

October 2, 1969

Richard M. Westebbe

Economics of Urbanisation Division: Progress Report - September 17-30

Miss Briggs:

1. Collection and assembly of statistical material for India.
2. Preparation of world table indicating population concentration and GDP growth rates.

Mr. Bhatia:

1. Continued work on Pakistan research project and preparation for the forthcoming mission.
2. Prepared terms of reference for our forthcoming mission to Iran, Pakistan and Rotterdam.
3. Prepared a draft framework for examining urban development and planning aspects in Senegal for the forthcoming economic mission and participated in a briefing meeting for the members of the mission.
4. Discussed my research paper on Pakistan with Prof. Alonso, consultant.
5. Participated in a meeting with Prof. W. Smith.
6. Commented on Mr. Westebbe's memo outlining the Division's future work program and attended a meeting on this in our front office.
7. Participated in a discussion on Mrs. Johnson's (consultant) research project and drafted jointly with Mr. Mera the outline for the study being undertaken by her.

Mr. Mera:

1. Preparation of a paper: "On the Concentration of Urbanisation and Economic Efficiency".
2. Discussion with Professor Alonso, consultant to the Division, on the paper under way and on the work program of the Division.
3. Discussion with Professor Smith on urban problems and proposals in India, and wrote a memorandum on his visit.

4. Discussion with Mr. Bhatia on a draft of his paper, "National Costs Approach for Industrial Location".

5. Discussion with Messrs. van der Tak and de Weille on my memo on "The Framework for Urban Transportation Studies".

Mr. Wastebba


2. Memo on Mr. Caud's speech.

3. Discussed urban work with operations officers for Ceylon & India.

4. Preparation of Division's work program for next year.

5. Memo on work program in Brazil.


7. Meetings with Prof. Wallace Smith and Bank staff on his findings in India, and with Prof. Alonso, a visiting consultant.

8. Discussions on Mrs. Johnson's research project.

9. Preparation for missions to Iran, Pakistan and India.

10. Discussions with area economist on Moroccan creditworthiness paper and forthcoming Consultative Group meeting.

11. Work on white paper.
Mr. A. Stevenson  

H. G. van der Tak  

October 2, 1969  

Activities of Sector and Projects Studies Division, September 17-30  

Agriculture  

Ablasser:  
Brazil agriculture sector study (5 days); agriculture sector planning models (1 day); review and commenting on feeder roads paper (2½ days); preliminary meeting on Brazil agriculture mission (½ day); Spanish (1 day).  

Egbert:  
Portugal agriculture sector survey mission report (3 days); Portugal agriculture sector study (2 days); annual leave (5 days).  

Husain:  
Seminar for Agriculture Projects Department, Livestock Division (1 day); risk analysis of Morocco irrigation project (5 days); programming for irrigation and livestock studies (2 days); preparation for irrigation appraisal mission to Ethiopia (2 days).  

Haaning:  
Mexico irrigation reappraisal study (3 days); reviewing feeder roads paper (1½ days); Mexico sectoral model, Basic Research Center; review of draft of Seagrawes' agriculture supply research paper; Mexico agriculture sector report, and comments on Pakistan irrigation engineering credit appraisal report (½ day on each).  

Reutlinger:  
Grain storage projects criteria (5 days); internal administration (3 days); Spanish (1 day); special leave (1 day).  

Seagrawes:  
Agriculture supply research (part time, Raleigh, N.C.).  

(Consultant)  

Carr:  
Brazil agriculture sector study for Mr. Ablasser (6 days); Mexico irrigation appraisal study for Mr. Haaning (1 day).  

Kim:  
Portugal agriculture sector study for Mr. Egbert (10 days).  

King:  
Grain storage projects criteria (3½ days); sick leave (1 day); annual leave (½ day).  

Wilde:  
Grain storage projects criteria (part time, Boston, Mass.).  

(Consultant)  

Education  

Carney:  
Kenya education study revision and Tunisia education study (part time, Stanford, Calif.).  

(Consultant)  

Thias:  
Revision of Kenya education study (9 days); commenting on Mr. Graves' paper on education (½ day); preliminary work on a research project in education finance (½ day).  

Brandenburg:  
Revision of Kenya education study data (4 days); checking computer print-outs for Tunisia education study (6 days).
<table>
<thead>
<tr>
<th>Name</th>
<th>Activities and Details</th>
</tr>
</thead>
</table>
| Mr. A. Stevenson | **Transportation**<br>de Weille: Highway design standards study (3 days); feeder roads study (3 days); transport planning models study (2 days); comments and advice (1.5 days) sick leave (½ day).<br>Harral: Transport planning models study (6 days), including seminar for Colombian Government representatives (½ day); advanced orientation (1.5 days); commenting on Mr. Ray's depth of paper (¾ day).<br>Israel: Feeder roads study (3 days); railway reappraisal study, preliminary work (1 day); annual leave (2 days); special leave (1 day).<br>Hiller: Transport planning models study (10 days), including seminar on highway model for Colombian Government representatives (3 days).<br>Cort (Consultant): Regulation of road transport study (part-time, Utrecht, Neth.).<br>Ray: Central American port study (9 days); ongoing port research, port of Guayaquil (1 day).<br>Isaac: Transport planning models study; evaluation of SISTAN's transportation planning model (3 days); participation in seminar for Colombian Government representatives (½ day); special leave (1 day).<br>Hijares: Transport planning models study (10 days).<br>Femina: Central American port study for Mr. Ray (9 days); ongoing port research, port of Guayaquil data (1 day).<br>**Public Utilities**<br>Anderson: Preparation and participation in discussions with Public Utilities Department (3 days); written review of literature on the economics of electric power systems (4 days); program development (3 days).<br>**General**<br>Snell: Writing of Kenya education study (5½ days); updating administrative charts and collecting progress reports (1 day); reviewing and commenting on Mr. Anderson's paper (¾ day).<br>van der Tak: Writing of "Economic Benefits of a Road Transport Project" (2 days); general supervision (5 days).
Mr. Alexander Stevenson

Stanley Please

October 2, 1969


Major Studies

Mr. Scioli - discussion of study on Tunisian Tax Structure (1 day).

Mr. Gandhi - continued work on the study of the growth and structure of government expenditure in developing countries (6 days).

Country and Project Mission Work

Mr. Beier - completion of his contribution to the report of the economic mission to Malawi (3 days).

Mr. Eklund - preparation of report on the fiscal situation in East Pakistan in connection with the Chandpur Irrigation Project appraisal mission (11 days).

Mr. Schebeck - arrived in Washington on September 24 from an economic mission to Iran; preparation of his contribution to the report of the mission (5 days).

Other Activities

Mr. Joshi - work on mobilisation of domestic finance in developing countries (5 days); comments on various papers (3 days); Spanish lessons (3 days).

Mr. Please - arrived in Washington on September 22 from an economic mission to Iran. Supervision of Division activities.

Mr. Beier - in the absence of Mr. Please, Mr. Beier acted as chief for the Division (Sept. 15-19).

Mr. Gandhi - comments on Hofstra's report on Tax Policy in Indonesia (2 days); discussion on Tunisian Tax Structure (2 days); preparation and discussion of note on copper taxation in Zambia (1 day).

Research Assistants

Miss Daquino - East Pakistan budget accounts (4 days); public finance and capital market issues (3 days); miscellaneous (4 days).

Miss Meldan - completion of first draft of interest elasticity of preferential interest rate time deposits in Taiwan (10 days).

Sick/Annual/Home Leave

Mr. Beier - sick leave (1 day); annual leave (2 days)
Miss Meldan - annual leave (1 day)
Mr. Schebeck - home leave (2 days)
Mr. Scioli - annual leave (10 days)

cc: Messrs. Kenmare and Lowther
George Kalmanoff

Progress Report of Economics of Industrialization Division for the period September 16-30, 1969 (11 days)

<table>
<thead>
<tr>
<th>Name</th>
<th>Task</th>
<th>Duration</th>
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<tr>
<td>G. Kalmanoff</td>
<td>Review of draft report on Indian Industry</td>
<td>1 1/2 days</td>
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<tr>
<td></td>
<td>Korean steel mill project</td>
<td>1 day</td>
</tr>
<tr>
<td></td>
<td>Advisory Committee on Domestic Preferences</td>
<td>1 day</td>
</tr>
<tr>
<td></td>
<td>Yugoslav automotive project</td>
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<tr>
<td></td>
<td>Special leave</td>
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<tr>
<td></td>
<td>General supervision</td>
<td>6 days</td>
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<tr>
<td>J. Datas-Panero</td>
<td>Memorandum to East Asia Department on Philippine manufacturers as possible source of supply</td>
<td>1 day</td>
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<tr>
<td></td>
<td>Honduras mission report - final revisions</td>
<td>1 day</td>
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<tr>
<td></td>
<td>Report on Consumer Spending Patterns and Income Elasticities of Demand</td>
<td>1 1/2 days</td>
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<tr>
<td></td>
<td>Pulp and Paper report - revision and additions</td>
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<tr>
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<td>French class</td>
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<td></td>
<td>Miscellaneous</td>
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<tr>
<td>Mrs. Hughes</td>
<td>Southeast Asia mission</td>
<td>1/4 days</td>
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<tr>
<td></td>
<td>Indonesia report</td>
<td>7 days</td>
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<tr>
<td>A. Nowicki</td>
<td>Korea mission</td>
<td>11 days</td>
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<tr>
<td>M. Schrenk</td>
<td>Automotive project - Yugoslavia</td>
<td>5 days</td>
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<td>Preparation for Yugoslavia mission</td>
<td>5 days</td>
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<td></td>
<td>Spanish course</td>
<td>1 day</td>
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<tr>
<td>B. Walstedt</td>
<td>Appraisal and discussion - Korean steel mill</td>
<td>3 days</td>
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<td></td>
<td>Discussion project appraisal - Turkey</td>
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<td></td>
<td>Heavy mechanical equipment report</td>
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<tr>
<td></td>
<td>Other (meetings, advice, reading)</td>
<td>2 days</td>
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<tr>
<td>Miss L. Keough (RA)</td>
<td>Assisted Mr. Schrenk in preparation for Yugoslavia mission</td>
<td>11 days</td>
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<tr>
<td>Mrs. H. Neufeld (RA)</td>
<td>Brazil mission report</td>
<td>6 days</td>
</tr>
<tr>
<td></td>
<td>Revision of the report on Statistical Indicators of Levels of Industrial Development</td>
<td>5 days</td>
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</table>
Mr. A. M. Kamarek

October 1, 1969

P. Ojinnaka (RA)  Worked on diesel locomotives in the U.S. 1958-67 for Mr. Walstedt  (4 days)
Japanes Heavy Mechanical Equipment for Mr. Walstedt  (4 days)
Annual leave  (3 days)

H. R. Ullmann (RA)  Domestic and Export prices in the EGSC for Mr. Walstedt  (9 days)
Annual leave  (2 days)

cc: Mr. Stevenson
Mr. Kamarok

Michael L. Hoffman

Economics Department Quarterly Operations Report

In the final sentence of the introduction to your first edition of this document you invite "comments and reactions." Mr. Demuth and I have both read the paper and what follows represents our joint views.

We feel that some fairly fundamental changes in the character of this report would make it a more useful document, at least to readers outside your Department. It gives us an impression of being designed in part to give a credit line to nearly everyone in the Department and of being much too detailed. Mention of staff members' participation in economic missions to do routine jobs of analysis -- e.g., Sudan Mission on page 8, Mexico Mission on page 9 -- could be eliminated.

Long lists of meetings attended by individuals seem unnecessary. Bank representation at major international meetings is covered by other reports. It would be most useful to us, and I should think to other departments, would be reports on new departures, new techniques and policy issues under review. Indications of the kinds of problems being tackled by new divisions like Urbanization are also interesting. If you want to include routine activities for the record, they should be listed in tabular form and attached as annexes to the report.

In sum, we think a redesigned report, at most one-third the length of this one and issued four times a year, would be a useful document and would serve to dispel any feeling, almost inevitable in today's expanded Bank without some such paper from time to time, that the rest of us don't know what is going on in the Economics Department.

MLHoffman/pnn
September 22, 1969

Mr. Andrew M. Kasarck

Josefina Vial

Work Progress Report for the Comparative Data Division for the Period September 1-15, 1969

Computer Data Bank

1. Most of the research assistants continued to work on input data for the Data Bank on a full time basis.

Five-Year Projection Exercise

2. The basic data sheets for the Five-Year Economic Development Program for Iceland, Taiwan and Papua and New Guinea have been updated.

Statistical Mission to Pakistan

3. Mr. Levy attended a number of meetings with the designated Chief of the Statistical Mission to Pakistan and with representatives of the South Asia Department and the US AID.

Miscellaneous

4. The Atlas tables and maps have been checked repeatedly at various stages of preparation for final printing, including the checking of proofs and negatives.

5. Several documents have been checked for the accuracy of economic data.

6. Several tabulations have been prepared at the request of universities in the US and Canada.

J. Vial

cc: Mr. Stevenson
    Mr. Lowther
### Man-Days Worked
#### September 1-15, 1969

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<tr>
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<td>Y. Franchot</td>
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<td>A. Leonard</td>
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<td>G. Novak</td>
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<tr>
<td>J. Vial</td>
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<td>3</td>
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<td><strong>43</strong></td>
<td><strong>13</strong></td>
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<td><strong>1.5</strong></td>
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| II. Research Assistants |       |           |             |                                 |       |
| C. H. Anochie       | 10    | 10        | 10          |                                 |       |
| R. Aspinwall        | 5     | 2         | 3           |                                 |       |
| G. Baird            | 10    | 10        | 10          |                                 |       |
| J. A. Belt          | 10    | 8         | 2           |                                 |       |
| R. de Campos        | 10    | 7         | 2           |                                 |       |
| L. Francisco        | 9.5   | 9.5       | 9.5         |                                 |       |
| T. Khalil           | 10    | 10        | 10          |                                 |       |
| L. Kendall          | 9     | 9         | 1           |                                 |       |
| L. Laffey           | 9     | 6         | 6           |                                 |       |
| **Total**           | **92.5**| **71.5** | **6**      |                                 | **5**  |

| III. Summer Assistants |       |           |             |                                 |       |
| W. Dirksen          | 4     | 4         |             |                                 |       |
| N. Groth            | 2     | 2         |             |                                 |       |
| **Total**           | **13**| **13**    |             |                                 |       |

**Total** | **138.5** | **97.5** | **11.5** | **1.5** | **28** |

---

*Returned from home leave September 11.*

*Preparing lectures for IMF Institute and working on the forthcoming mission to Cambodia.*

*Checking World Bank Atlas.*

*Checking Bank documents, for the accuracy of the macro-economic data.*
Activities of Sector and Projects Studies Division, September 1-16

Agriculture

Ablasser: Brazil agriculture sector study, preparatory mission (1 day); Brazil agriculture sector study (9 days); Spanish (1 day).

Egbert: Portugal agriculture sector survey mission report (10 days); Portugal agriculture sector study (1 day).

Husain: Giving lectures at EDI on new techniques of project analysis (3 days); livestock appraisal paper (3 days); risk analysis of an irrigation project (3 days); comments and advice (2 days).

Manning: Mexico agriculture sector report (1 day); Mexico irrigation reappraisal study (5 days); special leave (5 days).

Reutlinger: Grain storage projects criteria (4 days); administration and supervision (3 days); Mexico irrigation reappraisal study (1 day); giving lecture at EDI (1 day); comments and advice (1 day); annual leave (1 day).

Seagraves: Completed draft of agriculture supply research paper (part time, Raleigh, N.C.). (Consultant)

Carr: Joined division September 15. Familiarisation with Mexico irrigation reappraisal material (2 days).

Kim: Research files work for Mr. van der Tak (2 days); Portugal agriculture sector study for Mr. Egbert (7 days); annual leave (2 days).

King: Grain storage projects criteria (9 days); annual leave (2 days).

Wilde: Grain storage projects criteria (10 days); ended summer employment September 15 to return to school.

Education

Carney: In office September 2-8 for revision of Kenya education study; Kenya revision and Tunisia education study (part time, Stanford). (Consultant)

Thias: Revision of Kenya education study (10½ days); comments on Education Projects Department appraisal report for Sierra Leone (½ day).

Brandenburg: Tunisia education study (5 days); revision of Kenya education study data (5 days); sick leave (1 day).
Transportation

de Mille:
Railway line closure study (4 days); transport planning models study (2 days); META systems analysis study on rural transportation (1 day); feeder roads study (1 day); highway design standards study (1 day); comments and advice (2 days).

Harral:
Transport planning models study (10½ days); comments and advice on feeder roads study (½ day).

Israel:
Feeder roads study (1 day); railway reappraisal study, preliminary work (9½ days); comments and advice (1 day); advanced orientation (3½ days).

Miller:
Transport planning models study (11 days).

Cort:
(Consultant)
Regulation of road transport study (part time, Utrecht, Math.).

Ray:
On port study mission to Central America (10 days); Central American ports study (2 days).

Sau:
(Consultant)
Completed division draft of railway line closure study (11 days)

Issac:
Graphing economic data on Colombia (9 days); categorization of model inputs for Harvard macro-economic model (1½ days); annual leave (½ day).

Mijares:
Transport planning models study (11 days).

Pernia:
On port study mission to Central America (10 days); Central American ports study for Mr. Ray (2 days).

Public Utilities

Anderson:
Completed discussion on demand forecasting and investment models in electricity (10½ days); commented on Botswana infrastructure project, electrical supply (½ day).

General

Smith:
Revision of Kenya education study (1½ days); collecting progress report and work on M. Hasso's appraisal methodology paper (1 day); annual leave (½ day).

van der Tak:
Revision of Kenya education study (1½ days); preparation for conference on education (1 day); attending conference of the Protein Advisory Group (FAO/WMO/UNICEF) in Geneva, and a seminar on costing studies of the International Institute for Educational Planning (5 days); rewriting of "Economic Benefits of a Road Transport Project" (1 day); comments and advice (½ day); miscellaneous and supervision (2 days).

cc: Mr. Kamarok
Mr. Lowther
HofvanderTak: WAC
Progress Report of Statistical Services Division for the period September 1 - 15, 1969

A. EXTERNAL DEBT

1. Posting, coding and preparation of debt tables; see Annex I for details.

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<td>Portugal - preparation of memorandum on debt submission as of December 31, 1968</td>
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<tr>
<td>4. South Africa - preparation of memorandum on debt submission as of December 31, 1968</td>
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</tr>
<tr>
<td>5. Iraq - preparation of memorandum on debt submission as of December 31, 1968</td>
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<td>6. Indonesia - preparation of memorandum on debt submission as of December 31, 1968</td>
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<tr>
<td>7. Pakistan - examination of updated information supplied by mission</td>
<td>So. Asia</td>
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<tr>
<td>10. Sierra Leone - preparation of memorandum on debt report as of December 31, 1968</td>
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<tr>
<td>13. Preparation of data for a model</td>
<td>Pearson Comm.(Gulhati)</td>
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<tr>
<td>14. Colombia - preparation of revised tables as of December 31, 1968</td>
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</tr>
<tr>
<td>15. Nicaragua - posting, coding and preparation of local currency tables as of December 31, 1968</td>
<td>W.H./IDB</td>
<td>In progress</td>
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<tr>
<td>Work</td>
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<tr>
<td>16. Panama - posting, coding and preparation of local currency tables as of December 31, 1968</td>
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<tr>
<td>17. Mexico - reconciliation of debt data as of December 31, 1967</td>
<td>W.H. (Ross)</td>
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<td>18. Compilation of bond tables for the Ad Hoc Group of Financial Statisticians</td>
<td>Eco.</td>
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<td>19. Preparation of debt data for Programming and Budgeting</td>
<td>Prog. &amp; Budg. (Colaço)</td>
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### B. GENERAL STATISTICS

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<td>1. Moderately complicated tabulations: IBRD and IDA commitments in Africa by country, for fiscal years 1967-1965</td>
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<td>3. Classifications of developing countries: Selection of criteria, their measurement and an index for classification</td>
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<td>4. Complicated analysis: Preparation of factors and data for the projections of the IBRD Financial Model and the &quot;Five Year Plan&quot;. Testing disbursement projections of IBRD loans in total and by purpose</td>
<td>Eco. (Gooe)</td>
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<td>5. Complicated statistical and regression analysis: Port of Mombasa Study - determination of service time of ships in the port (loading and unloading), identification and quantification of the various factors involved with special focus on the average number of gangs working simultaneously on a ship. Testing ship arrival patterns and service time distributions</td>
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<td>6. Sensitivity analysis of IBRD and IDA lending operations</td>
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<td>7. Moderately complicated calculations: Stages of industrial development. Various inter-relationships among income, industrial output, exports, imports, share of manufactured goods etc.</td>
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<td>8. Moderately complicated data handling and statistical analysis: Portugal - livestock production, percentages of annual total production, average yield, time series analysis of yield by districts and for the whole country, during 1952-1967</td>
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<td>9. Simple regression analysis: India - time series analysis of rainfall by region</td>
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10. Simple regression analysis:
   Kenya - educational project
   Requested by: Eco. (Thias)  Status: In progress

11. Moderately complicated data handling and statistical analysis:
    Portugal - crop production, percentages of annual total production, total acreage, time series analysis for each crop by districts, regions, and for the whole country during 1952-1967
    Requested by: Eco. (Egbert)  Status: In progress

12. Moderately complicated tabulations:
    IBRD and IDA commitments by area and purpose quarterly beginning June 1947
    Requested by: Eco. (Mundu)  Status: Completed

13. Simple regression analysis and rate of growth calculations:
    Portugal - time series analysis of each of 95 separate production streams
    Requested by: Eco. (Egbert)  Status: Completed

14. Simple regression analysis:
    Taiwan - preferential interest deposits
    Requested by: Eco. (Please)  Status: Completed

15. Moderately complicated tabulations:
    World summary of reported balance of payments statistics 1962-67 (IMF) compilation of regional tables
    Requested by: Eco. (Kamarek)  Status: Completed

16. Moderately complicated calculations:
    Kenya - Five-year plan study mission - computations for the econometric projection of GDP components
    Requested by: Eco. (Shourie)  Status: Completed

17. Moderately complicated statistical calculations and revisions:
    Brasil - import tariffs by industrial categories
    Requested by: W.H. (Walinsky/Wadsted)  Status: Completed

18. Moderately complicated regression analysis:
    Criterion for market eligibility for a number of developing countries - revised data
    Requested by: Special Studies (Schmitt)  Status: Completed

19. Simple regression analysis:
    Cocoa model
    Requested by: Basic Research (Oury)  Status: In progress

20. Moderately complicated regression analysis:
    Unemployment problem of the world - econometric model with labor force etc.
    Requested by: Basic Research (Singh)  Status: In progress

21. Simple regression analysis:
    India - agricultural model, estimation of weather index
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<td>25. Simple regression analysis: Paper consumption in some Eastern African countries - Kenya, Tanzania and Uganda</td>
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<td>26. Moderately complicated regression analysis: Trade relations of developed countries - industrial production and imports during 1950-68; regional trade selected national income component</td>
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<td>1. Highly complex system analysis - planning a new system for coding, punching, assembling, editing, adjusting, external debt data in the form of a disk oriented data base and the required retrieval and processing procedures</td>
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<tr>
<td>3. Highly complex system analysis and programming (OECD/IBRD Joint Reporting System) to produce tapes for OECD and summary tables for participants</td>
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<td>4. Moderately complex computer program to produce cash flow tables of World Bank operations</td>
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<td>5. Harvard Transportation model (analysis and debugging of a complex computer program) including input, equations, output and FORTRAN conversion</td>
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<td>7. Preparation of an input-output matrix program</td>
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<td>8. World tables summary - several programs to calculate and to print the annual growth rates of the aggregate amounts of national accounts by areas and by years</td>
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<td>12. Tunisian education evaluation study</td>
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<td>18. Projection of national accounts, balance of payments and external debt</td>
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<td>20. Evaluation of the transport part of the Gabels project</td>
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<td>23. Preparation of input to Portfolio</td>
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D. CONTINUING

EXTERNAL DEBT

1. Compilation of data for quarterly tables showing all foreign bonds and equities publicly-issued and privately-placed in various markets.

2. Preliminary checking and coding of ERS Forms 1.

3. Compilation of data on deposit rates and weighted averages yields of Eurodollar.

4. All countries - semi-annual conversion of Treasurer’s IBM cards to statistics IBM cards.

5. Preparation of current data on yields of IBRD bonds.


7. Maintenance of ERS files.

8. Highly technical drafting of manual of instructions for treatment and processing of external debt reported under debtor and creditor systems.


10. Compilation of debt outstanding and service payments by country and area for all developing and developed countries.

11. Compilation of debt statistics on selected countries.


13. Checking debt data in Economic Reports.

14. Preparing backlog of Tables A, B and C for ERS participants.

GENERAL STATISTICS

1. Maintenance of supplier vouchers on IBRD and IDA disbursements.

2. Maintenance of IBRD/IDA loans and credits by economic purpose.

PROGRAMMING

1. Maintenance of existing programs (such as revisions, updating, debugging and assistance in interpretation).

cc: Mr. Stevenson

/ra
## ANNEX I

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<th>Eastern Africa</th>
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<th>East Asia and Pacific</th>
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Note: Excludes 12 countries in abeyance; ( ) = number of countries started during period.
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### Western Hemisphere

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</table>
Mr. Alexander Stevenson

September 17, 1969

Arthur E. Tiemann

Progress Report - Professional Staff - September 1 - 15, 1969

The professional staff of the Statistical Services Division carried out the activities indicated below during the period September 1 to 15, 1969:


McPheeters - Discussions with representatives of IMF and Asian Development Bank on debt system revisions and general statistical activities, with Administration and Programming and Budgeting personnel on preparations for further work on Bank portfolio and financial flow models, with staff of Public Utilities and Transportation Projects Departments on statistical and computer programming support, with IMF personnel on preparations for Peruvian debt reorganisation exercise, and with Creditworthiness Studies Unit on various statistical and analytical projects. Review of Moroccan creditworthiness study and preparation of draft new macro-economic cum debt model. Revision of Operational Memorandum on external debt reporting. General supervision and administration, including attention to division personnel matters.

Goor - Sick leave.

General Statistics Section


Gholl - Updating and review of charts 4.5 and 4.6 of Chartbook. Tables related to chartbook "Trends in Developing Countries". General work on statistics. Leave.

External Debt Section


Slepey - For external debt system project: continued work on user's survey (meetings with representative of Asian Development Bank and area economist). Redesigned EBRD Form 1; worked on EBRD data requirements for the debt system and Bank Portfolio. Began drafting a summary of the current status of the debt system project. Supervised preparation of data for Programming and Budgeting; grant elements and weighted average terms of EBRD loans and IDA credits; debt data for 32 countries.

Ferella - Research into Nicaragua's external public debt. Wrote memoranda on external debt of Mexico and Chile. Preparation of report on status of Western Hemisphere debt information. Worked on, and supervised job of compilation of debt figures for several Western Hemisphere countries. Worked on Argentina's external public debt report as of December 31, 1968. General supervision.

Martin - Wrote memoranda on debt reports of Sierra Leone, Somalia, Mali and Ceylon. Study of special problems in Pakistan debt data. General supervision.


Douletsinos - Wrote memoranda on external debt reporting for Indonesia and Iraq. Prepared forms on status of debt information for all countries. Reconciled debt tables on Turkey as of Dec. 31, 1968 as prepared by EBRD and OECD. General supervision. Leave.

Haine - Continued working on the analysis of the Ghana bilateral rescheduling agreements of medium-term suppliers' credits. Supervised the preparation of a numerical list of debts to be sent to the Economic Affairs Division, Government of Pakistan, to serve as a basis for a new numbering system. Did some
Further investigation work on Pakistani external debt reporting to determine what additional information is needed to complete the reconciliation job commenced during mission to Pakistan in July-August.

Ahuwalia - Discussed draft proposal for Resource Gap estimation models with a view to revising and applying to Ghana

Programming Section

Angel - Continued work on generalised debt model. Started work on two programs to produce Portfolio. Briefed Mr. Omate from Asian Development Bank on computer work carried by Programming Section. Ran the creditworthiness model on new data for Tunisia. General supervision of the Section.

Comar - Continued work on Tunisian Education Evaluation Study. Completed several plots. Made modifications to and tested the Irrigation Model. Started work on a PERT problem.

Concliffe - Worked on the livestock model. Worked on the education model. Translation of a least square program. Advanced orientation.

Pan - Continued work on Guayaquil Port Study. Worked on part II - to analyze the relationship between different time intervals, volume loaded and unloaded in tons, etc. and present results in computer-made graphs. Continued work on macroeconomic Data Bank. Completed the write-up of the Data Bank. Revised the World Tables Summary in order to give three different options for the output.


Bradley - Modified DAM (regression package) and assisted General Statistics staff on use of DAM program. Modified and ran Grant Element Program on a new set of IBRD and IDA loan data. Wrote a COBOL program to convert India rainfall data on punched cards into an input suitable for statistical programs. Familiarised with Linear Programming (ALPSI) package and grain storage model. Attended a meeting on same model. Worked on new external debt reporting system.

Krishna - Continued working on the Project-Analyzer part of the Harvard Transportation model making modifications. Attended meetings with Messrs. Reulingen and Wilde and Miss Bradley on grain storage model problems. Advised other staff on ALPSI. Leave.
Slade - Continued work on external debt system. Leave.

Kieser - Worked on developing a design for a master file containing all the IBRD data needed to produce the external debt reports, portfolio reports, and financial model reports. Continued work on integrating various portions of the transportation model. Modified population model to produce two additional tables.

Yen - Ran IDA Financial Projection program and continued modifying IBRD Financial Model. Ran simple correlation program and revised and ran Weather Index (MINDEX) program.

Attil

cc: Mr. McPheeters
    Mr. Lowther

/ra
## PROFESSIONAL STAFF

### TIME DISTRIBUTION - PERCENTAGE

**September 1 - 15, 1969**

<table>
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**Total** 100.0

*Statistical Services Division*

*Economics Department*

*September 17, 1969*
Mr. Alexander Stevenson  
September 16, 1969

George Beier


Major Studies

Mr. Scioli - completion of study on Tunisian Tax Structure (18 days).

Mr. Gandhi - Initial exploration of the literature relating to the growth and structure of government expenditure in developing countries (2 days).

Country and Project Mission Work

Mr. Beier - preparation of his contribution to the report of the economic mission to Malawi (100 days).

Mr. Eklund - preparation of report on the fiscal situation in East Pakistan in connection with his participation in the Chandpur Irrigation Project appraisal mission. (10 days)

Mr. Schebeck - has been in Iran as a member of an economic mission.

Other Activities

Mr. Please - has been in Iran as a member of an economic mission.

Other Activities

Mr. Joshi - comments on capital market on Thailand (1 day); attendance at orientation meetings (3 days); Spanish lessons (3 days); miscellaneous (3 days).

Mr. Scioli - in the absence of Mr. Please, acted as chief for the Division.

Mr. Gandhi - comments on the Zambian tax structure (6 days); working party meeting on the economic report on Chad (3 days); Research Assistants

Miss Deben - Tunisia: Expected Built-In Elasticity of Tax Structure (3 days); analysis of revenue and expenditure accounts of East Pakistan (4 days); extracts of public finance and capital market issues (3 days).

Miss Meldau - interest elasticity of preferential interest rate time deposits in Taiwan (10 days).

Sick/Annual Leave/Special Leave

Mr. Scioli - sick leave (1 day), annual leave (1 day)

Mr. Gandhi - special leave (1 day)

GBeier/lo

cc: Messrs. Kasarck and Louther
Mr. Alexander Stevenson  
Richard N. Westebbe  

Economics of Urbanisation Division: Progress Report - September 1-16

Miss Briggs:
1. Collection and organisation of data on India - population, employment, income, land-use patterns, investment, government taxation and expenditure - as background for upcoming Indian Mission.

Mr. Bhatia:
1. Prepared a paper entitled, "Iran - Urban Management and Problems" and held discussions with Mr. Eschenberg, concerning the forthcoming mission.
2. Reviewed preliminary data concerning the Jamaica Hellshire Hills Area Project.
3. Attended Spanish course.
4. Participated in Third PADCO Seminar entitled, "Integrating Rural and Urban Development."

Mr. Mera:
1. Review of urban situations and urban planning done for Indian metropolitan areas.
2. Preparation for a research work - "Social Evaluation of Urban Investment."
3. Orientation session.

Mr. Westebbe:
1. Attended Sixth Session of the UN Committee on Housing, Building and Planning in New York.
2. Moderated panel discussions on "Poverty and the Urban Environment" as part of a HUD international symposium.
3. Commented on draft of President's speech.
4. Commented on Minister Shah's Housing Finance Proposal for India.
5. Preparation for missions to Iran and India.
6. Continued work on "white paper."
7. Supervision.

cc: Mr. Kamarck
Economics Department Quarterly Operations Report

You might be interested in the attached report that attempts to present a readable summary of much of the non-research work of the department. It is designed, in part, to meet the need for better information on what is going on in the Bank as expressed by Mr. Cargill at today's Senior Staff Meeting, and in part, to try to cope with the particular problem of the Economic Department: that is, that much of our work contributes to a whole that appears as a product of some other Department.

Attachment:

cc: Mr. Friedman

AMK: rf
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**REMARKS**

From: A. M. Kamarck
I. Introduction

II. Commodities

III. Population

IV. Domestic Finance of Developing Countries

V. Quantitative Techniques and Analysis

VI. Urbanization

VII. Industrialization Economics

VIII. Comparative Data

IX. Statistics

X. Sector and Projects Studies

XI. General Activities
NOTE

This issue covers operations through August 31, 1969.
Subsequent reports will cover three-month periods.
ECONOMICS DEPARTMENT
QUARTERLY OPERATIONS REPORT

I. INTRODUCTION

The Economics Department for some time has been issuing a quarterly report on its research projects as a means of informing Bank personnel and development economists outside the Bank of this work and so making it more useful and accessible. But only part of the work of the Department is research and is represented in the research report. A separate report is needed to cover the more directly operational work of the Department. This Quarterly Operations Report has been designed therefore to inform people outside the Department of this part of the Department's activities.

It should be noted that the general support activities of the Department are not reported on. Most of the work of the Statistical Services Division, for example, becomes such an integral part of the product of other departments that it cannot be covered in this type of departmental report. This report also does not cover support work for the President and President's Council. An attempt has been made in this report to cover only matters that would be of substantial interest to Bank staff generally. As this is an initial and to some extent an experimental report, comments and reactions to it will be gratefully received.

II. COMMODITIES

Bank's Policy on Financing of Stocks

We are receiving indications that requests are being prepared for Bank assistance for the financing of commodity stocks.

(a) Copper

Commodities Research Unit Ltd. (CRU) London has informed Mr. Macone that it has been engaged by CIPEC, an intergovernmental organization of the four major LDC copper exporting countries (Chile, Congo, D.R., Peru and Zambia), to prepare a choice of strategies whereby the exporters could concert action to influence world copper prices. As part of the study, CRU is considering the possible role of the Bank and the Fund in an exporter price control scheme involving in part buffer stock operations (other alternatives such as voluntary limitations on capacity utilization without stocking, are also being studied).
(b) Tin

The Secretary of the International Tin Council has informed Mr. Geer that Indonesia was considering applying to the Bank, as well as to the Fund, for assistance in financing its contribution to the buffer stock of the Tin Agreement. The Secretary expects countries which have hopes of qualifying for assistance from the Fund/Bank to argue for an increase in the buffer stock's resources, while those without such hopes will oppose such a move.

Research and Development in Jute

Mr. Varon was requested by FAO early in June to participate in his expert capacity in a feasibility study, to be financed by UNDP, of the means by which a coordinated research and development program can be instituted for jute and kenaf, to help these products cope more effectively with the encroachments of synthetic substitutes into their markets.

Early in the summer, Mr. Varon was in India to advise an Indian team of experts which was completing a study of India's jute industry in the context of the world market. The study, financed by AID, has been in progress for nearly a year and Mr. Varon has acted as a consultant to the team, at AID's request, during this period. The study's conclusions are generally consistent with our own views.

Research in Primary Products

The UNCTAD Commodity Division is making a commodity by commodity survey of the research and development currently taking place in agricultural products, as a first step in considering how such efforts could be improved. Mr. Maizels, Deputy Director of the Division, is fully aware of the Bank's interest in such research and has agreed that the Bank would be kept informed of the progress of this plan.

Commodity Diversification and Stabilization

Mr. Maizels also is preparing a proposal to convene a seminar of representatives of both academic and international financial institutions to consider problems and possibilities of commodity diversification. The Bank representatives agreed to examine the preliminary proposal. UNCTAD has also agreed that it would make a more intensive effort to keep the Bank closely informed of the progress of international discussions or negotiations under the aegis of UNCTAD of possible new commodity agreements.

Coffee

The International Coffee Organization has held a technical meeting of experts from major producing countries on the diversification experiences of some of the coffee producing countries and the formulation of individual
countries' coffee policy plans to be submitted to the Coffee Diversification Fund by the end of 1969. Upon request by the Executive Director, Bank representatives (Miss Lovasy and Mr. Singh) assisted in the preparation of background papers. Mr. Singh also attended the meeting and the seminar.

Rubber Commodity Study

Mr. Geer has provided information and advice to the Secretariat of the International Rubber Study Group in the study it is making of the World Rubber Market. An important element of this is the need to improve the estimates of the productive capacity of Indonesia's smallholder rubber sector; this is a most troublesome gap in the attempts to analyze prospective world supplies. The question of how the Bank can assist in a possible sample survey of Indonesia's smallholder rubber sector is still under discussion.

Tin Study

The Secretary of the International Tin Council has sounded out Mr. Geer on undertaking in 1970 a short survey of the operations of the international mechanism for marketing tin, to be based on information to be supplied by the ITC. The ITC needs this information for its renegotiation of the Tin Agreement in 1971. The request is under consideration.

Bananas

FAO, at the request of its Banana Study Group (at which the Bank is represented by Mr. Singh), is preparing an outline of a possible study of banana marketing. FAO will consult with the Bank, among other organizations, in preparing its outline. The study, to arrive at useful results, would require the principal international companies to provide a great deal of information on their operations. It is not yet clear how far these companies are prepared to go.

Malawi Export Prospects

Mr. Elz participated in the Malawi mission July 5-24, 1969, specializing in the appraisal of the export prospects of Malawi. His conclusions after examining the individual commodities were that some acceleration could be expected in the rate of growth of export earnings.

Consultations with International Organizations

An important part of the work of the Export Projections and Trade Analysis Division is keeping in close touch with the work done in the numerous international commodity organizations and representing the Bank at the periodic meetings of their membership. In this way, the Bank profits from the intelligence-gathering and analysis and exchange of views and information carried on by these bodies while also having its relevant policies and attitudes made clear to them as necessary.
Periodic visits to these organizations, usually timed with their membership meetings, are therefore necessary. Among the recent missions for these purposes have been the following:

28th Plenary Meeting of International Cotton Advisory Committee, Kampala, Uganda, June 2-11, 1969. Bank observer Mr. Varon.


III. POPULATION

Population Project Missions

Colombia. This mission, headed by Mr. Zaidan, was in the field from July 13 to August 2, 1969. (It was instructed to identify a family planning project within the framework of the National Health Plan.) For the Colombian Government, the critical question was to identify a project that could be presented as a project in public health. For the Bank, however, the project would have to be justified in terms of family planning. The mission identified a project which it felt reconciled these different points of view. It includes the training of auxiliary nurses to disseminate maternal and child health services and family planning, the construction of rural health centers, and costs of building up the operations of schools and clinics. The total cost is approximately $5.0 million. The Government's reaction was that this was a disguised family planning project. The Government is presently working on an alternative plan to submit to the Bank. This project raises the following basic issues of Bank policy which are currently being discussed:
(a) The definition of capital costs in family planning programs, and hence the items that the Bank would be prepared to finance;

(b) The extent to which the Bank would be willing to go into the health field as an indirect method of influencing the family planning program. This latter is especially relevant to Latin America. Colombia is among the more progressive Governments and yet it is unwilling, for political reasons, to go into family planning without at the same time providing extensive health services.

Tunisia. The Government of Tunisia has asked the Bank for a project identification mission. Mr. Miller was the Population Specialist in an earlier economic mission and had made preliminary soundings in this respect. He will participate in a project identification mission to that country, tentatively scheduled for next November.

Indonesia. Partly as a result of Mr. Miller's participation in the International Planned Parenthood Federation Regional Conference for Southeast Asia held in Bandung last June, the Government has requested the U.N. and Bank to mount a mission. It was subsequently decided that this will be a joint U.N.-Bank-WHO mission. The report, however, will be the sole responsibility of the mission, under the leadership of Mr. S. Keeny (consultant), with the U.N., WHO and the Bank commenting on the findings. The report will be written at the Bank, and Mr. Zaidan, the Bank member of this mission, will be responsible for coordinating the drafting of the report.

Economic and Special Population Missions

It has been agreed with the Area Departments that an Economics Population Specialist will be attached to a dozen missions over the coming year. This will be possible as a result of the expansion in the staff of the Population Studies Division. Mr. T. King joined the staff on August 7 and at least one other staff member is expected to be available. The participation in economic missions on such a scale should act as a project catalyst, as demonstrated by the Tunisian experience.

Preparations for mounting a special mission to Pakistan have been undertaken in cooperation with the Area Department. The objective will be to review the impact of the family planning program on past and future demographic trends. The conflicting claims of the National Family Planning Board and the Economic Planning Unit regarding the effectiveness of the program will be examined, to provide a sounder basis for the population projections in the next Five-Year Plan. It is expected that this will be a two-man mission consisting of Mr. Hawkins and a consultant.
Population Support Work for Economic Missions

Briefs on population problems have been prepared for country economic missions for Panama, Sierra Leone, Central Africa Republic, Kenya, the Philippines, Nigeria, Mexico and Korea. In many cases the mission members have followed this up on their return. For example, in the cases of the Philippines and Kenya, the result has been an outstanding population section in the economic reports. This service has both an educative function and provides a basis for a more extended coverage in key countries.

Contacts with Other Population Organizations and Professional Meetings

The Population Division has made considerable efforts to keep abreast of developments in other organizations and research centers working in this field. Mr. Hawkins has visited the North Carolina Population Center, the Population Council, Ford Foundation, ILO, UNESCO and OECD Development Centre. Mr. Miller attended relevant parts of the WHO Annual Assembly and the IPPF Regional Conference in Bandung. There have also been frequent contacts with national agencies, such as the Swedish International Development Agency and U.S. AID, the U.N. Population Division and the Organisation of American States. The knowledge of what is happening in those organizations is important to the Bank in terms of avoiding duplication in research efforts and in becoming familiar with persons working in the field. The latter is particularly important because the Bank will have to rely initially to a significant extent on the services of consultants. In addition, attendance at professional meetings, such as the Population Association of America Annual Meeting (which was attended by Mr. Zaidan) allows the Bank to keep abreast of developments in the professional field that are of relevance to operational matters. Such knowledge is particularly relevant to the work going forward on the methodology of cost/benefit calculations in the population field, where it is important for the Bank to develop operational techniques for dealing with such questions.

Information Service on Population

This service which was set up in cooperation with Research Files, has been working smoothly. Materials from the Population Council and other sources are received on a regular basis, reviewed in the Population Studies Division and then channeled to persons in the Bank dealing with particular countries.

Population Consultants

The services of Professor R. Freedman and Dr. J. Beasley to act as general consultants for the Bank on population matters have been enlisted. In addition, the Population Studies Division worked actively in suggesting and recruiting consultants of the required calibre to work on various Bank missions in population and family planning. The mission to Colombia and forthcoming missions to Indonesia, Pakistan and Tunisia include the services of such consultants.
IV. DOMESTIC FINANCE OF DEVELOPING COUNTRIES

Iran - Mobilization of Domestic Resources for Investment

Mr. Schebeck went to Teheran in August to participate in the country economic mission. Mr. Please joined the mission in September. Particular effort will be made to investigate the degree of direct and indirect dependence of overall resource generation on the petroleum sector. This will imply, inter alia, analyzing the role of the traditional tax system, i.e. excluding oil revenue, in mobilizing resources for public investment. Another important area of research will be the role of the monetary system (in particular time and savings deposits) and of financial markets, including the impact of high corporate profits on financial resources for investment.

Fiscal Work in Pakistan

The Chandpur Irrigation Project raises at the micro level the policy problem of setting irrigation rates particularly to farmers at extremely low levels of income. As a consequence it raises the fiscal implications of income transfers within East Pakistan and more widely between West Pakistan and East Pakistan. A meeting in Mr. Knapp's office isolated this as a crucial issue in this project. As a consequence Mr. Eklund joined the appraisal mission for the Chandpur project. His preliminary findings indicate that with appropriate inputs it should be possible to recover operating, maintenance and replacement costs from farmers, as poor as they are, and other beneficiaries in 10-15 years after construction. While in Pakistan, with the mission leader he discussed the more general implications of this work with the Bank's resident staff in Rawalpindi which has been examining the deteriorating fiscal position of East Pakistan.

Agricultural Credit in Pakistan

During May, Mr. Christoffersen was in Pakistan for two weeks on the problem of the organization of agricultural credit which had been opened up in the new political circumstances existing in Pakistan. While in the field he was appointed as an advisor to the East Pakistan government's committee charged with the responsibility for proposing changes in the organization of agricultural credit in East Pakistan. On his return to Washington he was assigned as Personal Assistant to Mr. McNamara, but he subsequently participated in discussions to ensure that a consultant was appointed to carry on the work in East Pakistan in which he had become involved.

Until mid-May, Mr. Christoffersen was involved with the work of the appraisal mission for the third Agricultural Development Bank project in Pakistan. He was particularly concerned with seeing that the interest rate policy was modified to eliminate the subsidy element in loans to larger farmers and that tariff policy in respect of imported inputs for the agricultural sector did not result in unduly encouraging capital intensive agriculture.
Philippines Tax and Savings Problems

Mr. Eklund prepared the fiscal and private savings mobilization sections of the economic report on the Philippines. The issues raised focussed on the problems of increasing the tax effort of the Philippine authorities for ensuring in particular that government revenues for developmental purposes increased more rapidly and that tax policy was made more consistent with the need to improve income distribution. The discussion also centered around the importance of private savings mobilization in the Philippines and in this regard specifically on the policies of the Development Bank of the Philippines (DBP). The DBP has attempted in the last few years to introduce more realistic interest rate policies in order to mobilize private savings for financing its activities and during the past year has made this policy even more effective by issuing bonds to borrowers rather than cash. These policies are contentious and Mr. Eklund's work was an attempt to encourage them in the direction they were going.

Tunisia Public Finance

Mr. Sciolli has contributed the public finance section of the economic report on Tunisia, engaged in continuing discussions with the Area Department and the Economic Committee on the report, and initiated work on the Study of Tunisian Tax Structure requested by the Area Department. Public savings are a major issue of economic policy in Tunisia with expenditure control as the main condition for improving performance in this regard. This has been stressed in the course of Bank discussions with Tunisian officials as well as in the economic report and policy paper. An improved public savings performance is also included in a Letter of Commitment which covers various performance areas and which the Tunisian Government has been requested to sign. The work on the tax structure is also related to the savings problem. It aims at investigating the causes for the apparent lack of built-in elasticity in the Tunisian tax system. Preliminary conclusions indicate that this shortcoming is due to weakness in tax administration, tax exemptions and certain structural relationships between growth of the economy and imports which are a significant source of revenue.

Sudan Central Government Finance

Mr. Schmutz (Young Professional) has been a member of the economic mission to Sudan and has contributed a section of the report dealing with central government financial performance. Fiscal policy is a crucial element in judging economic performance in Sudan and for determining whether to go ahead with a Bank operation there. This is a country with a high tax ratio but with very rapidly growing current expenditure responsibilities. Mr. Schmutz documented these developments and, in addition, has undertaken a more sophisticated analysis of the pattern of expenditure growth in relation to revenue growth.
Mexico - Agricultural Finance, Tax Administration

Mr. Beier participated in the work of the economic mission to Mexico and prepared the section on public finance. He particularly focused on the relationships between agriculture and fiscal measures which he managed to quantify to some extent. In addition he worked very closely with the member of the mission concerned with tax administration which is a major problem area in Mexico.

Malawi - Fiscal Management

Since mid-June, Mr. Beier has participated in the work of an unscheduled economic mission to Malawi. The question of availability of resources for development and the general question of fiscal management with which Mr. Beier has been concerned are central to the Bank's decision on going ahead with a major project which has been delayed for want of IDA funds but also on fiscal performance grounds. The positive tentative conclusions of the economic mission have been partly responsible for a reappraisal mission for the project which is now in the field.

Development Bank Mobilization of Private Savings

Mr. Please with Mr. Joshi examined the experiences of a sample of development banks in mobilizing private domestic savings. The findings were that these banks had not lived up to expectations in this regard. Mr. Diamond agreed that the exploration of the problem should be undertaken on a country by country basis for those countries where it was felt progress could be made and members of the Domestic Finance Division, to the extent available, would participate for this purpose in missions mounted by his Department. Mr. Diamond is also sending draft appraisal reports of his Department to the Division, where Mr. Joshi has been reading them particularly on the question of the extent to which appraisal teams have examined the policies of the financial institutions looking toward improved mobilization of local resources.

V. QUANTITATIVE TECHNIQUES AND ANALYSIS

Kenya

Mr. Shourie participated in the work of preparing the latest country economic report on Kenya. He prepared an econometric model of the Kenyan economy which was used both in making projections and in suggesting lines of policy to be pursued. This work and other Bank experience has demonstrated the severe limitations of several types of widely used regression models. Mr. Shourie is working on a paper outlining better methods.

Jamaica

Mr. Carter and Mr. Kohlhagen have together undertaken a study by sectors of the determinants of growth and investment in Jamaica. This is now in the process of final revision.
Mr. Carter has continued his analysis of the employment and growth potential of Jamaica over the coming decade, which has involved the development and application of an optimizing model using an input-output approach. Mr. Carter has also brought to virtual completion a macro-economic study of Jamaica.

**Mexico - Tourism**

Mr. Carter and Mr. Hooper are making an analysis of the impact of tourist development on the economy of Mexico. This work was initiated at the request of the Projects Department. The effects of a particular tourist project are linked by a model to the region concerned, and the economic system as a whole.

**Country Projections**

Mr. Carter and Mr. van der Valk have examined the quantitative aspects of the five-year country projections made last year. The preliminary results indicate that there may have been a consistent bias in country forecasts. There is an apparent tendency for the forecasts of the main indicators to move towards the center, e.g. high growth rates in the past are lowered and low rates tend to be raised.

**VI. URBANIZATION**

**Brazil**

Mr. Westebbe visited Brazil in conjunction with the country mission to Sao Paulo to explore the problems of general urban development in the Sao Paulo Metropolitan Region. The appraisal of the new Sao Paulo basic plan suggests that it may be of questionable value in guiding public investments in that city: the plan does not encompass the economic region of Sao Paulo. It is a physical intuitive land use plan and contains little in the way of economic analysis or cost benefit analysis of proposed investments. Finally, it proposes no credible way of coordinating the multiple governmental authorities concerned with urban development in the region. The Regional Government has to be looked to for overcoming the defects noted in the city plan.

**Chile**

At the request of the Area Department, Mr. Westebbe made a brief review of the economic impact of the housing program. The large proportion of public investment which has been devoted to housing appears to have been at the expense of higher priority economic goals while doing little to integrate the large urban marginal population into economic and socially productive urban life. The capital of both savers and the Housing Ministry has been eroded by inadequate official value adjustments for inflation. There is a serious lack of policy coordination between government agencies responsible for housing and urban planning and the
Ministry responsible for other urban public works. One consequence of this is the decision of the Ministry of Public Works to proceed with a Santiago subway system despite the objections of the urban planners.

**Senegal**

Mr. Westebbe explored the regional development policies with the Minister of Development and his staff and the program of Development of Dakar with the Urbanization Directorate of the Ministry of Public Works. The visit provided the initial background to assist the Area Department in evaluating lending requests for urban development, and is regarded as a first step in following Senegal's progress in urban-regional planning as well as an opportunity to inform the Government of the Bank's interest in this field. As a result of this, the Senegal Government has asked the B.E.C.O.M. of France to prepare a study to examine the future development of Dakar.

**Jamaica**

At the request of the Area Department, Mr. Bhatia is reviewing the proposal of the Government of Jamaica for the development of the Hellshire Hills Area including the Kingston Metropolitan Area.

**Colombia**

Preparatory work is being done on behalf of the Western Hemisphere Department to assist them in defining the approach to take in dealing with urbanization in the next comprehensive economic mission. The intention is that one or two members of the Division should undertake to do this analysis for the economic report in order to work out an approach that could be used as a model for urban economic analysis for other country reports.

**India**

At the request of the Area Department and the Government of Maharashtra, Mr. Westebbe did an analysis of a proposal that the Bank consider financing projects as part of the Bombay-Poona Metropolitan Plan. The report concluded that the plan while bold in concept did not justify locational patterns for new townships and industrial estates in terms of an evaluation of alternatives on cost benefit grounds and provided little basis for evaluating the requests for foreign financing of mass transit, electricity and water and sewer investments. In fact, a number of the transport requests involved contradictions between competing modes as well as inconsistencies with the basic strategy of absorbing new migrants in new town centers. It was agreed with the Area Department that our work on urban economic development in India will be directed to providing a framework within which priorities can be established for eventual Bank lending for urban projects and specifically for guiding the visit of the mission of the Urban Transport Division which will follow a visit of staff of the Division to Bombay in November.
Kenya

The East Africa Department asked Mr. Westebbe to evaluate the request of the Government of Kenya, passed on by our resident representative in Nairobi, that the Bank consider financing a program of housing. We concluded that the request was not well supported and that an examination was needed of the whole problem of urban development in Nairobi.

Niger

Mr. Westebbe commented on the request of the President of Niger for an UNDP financed study of urban investment priorities at the request of the Area Department. Following this, the Bank proposed that it act as executing agency for an expanded study to include urban economic development criteria.

Contacts with Other Organizations

The Division carried out an active program of making contact with leading professional and official organizations interested in the field of urban development. Aside from several overseas trips and a seminar with Resources for the Future and six academic and research organizations in this country, regular contacts were continued with such agencies as the Inter-American Development Bank, AID, the Organisation of American States and several U.N. units, including the UNDP and the Centre for Housing, Building and Planning. Discussions were held with representatives of a number of leading private research and consulting firms. Mr. Westebbe visited leading experts on urban development in England and the Division was visited by experts from various parts of the world. All of these contacts have greatly increased the awareness of professional and official circles dealing with urban development of the Bank’s interest in the field. The Division has also thereby acquired knowledge in depth of what is being done in the field and where the Bank Group can find professional assistance in its operations.

VII. INDUSTRIALIZATION ECONOMICS

Bank Group Policy

Early in the quarter Mr. Kalmanoff completed his participation in the work for the report to the President of the Bank prepared by Messrs. Demuth and Gaud on the role of the Bank Group in supporting industrial growth.

The President of the Bank announced at the Senior Staff Meeting on June 3, 1969 that it had been decided to establish an Industrial Projects Department in the Bank. The principal recommendation made by this Department concerning the future role of the Industrialization Division is: besides continuing to conduct research on the process of industrialization in LDC’s generally, the Division should cover the
impact of the major elements in government economic policy in individual countries which affect the pace, character and direction of industrialization, such as tariffs, direct import controls, exchange rates, taxation, financial incentives, availability of credit. Since the Industrial Projects Department would have as its principal task the finding, preparing, evaluating and financing of industrial projects, the broader economic policy influences affecting the pace and character of industrialization to be studied effectively require the kind of personnel found in the Economics Department. Economics Department involvement in these policy aspects is necessary if its research on industrialization is to be of operational significance and meaningful.

Early in July, Mr. Kalmanoff prepared for the President of the Bank a note on Industrialization and Economic Development in the LDC's. The principal operational thesis emerging from the note was that the Bank Group should be concerned not merely with the volume of its support of industry, but also with the influence it may bring to bear for a reorientation of industrial strategy in LDC's along sounder lines. The cost of industrial protection policies to the economies of many LDC's is high, and they will turn out to be self-defeating unless new approaches are adopted to make industry more internationally competitive.

Mr. Kalmanoff has participated in the work being undertaken by a Working Party under the direction of Mr. Baum reviewing the Bank policy of Preferences for Domestic Suppliers in Procurement for Bank Financed Projects, with special attention being given to the feasibility of switching the policy to one involving effective protection rather than nominal protection, i.e., protection related to the value added by the domestic suppliers in their industrial activity.

Brazil - Industrial Policies

A three-man mission completed a stay of eight weeks in Brazil early in May, to make a comprehensive assessment of national policies affecting industrialization, including special attention to industrialization in the development of the Northeast. The mission was headed by an outside consultant, Mr. Louis Walinsky, with participation by Mrs. Hughes of the Division. The mission's report is now close to completion. The mission found that most Brazilian manufacturing industry has failed to achieve desirable economies of scale, because of the emphasis on import substitution, the low purchasing power of a large proportion of the population, and the only limited entry into export markets. High production costs are common, and the competitive situation is mixed. Substantial changes are needed in the level and structure of protection, and mergers of individual producing units appear to be desirable. There is also fundamental need for progress in agriculture to raise domestic purchasing power. As regards industrialization of the Northeast, there are serious questions about the effectiveness of the incentive system.
Mexico

Mr. Walstedt's work as industrial economist on a four-week country economic mission to Mexico was completed in July. It was found that growth in Mexican manufacturing exports over the last two decades has been well sustained but that there has been no real break-through. Excessive protection has to a large extent delayed the adjustment of Mexican industries to internationally competitive levels. Substantial changes of policy and restructuring of industries are necessary to achieve such competitiveness. Specific export incentives which have been applied are unlikely to have a major impact without action on such basic matters as the high prices of industrial intermediates.

Honduras

Mr. Datas completed a report during the last half of May on his findings as industrial economist on a three-week mission to Honduras. Limited industrialization in Honduras, probably the least industrialized of the Central American countries, is concentrated in the consumer goods field. Emphasis in policy has been on import substitution through high protection, without sufficient regard to the possibilities of specialization in relation to the Central American Common Market, with the possible exception of one large project to manufacture container board for the packing of bananas for export from the region.

India

A three-man mission on industry in India headed by Mr. Waide of the South Asia Department, with the participation of Mr. Alexander Nowicki, is completing its report. This undertakes a comprehensive and fundamental review of industrial trends in India, and of policies affecting industrialization and their effects. Industry in India has suffered from an extensive recession during the last several years which is more than of a cyclical character. This is particularly true of new capacities in capital goods industries which have come on-stream and which are dependent on a high level of investment for the demand for their output. There are also particular difficulties of finance and efficiency in publicly owned capital goods industries. The setbacks of recent years have, however, produced some positive effects through a greater cost consciousness and some liberalization of official controls.

Tunisia

By mid-July Mr. Cilingiroglu completed his contribution on industry to a report on public sector enterprises in Tunisia. The four-man mission to Tunisia on this subject was headed by Mr. Nespoulos-Neuville. In industry, state-owned enterprises have predominated in the decade or so since independence. Many such enterprises have suffered from inadequate project evaluation and preparation, high investment costs, and insufficient and poorly structured capitalization. There is also excessively
centralized control of enterprise operations at the ministerial level. These deficiencies are on top of the usual difficulties characteristic of many industries, whether public or private, operating in small, underdeveloped markets.

Argentina

In July, Professor Bela Balassa was on an advisory mission to Argentina to discuss industrial protection policy. This one-man mission had been especially requested by the Western Hemisphere Department. Professor Balassa found considerable receptivity to his recommendations for the gradual introduction of policies to increase the rate of growth of agricultural exports by lessening discrimination against them, to reduce tariffs and to increase subsidies for exports of manufactured goods, and to lessen differences in duties among various groups of manufactured products.

Korea

Professor Balassa during August was on a similar mission to Korea on the request of the East Asia Department and the invitation of the South Korea Government.

Iran

During July, Mr. Kalmanoff reviewed in detail a preliminary report prepared by Mr. Avramovic of the South Asia Department on the Industrialization of Iran. The report addresses itself to the policy orientation that should be pursued in further advances from the present position of intermediate industrial development after a period of rapid growth geared to the domestic market and accomplished under conditions of substantial, differentiated protection. Emphasis is placed on the desirability of a transition to a policy mix of lowered uniform protection coupled with export subsidies for manufactures.

Country Mission Schedule

An economic country mission schedule for work on industry during fiscal year 1970 has been prepared, based on requests received from the Area Departments and reviewed in the light of the five-year program and other considerations to determine priorities. As the demand is greater than can be covered by manpower from the Division, outside consultants will be used. It is expected that at least 11 countries will be covered by manpower from the Division, as follows: Argentina, Colombia, and Mexico in Latin America; Ethiopia, Ghana, Morocco and Nigeria in Africa; Turkey and Yugoslavia in Europe; and Korea and Thailand in Asia.

Industry Research Program

The research program of the Division was reviewed in a meeting of the Economics Department Research Committee held on July 29, with interdepartmental representation from the entire Bank Group. The committee
reviews the research programs of the Divisions of the Economics Department to ensure that they are fully responsible to the operational requirements of the Bank Group.

UNIDO

Mr. Kalmanoff represented the Bank during the last few days of the Third Annual Session in Vienna of the Industrial Development Board, the immediate policy-making body of UNIDO. There was little of direct interest to the Bank in the proceedings of the Industrial Development Board. The Executive Director and a few delegations called for a closer relationship with the Bank. However, this did not result in any concrete suggestions or proposals. While Mr. Kalmanoff considered his participation useful, if only for the negative findings, he would not advise any such representation in the future unless it could be linked with some other necessary activity. However, the few additional days he spent with the UNIDO Secretariat after the meeting proved to be useful. Possible future utilization by the Bank Group of UNIDO work may prove to be worth exploring as we expand our activities in the field of industry. The approximately 135 professional members of the UNIDO staff engaged in substantive work on industry, as distinct from administrative activities related to specific technical assistance projects, are dealing with such subjects as methods of economic evaluation of industrial projects, industry profile data, industrial promotion techniques, incentive policies, world and country industrial surveys, technical studies of specific industry branches, the handling of industrial inquiries, and institutional arrangements for assistance to industry.

UNCTAD Work in Industry

En route back to Washington, Mr. Kalmanoff similarly spent a couple of days in Geneva to become acquainted with the work of the UNCTAD Secretariat in industry. This staff works on the negotiation which is underway for the granting of preferences by developed countries for imports of processed and industrial products from developing countries, studies of possibilities in individual countries of exports of manufactures, and general studies of international trade aspects of industrialization.

VIII. COMPARATIVE DATA

Country Data Bank

The first stage of the country data bank (under the supervision of Mr. Novak) is expected to be completed by the end of 1969. The data bank will facilitate the preparation of most of the ad hoc tabulations which now have to be carried out largely by hand.

The data stored include time series in demography, labor force, education, national accounts, public finance, production, prices, money, foreign reserves and foreign trade. The base year for the series is 1950.
In addition to gathering and consolidating data from various sources, independent estimates have had to be made for years for which data are lacking and in adjusting series to make them comparable both over time and among countries.

**Country Data Files**

Work on the preparation of individual country data files for West African countries has been started by Mr. Franchet. When completed, the files will provide in summary form a considerable volume of basic statistical information that is at present lacking.

**1969 World Bank Atlas**

The new edition to come out in September has not only been up-dated but population and GNP rates of growth have been added. Estimates of GNP per capita have been added for a number of countries not included in previous issues of the Atlas.

**Statistical Mission to Pakistan**

With the South Asia Department, Mr. Levy has been organizing a statistical mission to Pakistan for October to undertake a critical review of the Pakistani statistics and its organization. Mr. Eory will be deputy chief of mission.

**Mali Statistics and National Accounts Series**

Mr. Franchet participated in the economic mission to Mali as national accounts expert. The Mali statistics and the statistical organization were evaluated and national accounts estimates at constant prices were prepared for the first time.

**Comparative Latin American Per Capita GNP Estimates**

As a part of the program for improving the available estimates on per capita GNP, Mr. Novak participated in the 12th meeting of ECIEL (Estudios Conjuntos sobre la Integracion Economica Latino-Americana) held in Caracas in July 1969. The meeting initiated further work on comparative studies of prices among Latin American countries. Such studies are designed to be a basis for the eventual computation of purchasing power parities for the purpose of improving the present estimates of GNP per capita in U.S. dollar equivalents. (ECIEL's studies are coordinated with Professor Kravis' world-wide project on this subject in which the Bank is one of the contributors.)

**Country Program Paper Table**

The revision and up-dating of the summary country data sheets for the CPP has continued under the direction of Mr. Eory according to the Bank-wide country economic mission program.
IX. STATISTICS

Improvement in Capital Markets Data

The Statistical Services Division maintains a statistical reporting system on the international bond and equities market. This reporting system was developed as a part of the Bank’s external debt reporting system and has been operational for many years. The growth of the international bond market in recent years has made these statistics more important so that financial statisticians have now begun to give more attention to this field of statistics.

The OECD Ad Hoc Group of Financial Statisticians (made up of financial statisticians from DAC countries and representatives of IMF, IBRD, EEC and BIS and provided with staff direction by OECD) devoted a large part of a meeting in the early summer to the capital market statistics.

The OECD Secretariat requested that the IBRD be recognized as the official international source of the data on the international bond market while the Bank agreed to accept the statistical standards and definitions agreed to by the Group. The DAC member country representatives agreed to provide data to IBRD from their own statistical systems to assure that IBRD statistics were complete and accurate.

New External Debt Reporting System

The system of processing external debt reports and producing required data is being thoroughly revised. The old system is not capable of handling the forecast growth in reporting, coverage, and demands by management for outputs from the system.

The revised system will reduce the requirements for manual treatment of the reports through the elimination of such intermediate processing by making full use of the computer capability and standardizing a number of different types of tables. This latter should avoid the need to respond to many special requests which can be handled now only at a tremendous cost in manhours of clerical effort or which may even be impossible to answer. It is planned to have the revised system operational in time to process the reports to be received as of December 31, 1969.

Expanded Reporting System

The Expanded Reporting System is the arrangement under which creditor countries in the DAC report loans and grants made to developing countries. It is operated jointly with OECD. An OECD representative from the DAC Secretariat spent 10 days with Bank staff in Washington preparing material to clarify definitions and reporting procedures and helping to develop the agenda for the annual review of the system, to be held in December 1969. Since the reporting system is still in its infancy, the agenda which was set up for the annual review was primarily concerned with resolving the
problems encountered by creditor countries in submitting their initial reports. When the reporting system problems have been sufficiently cleaned up, the data will be put on computer tape for use by OECD in its analysis of financial flows and for Bank use in enhancing the quality of the debtor data.

X. SECTOR AND PROJECTS STUDIES

Agriculture

Mexico. Mr. Manning of the Division participated in the agricultural sector review during the annual economic mission to Mexico. The sector study gave special attention to existing input/output price relations and their dependence upon government policy measures. It suggested a generalization of the two-level price support policy for irrigated and rainfed agriculture as a means of achieving both production and distribution goals. It also recommended an overhaul of the capital structure of the state fertilizer monopoly which could permit much lower prices for fertilizer now, in anticipation of vastly greater turnover and lower costs in the near future. Participation in this mission greatly facilitated the subsequent reappraisal of the Mexican irrigation rehabilitation loans programmed as a part of the Division's continuing work in this area of research.

Portugal. Mr. Egbert participated in the recent agriculture sector mission to Portugal. The preliminary findings, subject to further analysis and review by the mission, are that the slow growth of agriculture (1% during the 60's) has two primary sources: (1) a thin agricultural resource base; and (2) slow adoption of more modern production technology by farmers. The persistence of traditional methods and lack of technological progress is traced back to land tenure conditions, with very small and very large farm units; to excessive intervention by public and quasi-public agencies which rigidly control production, processing, distribution and prices of the major agricultural commodities; and to the lack of education in rural areas. Physical possibilities for greater agricultural growth exist, but it will take considerable restructuring of government programs and agencies to provide real incentive to farmers, and great adaptation on their part to even approach the officially expected agricultural growth target of 3% per annum. Participation in the mission provided also a firm basis for the division's research work on the uses of agricultural sector planning models.

Transport

Colombia. Messrs. de Weille and Miller undertook two transport study missions to Colombia. These missions are closely related to ongoing research on the so-called Harvard Transport Model. Their primary purpose is to assist the Colombian Government in setting up a transport investment planning mechanism: efforts have been made to secure coordination between government departments in transport matters, assignment of planning personnel in the various departments, training of personnel (two Colombians will visit Washington for five weeks each in October), collection of relevant data, and transfer to Colombia of planning tools (models).
Dahomey, East Africa. The Division also participated in the Steering Committees of the UNDP-financed transport studies in Dahomey (de Weille), and East Africa (van der Tak). The Dahomey study provides a better basis for investment planning. It is one of the first studies in which a network/systems analysis approach was applied on a national basis for identifying and evaluating investments in inter-city transport facilities (all modes of transportation). The East African study provided a vehicle for effective discussion of the inter-related problems of the proper rate structure for the East African railways, the closing of uneconomic rail lines, the need for more commercial management and better cost accounting, the proper level of road user taxes, and the disadvantages of the restrictive road transport licensing system. Acceptable action taken on these issues by the governments and other parties concerned will be a key question for Bank operations in the immediate future.

Tanzania. Mr. Israel participated in a mission to Tanzania to prepare a feeder road project. This is closely related to the division's methodological work on feeder road projects. We envisage monitoring the Tanzania project closely from the outset until well beyond the end of the construction phase and analyzing the problems which present themselves.

Education

Tunisia. A brief participation by Mr. Thias in a review of education problems in Tunisia, as part of the work of a country economic mission, pinpointed the usual problems of low internal efficiency, difficulties of school leavers to find jobs, heavy dependence on expatriate personnel, etc. It also served as a useful preparation for the subsequent reappraisal study of a Bank-financed education project in that country.

XI. GENERAL ACTIVITIES

Bank Lectures and Seminars

As a regular part of their work growing out of their research, members of the Department participate in teaching at the E.D.I. In the last quarter, this included: lectures on project simulation and risk analysis (Mr. Reutlinger); urbanization problems (Mr. Westebbe); development strategies in semi-industrial countries (Professor Balassa); problems of food processing industries in developing countries (Mrs. Hughes). A seminar was organized in the Bank on the use of shadow prices in project analysis with the participation of Professors Little (Oxford), Marglin (Harvard), and Weckstein (Brandeis). Mr. Reutlinger also gave a talk to the International Institute of Administrative Sciences in Barcelona on the use of quantitative techniques used and evolving in IBRD projects.

Mauritania: Planning Advice

Mr. Westebbe visited Mauritania at the request of the Government and the Area Department in order to advise on development planning and related policy issues and to introduce the chief of the Operations Division to leading officials. His mission focused on the desirability of speeding up the
introduction of annual planning, of coordinating an annual plan with the annual budget, and of relating the decision-making authority of the President, Minister of the Plan and Minister of Finance, in order to get a more effective allocation of resources. A good deal of work was also done on project identification within the framework of the development strategy adopted by Mauritania.

Operational Memorandum on Country Economic Work

The Department took the lead in working out in consultation with other Departments, a new Operational Memorandum 4.02 on Country Economic Analysis and Reports. This new O.M. calls for a number of important changes in the way in which country economic work is done in the Bank as well as codifying existing work approaches which have been adopted since the last edition. Among the important points in the new O.M. are:

- basing country economic work on a systematically organized program of investigation into the long-term development problems of the country in which the Economic Staff and Projects Departments contribute functional and sector analysis;

- setting a regular schedule for the preparation of general economic reports - annually, biennially or triennially - according to the country with brief visits in the intermediate years as necessary to keep abreast;

- preparation of a coordinated pre-investment program for each country.

In addition to the general economic reports, the program of work should include the preparation of updating memoranda as necessary, of special reports dealing with important sectors or problems of the economy and the economic section of Country Program Papers.

Economics Department

September 12, 1969
Work Progress Report for the Comparative Data Division for the Period
August 16-31, 1969

Computer Data Bank

1. The work on this project continues to occupy a considerable
part of the time of the research assistants and some of the profes-
sionals. Several series have already been tested in the computer.

World Bank Atlas

2. The work on this year's edition of the World Bank Atlas
was completed and the tables forwarded for publication to Mr. Lind
of the Information Department.

3. The estimates to be included in the Atlas relate to 1967
population, GNP per capita in 1967 US dollars, and average annual
rates of growth for both indicators for the period 1960-67. These
estimates were given for 191 countries and territories.

Statistical Mission to Pakistan

4. Mr. Levy has continued working on the organization and
staffing of the statistical mission to Pakistan.

Miscellaneous

5. Some special tabulations have been prepared for staff
members and executive directors.

Mr. Levy

cc: Mr. Stevenson
Mr. Lowther
### Comparative Data Division

**Man-Days Worked**

**August 16-31, 1969**

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\[a\] Home leave.
\[b\] Orientation.
\[c\] Data files for West African countries.
\[d\] Annual leave.
Mr. A. M. Kamarck  

Koichi era  

Back to Office Report from LMP

1. During my stay in Japan during August on a leave without pay, I was twice invited to give a speech by agencies of the Japanese Government.

2. A speech was given for professionals in the Economic Planning Agency on the research approaches and organizations in the field of urban and regional development. This request reflected the need of expanding research facilities and organizations in this field in Japan. It was my impression that urban and regional problems have been given most serious attention among policy makers there.

3. Another speech was made by the request of the Ministry of Finance on the approach to the international economic cooperation. This was also a topic which was attracting a major attention of national policy makers since pressures from outside have arisen to Japan for more active participation in helping underdeveloped countries and the country itself has reached the stage at which she can afford it. Discussion after the speech centered around the two questions: what should be the objective in international economic cooperation and which method of cooperation should be chosen, bilateral aid or through international organizations such as the World Bank. I argued for an increase of aid through international organizations primarily because recipient countries can get more benefit by this way.

EMERA:shn  

co: Messrs. A. Stevenson  
R. Westebbe
Mr. A. Stevenson

H. C. van der Tak

Activities of Sector and Projects Studies Division, August 16-31

**Agriculture**

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<tr>
<th>Name</th>
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<tr>
<td>Ablasser</td>
<td>Brazil agriculture sector study, preparatory mission (10 days).</td>
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<td>Egbert</td>
<td>Brazil agriculture sector study, preparatory mission (5 days);</td>
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<td>Portugal agriculture sector survey mission report (5 days).</td>
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<td>Hussain</td>
<td>Livestock appraisal paper (3 days); risk analysis of an irrigation project (3 days); preparation of PDI lecture on new techniques in project analysis (4 days).</td>
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<td>Manning</td>
<td>Field work in Mexico for irrigation reappraisal study (9 days);</td>
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<td>Beutlinger</td>
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<td>Portugal agriculture sector study for Mr. Egbert (5 days);</td>
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**Education**

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**Transportation**

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<td>Harrell</td>
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**Transportation (cont'd)**

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<th>Name</th>
<th>Task Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Israel:</td>
<td>Feeder roads study (8 days); preliminary work on railway reappraisal project study (2 days).</td>
</tr>
<tr>
<td>Miller:</td>
<td>Transport planning models study (7 days); study for Colombia of details in Harvard recommendations to Colombia, including day's trip to Cambridge, Mass. (2 days); feeder roads study (1 day).</td>
</tr>
<tr>
<td>Ort:</td>
<td>Regulation of road transport study (part time, Utrecht, Neth.)</td>
</tr>
<tr>
<td>Raya:</td>
<td>On port study mission to Central America (10 days).</td>
</tr>
<tr>
<td>Saus:</td>
<td>Railway line closure study (10 days).</td>
</tr>
<tr>
<td>Isaac:</td>
<td>Linear programming problem for Mr. Israel (4 days); graphing Colombia's agriculture production (5 days); annual leave (1 day).</td>
</tr>
<tr>
<td>Mijares:</td>
<td>Lockheed Susan Model for Mr. Harral (1 day); Fortran self-instruction (2 days); Harvard Colombia recommendation work for Mr. Miller (1 day); transport planning models study (6 days).</td>
</tr>
<tr>
<td>Femina:</td>
<td>On port study mission to Central America (10 days).</td>
</tr>
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</table>

**Public Utilities**

<table>
<thead>
<tr>
<th>Name</th>
<th>Task Description</th>
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<tbody>
<tr>
<td>Anderson:</td>
<td>Joint study on demand forecasting and investment models in electricity (8 days); orientation (2 days).</td>
</tr>
</tbody>
</table>

**General**

<table>
<thead>
<tr>
<th>Name</th>
<th>Task Description</th>
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<tr>
<td>Snell:</td>
<td>Editing Marcel Masse's paper on project benefits methodology (5 days); comments and revisions of Kenya education study (9/2 days); sick leave (3/4 day).</td>
</tr>
<tr>
<td>van der Tak:</td>
<td>Comments and advice (2 days); revision of Kenya education study (3 days); preparation for FAO/WHO/UNICEF conference of the Protein Advisory Group in Geneva (1 day); general supervision (4 days).</td>
</tr>
</tbody>
</table>

**Cc:** Mr. Karsnik  
Mr. Loader
September 3, 1969

Mr. Alexander Stevenson

Robert A. McFeters, Jr.

Progress Report - Professional Staff - August 16-31, 1969

The professional staff of the Statistical Services Division carried out the activities indicated below during the period August 16 to 31, 1969:

Tiemann - Prepared draft of paper on External Debt Reporting System to be presented at meeting of Central Bank Technicians at Lima, Peru, in November. Participated in briefing Western Hemisphere economists on changes in the External Debt System. Participated in meeting of computer committee and reviewed Bank's requirement for additional computer equipment. General administrative and supervisory duties, including review of staffing and recruitment. Sick leave.

McFeters - Completed long-run debt service and capital flow projections for Pearson Commission staff. Discussions with OECD Secretariat on preparations for annual review of EBS, with IFC representatives on global private capital movements, and with Western Hemisphere Department economists on external debt report. Annual leave.

Goer - Sick leave.

General Statistics Section


Programming Section

Angel - Revised debt model program (Pearson Commission). Started to produce on generalized version of debt models. Attended a meeting with Western Hemisphere country economists on the subject of external debt and a Data Processing Committee meeting. General supervision of the Section. Annual leave.

Conner - Continued checking data for the Tunisian Education Evaluation Project. Assumed the responsibility of making sensitivity runs on the Livestock Model during Mrs. Conliffe's absence. Began the modifications of the Highway subroutine of the Harvard Transportation Model to handle metric units.

Conliffe - Working on Livestock Model. Write-up of input for the Livestock Model. Annual leave.

Fan - Completed World Bank Atlas. All three programs are operational. Continued work on macroeconomic data bank.

Abellon - Continued study of COBOL by converting a program to COBOL. Modified forecasting model. Assisted Transportation Projects personnel to use the COMET remote terminal. Continued conversion of statistical programs from the IBM 360 to the B 5500. Started analysis of a program to tabulate imports of Persian Gulf countries.

Bradley - Continued work on new External Debt Data System. Designed a preliminary input request form for Special Table Generation. Modified and ran a loan-selector program to reclassify debtor information for input to "Projections". Completed debugging and implementation of a more efficient version of DAM.

Krishna - Continued studying the project analyzer part of the Harvard Transportation Model. Made runs with project analyzer. Worked on the Macro model. Assisted various people in the Economics Department on running ALPS. Attended a three-day shop on BASIS AT Detroit.

Slade - Continued systems design work and began laying out programming specifications for new external debt system. Attended (1) a two-day course on modular programming, (2) a day-and-a-half meeting with a representative from OECD concerning creditor country reporting requirements, and (3) a meeting with Western Hemisphere economists regarding debtor country reporting and data processing of the information received. Wrote a Gross Flow Model and net-to-gross disbursements model for the Pearson Commission. Ran calculations of the Grant Element of IBRD and IDA loans for Programming and Budgeting. Worked on redesign of the ERS reporting forms.
Kieser - Worked on putting together the various parts of the Harvard Transport Model as well as debugging the interface routine which connects the transportation section with the macro section. Visited Harvard for one day to consult with the designer of the model. Worked on population model developed by David Miller by adding two additional tables and equations. Worked on development of specifications for data input into the external debt system from the Treasurer part of the General Accounting Data Bank.


Tay - Continued work on the major changes of IBM Financial Model program, and computer runs for IDA Financial projections. Annual leave.

External Debt Section

Paulson - Meetings with Mr. Stein of OECD in preparation for ERS Annual Review. Preparation of paper on cross-checking of debtor and creditor information for ERS Annual Review. Meetings with Western Hemisphere Department on new debt system. Meetings on new debt system.

Slappey - For the ERS: worked on design of new forms and redesign of existing forms, participated in meetings with OECD representative. For the external debt system: continued work on the users' survey (write-ups of oral replies; participation in meeting with Western Hemisphere Department economists, examination of the effect of suggestions received on our present plans for data collection and processing); made preliminary designs of reporting forms.

Perella - Wrote memoranda on external debt of Nicaragua, Chile, Peru, Argentina and Paraguay. Wrote memoranda on specific external debt reporting problems of Argentina and Brazil. Meeting with Messrs. Ross and Chernick on external debt of Mexico. Preparation of list of all Western Hemisphere borrowers and guarantors. Annual leave. General supervision.

Caden - Preparation of proposals for changes in ERS procedures and for presentation at ERS Annual Meeting. Discussions on foregoing proposals with visiting OECD representative and Chief of Section. Sick leave. General supervision.
Doultsinos - Wrote memorandum on Spain's debt report. Prepared list, giving terms of all loans contracted during 1968 by Iceland. Wrote memoranda on ERM cross-checking information for Spain, Greece, Iran, Iraq and Philippines. Met with Mr. Ahluwalia and discussed problems regarding Indonesia's debt report. Leave. General supervision.

Helme - Returned from Pakistan upon completion of the external debt data reconciliation mission. Wrote the back-to-office report and prepared the data obtained for processing. Resumed work on the analysis of the Ghana bilateral rescheduling agreements of medium-term suppliers' credits, a project started in June before leaving for the mission.

Martin - Wrote memoranda on debt reports of Uganda, Gabon, Togo, Tanzania and Cameroon. Examination of debt data brought back by Pakistan mission. Annual leave. General supervision.

Ahluwalia - Completed first draft of paper outlining a Resource Gap Estimation Model. Circulated copies in Area Department and discussed model with Mr. Tims. Helped Mr. Doultsinos in processing of Indonesia debt reports.

Att:1

cc: Mr. Lowther

/ra
<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I - Research</td>
<td>12.0</td>
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<tr>
<td>II - Service</td>
<td>45.6</td>
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<tr>
<td>III - Supervision</td>
<td>11.4</td>
</tr>
<tr>
<td>IV - International meetings and</td>
<td>1.2</td>
</tr>
<tr>
<td>report writing</td>
<td></td>
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<tr>
<td>V - Other activities</td>
<td>9.3</td>
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<tr>
<td>VI - Training</td>
<td>3.9</td>
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<tr>
<td>VII - Leave</td>
<td>16.6</td>
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<td><strong>Total</strong></td>
<td><strong>100.0</strong></td>
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</table>

Statistical Services Division
Economics Department
September 3, 1969
Mr. Alexander Stevenson

Richard M. Westebbe

Economics of Urbanisation Division: Progress Report - August 16-31

Miss Briggs: - on leave.

Mr. Bhatia:

1. Continued work on Pakistan research project.


3. Reviewed newly arrived set of documents on Bombay-Poona Urban Development Project and participated in a meeting on this project with Mr. Rajwade, Home Secretary of the Maharashtra State.

4. Attended a meeting with the officials of the Indian Railway Board concerning Metropolitan transport in India and prepared a note on this to Mr. Westebbe.

5. Met Mr. Zamilosar of the UN Center for Housing, and Dr. Rosental of the UNDP.

6. Attended Spanish Course which started August 29.

Mr. Hara: - on leave.

Mr. Westebbe:

1. Wrote quarterly operational report.

2. Redraft of urbanisation section of the President's speech.


4. Meeting with Mr. Rajwade, Home Secretary of the Maharashtra State Government and Bank staff on Bombay-Poona Urban Development.


R/ Westebbe - cc: Mr. Kamarok
Progress Report of Statistical Services Division
for the period August 16 - 31, 1969

A. EXTERNAL DEBT

1. Posting, coding and preparation of debt tables; see Annex I for details.

<table>
<thead>
<tr>
<th>Work</th>
<th>Requested by</th>
<th>Status</th>
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</thead>
<tbody>
<tr>
<td>2. Belgium - preparation of memorandum on debt submission as of December 31, 1968</td>
<td>Europe, Middle East and No. Africa</td>
<td>In progress</td>
</tr>
<tr>
<td>3. Portugal - preparation of memorandum on debt submission as of December 31, 1968</td>
<td>Europe, Middle East and No. Africa</td>
<td>In progress</td>
</tr>
<tr>
<td>4. Spain - preparation of memorandum on debt submission as of December 31, 1968</td>
<td>Europe, Middle East and No. Africa (Guillot)</td>
<td>Completed</td>
</tr>
<tr>
<td>5. Iceland - preparation of list giving terms of all loans contracted during 1968</td>
<td>Europe, Middle East and No. Africa (Wahl)</td>
<td>Completed</td>
</tr>
<tr>
<td>6. Morocco - preparation of amortization schedule for proposed IBRD loan</td>
<td>Europe, Middle East and No. Africa (McCall)</td>
<td>Completed</td>
</tr>
<tr>
<td>7. Indonesia - preparation of memorandum on debt submission as of December 31, 1968</td>
<td>So. Asia</td>
<td>In progress</td>
</tr>
<tr>
<td>8. Pakistan - examination of updated information supplied by mission</td>
<td>So. Asia</td>
<td>In progress</td>
</tr>
<tr>
<td>15. Preparation of debt data for Annual Report</td>
<td>Off. Pres. (Sarma)</td>
<td>In progress</td>
</tr>
<tr>
<td>Work</td>
<td>Requested by</td>
<td>Status</td>
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<tr>
<td>----------------------------------------------------------------------</td>
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<tr>
<td>16. Preparation of data for a model</td>
<td>Pearson Comm. (Gulhati)</td>
<td>In progress</td>
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<tr>
<td>17. Mexico - reconciliation of debt data as of December 31, 1967</td>
<td>W.H. (Ross)</td>
<td>In progress</td>
</tr>
<tr>
<td>18. Colombia - preparation of revised tables as of December 31, 1968</td>
<td>W.H./IDB</td>
<td>In progress</td>
</tr>
<tr>
<td>19. Paraguay - preparation of memorandum on debt submission as of December 31, 1968</td>
<td>W.H./IDB</td>
<td>Completed</td>
</tr>
<tr>
<td>21. Guatemala - preparation of amortization schedules for proposed IFC loan</td>
<td>IFC (Harvey)</td>
<td>Completed</td>
</tr>
<tr>
<td>22. Panama - preparation of amortization schedules for proposed IFC loan</td>
<td>IFC (Harvey)</td>
<td>Completed</td>
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## 8. GENERAL STATISTICS

<table>
<thead>
<tr>
<th>Work</th>
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<tr>
<td>1. Moderately complicated tabulations:</td>
<td>Eco. (Kundu)</td>
<td>In abeyance</td>
</tr>
<tr>
<td>IBER and IDA commitments in Africa by country, for fiscal years 1947-1965</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Moderately complicated data collection:</td>
<td>Eco. (Schrenk)</td>
<td>In abeyance</td>
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<tr>
<td>Pakistan - detailed industrial data, input of imported goods etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Moderately complicated tabulations:</td>
<td>Eco. (Kundu)</td>
<td>In abeyance</td>
</tr>
<tr>
<td>IBER and IDA commitments by area and purpose quarterly beginning June 1947</td>
<td></td>
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<tr>
<td>4. Classifications of developing countries:</td>
<td>Eco. (Kumarck)</td>
<td>In abeyance</td>
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<tr>
<td>Selection of criteria, their measurement and an index for classification</td>
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<tr>
<td>5. Complicated analysis:</td>
<td>Eco. (Goor)</td>
<td>In progress</td>
</tr>
<tr>
<td>Preparation of factors and data for the projections of the &quot;IBER Financial Model&quot; and the &quot;Five Year Plan&quot;. Testing disbursement projections of IBER loans in total and by purpose</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Complicated statistical and regression analysis:</td>
<td>Eco. (de Weilla)</td>
<td>In progress</td>
</tr>
<tr>
<td>Port of Mombasa Study - determination of service time of ships in the port (loading and unloading), identification and quantification of the various factors involved with special focus on the average number of gangs working simultaneously on a ship. Testing ship arrival patterns and service time distributions</td>
<td></td>
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<tr>
<td>7. Sensitivity analysis of IBER and IDA lending operations</td>
<td>Eco. (Goor)</td>
<td>In progress</td>
</tr>
<tr>
<td>8. Moderately complicated calculations:</td>
<td>Eco. (Balasa/Hughes)</td>
<td>In progress</td>
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<tr>
<td>Stages of industrial development. Various inter-relationships among income, industrial output, exports, imports, share of manufactured goods etc.</td>
<td></td>
<td></td>
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<tr>
<td>9. Moderately complicated data handling and statistical analysis:</td>
<td>Eco. (Eber)</td>
<td>In progress</td>
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<tr>
<td>Portugal - livestock production, percentages of annual total production, average yield, time series analysis of yield by districts and for the whole country, during 1952-1967</td>
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<tr>
<td>Work</td>
<td>Requested by</td>
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<td>----------------------------------------------------------------------</td>
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<tr>
<td>10. Moderately complicated data handling and statistical analysis:</td>
<td>Eco. (Egburt)</td>
<td>In progress</td>
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<tr>
<td>Portugal - crop production, percentages of annual total production,</td>
<td></td>
<td></td>
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<tr>
<td>total acreage, time series analysis for each crop by districts,</td>
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<tr>
<td>regions, and for the whole country during 1952-1967</td>
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<tr>
<td>11. Simple regression analysis and rate of growth calculations:</td>
<td>Eco. (Egburt)</td>
<td>In progress</td>
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<tr>
<td>Portugal - time series analysis of each of 95 separate production</td>
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<tr>
<td>streams</td>
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<td>12. Simple regression analysis:</td>
<td>Eco. (Please)</td>
<td>In progress</td>
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<td>Taiwan - preferential interest deposits</td>
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<td>3. Moderately complicated statistical calculations and revisions:</td>
<td>W.H. (Walinsky/Wadsted)</td>
<td>In progress</td>
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<td>Brazil - import tariffs by industrial categories</td>
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<td>14. Moderately complicated regression analysis:</td>
<td>Special Studies(Schmitt)</td>
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<td>Criterion for market eligibility for a number of developing</td>
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<td>countries</td>
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<tr>
<td>15. Simple regression analysis:</td>
<td>Basic Research (Oury)</td>
<td>In progress</td>
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<td>Cocoa model</td>
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<tr>
<td>16. Simple regression analysis:</td>
<td>Basic Research (Oury)</td>
<td>In progress</td>
</tr>
<tr>
<td>India - agricultural model, estimation of weather index</td>
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</tr>
<tr>
<td>7. Simple regression analysis:</td>
<td>Basic Research (Singh)</td>
<td>In progress</td>
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<tr>
<td>Unemployment problem of the world</td>
<td></td>
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<tr>
<td>18. Moderately complicated data compilation:</td>
<td>Public Util.Proj.(Sased)</td>
<td>In progress</td>
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<tr>
<td>Evaluation of progress reports</td>
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<td>Optimum cost model of an education project</td>
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<tr>
<td>20. Rate of return calculations:</td>
<td>Agric.Proj. (Schumacher)</td>
<td>Completed</td>
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<tr>
<td>a) Livestock development project</td>
<td>Transp.Proj. (Sonley)</td>
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<tr>
<td>b) Portugal - eucalyptus project</td>
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<tr>
<td>a) Senegal - highway appraisal report</td>
<td>Transp.Proj. (Mackay)</td>
<td>Completed</td>
</tr>
<tr>
<td>b) East Africa - railway development project appraisal report</td>
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<td>Work</td>
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<td>----------------------------------------------------------------------</td>
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<tr>
<td>22. Simple regression analysis and growth rate calculations:</td>
<td>IFC (Dixon)</td>
<td>Completed</td>
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<tr>
<td>Ethiopia - sugar consumption project</td>
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<tr>
<td>23. Simple tabulations and calculations:</td>
<td>E. Africa (Collier)</td>
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<tr>
<td>Distribution of Bank portfolio by major borrowing countries, by hard borrowers, etc. updating tables</td>
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<tr>
<td>IRRD and IDA credits for various countries - averages for 1964-1968</td>
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### C. PROGRAMMING

<table>
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<tr>
<th>Work</th>
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</thead>
<tbody>
<tr>
<td>1. Highly complex system analysis - planning a new system for coding, punching, assembling, editing, adjusting, external debt data in the form of a disk oriented data base and the required retrieval and processing procedures</td>
<td>Eco. (Stat.Serv.)</td>
<td>In progress</td>
</tr>
<tr>
<td>2. Complex systems analysis to plan and program a macroeconomic data bank</td>
<td>Eco. (Levy)</td>
<td>In progress</td>
</tr>
<tr>
<td>3. Highly complex system analysis and programming (OECD/IBRD Joint Reporting System) to produce tapes for OECD and summary tables for participants</td>
<td>Eco. (Stat.Serv.)</td>
<td>In progress</td>
</tr>
<tr>
<td>4. Moderately complex computer program to produce cash flow tables of World Bank operations</td>
<td>Eco. (Goor)</td>
<td>In progress</td>
</tr>
<tr>
<td>5. Harvard Transportation model (analysis and debugging of a complex computer program) including input, equations, output and FORTRAN conversion</td>
<td>Eco. (Miller)</td>
<td>In progress</td>
</tr>
<tr>
<td>6. Port of Mombasa Study - testing ship arrival patterns and service time distributions</td>
<td>Eco. (de Weille)</td>
<td>In progress</td>
</tr>
<tr>
<td>7. Preparation of an input-output matrix program</td>
<td>Eco. (Kundu)</td>
<td>In progress</td>
</tr>
<tr>
<td>8. World tables summary - several programs to calculate and to print the annual growth rates of the aggregate amounts of national accounts by areas and by years</td>
<td>Eco. (Levy)</td>
<td>In progress</td>
</tr>
<tr>
<td>9. Port of Guayaquil Study - testing ship arrival patterns and distributions for waiting time, berthing time, etc. and to analyze the relationships between different variables</td>
<td>Eco. (Ray)</td>
<td>In progress</td>
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<tr>
<td>10. Risk analysis of an irrigation project</td>
<td>Eco. (Husain)</td>
<td>In progress</td>
</tr>
<tr>
<td>11. Population Model I</td>
<td>Eco. (Miller)</td>
<td>In progress</td>
</tr>
<tr>
<td>12. Tunisian Education evaluation study</td>
<td>Eco. (Thias/Carnoy)</td>
<td>In progress</td>
</tr>
<tr>
<td>13. Generalized debt model</td>
<td>Eco. (Stat.Serv.)</td>
<td>In progress</td>
</tr>
<tr>
<td>14. Imports of Persian Gulf countries</td>
<td>Eco. (Stat.Serv.)</td>
<td>In progress</td>
</tr>
<tr>
<td>Work</td>
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<td>Status</td>
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<tr>
<td>---------------------------------------------------------------------</td>
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<tr>
<td>15. World Bank Atlas</td>
<td>Eco. (Levy/Novak)</td>
<td>Completed</td>
</tr>
<tr>
<td>16. Projection of national accounts, balance of payments and external debt</td>
<td>Creditworthiness (de Vries)</td>
<td>In progress</td>
</tr>
<tr>
<td>17. Further development of existing road analysis program</td>
<td>Transp. Proj. (Poulquen)</td>
<td>In progress</td>
</tr>
<tr>
<td>18. Evaluation of the transport part of the Gabes project</td>
<td>Transp. Proj. (Poulquen)</td>
<td>In progress</td>
</tr>
<tr>
<td>19. Debt model to study the effects of various types of new lending on debt service ratios</td>
<td>Pearson Comm. (Gulhati)</td>
<td>Completed</td>
</tr>
<tr>
<td>20. Gross flow model to study net transfers</td>
<td>Pearson Comm. (Gulhati)</td>
<td>Completed</td>
</tr>
</tbody>
</table>
D. CONTINUING

EXTERNAL DEBT

1. Compilation of data for quarterly tables showing all foreign bonds and equities publicly-issued and privately-placed in various markets.
2. Preliminary checking and coding of ERS Forms 1.
3. Compilation of data on deposit rates and weighted averages yields of Eurodollar.
4. All countries - semi-annual conversion of Treasurer's IBM cards to statistics IBM cards.
5. Preparation of current data on yields of IBRD bonds.
7. Maintenance of ERS files.
8. Highly technical drafting of manual of instructions for treatment and processing of external debt reported under debtor and creditor systems.
9. Maintenance of records on IBRD, IDA and IPC loans.
10. Compilation of debt outstanding and service payments by country and area for all developing and developed countries.
11. Compilation of debt statistics on selected countries.
14. Preparing backlog of Tables A, B and C for ERS participants.

GENERAL STATISTICS

1. Maintenance of supplier vouchers on IBRD and IDA disbursements.
2. Maintenance of Commodity Prices.
3. Maintenance of U.S. and Foreign Commodity Prices Index.
4. Maintenance of IBRD/IDA loans and credits by economic purpose.

PROGRAMMING

1. Maintenance of existing programs (such as revisions, updating, debugging and assistance in interpretation).

cc: Mr. Stevenson
### ANNEX I

<table>
<thead>
<tr>
<th></th>
<th>Eastern Africa</th>
<th>Western Africa</th>
<th>East Asia and Pacific</th>
<th>South Asia</th>
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**Note:** Excludes 12 countries in abeyance; ( ) = number of countries started during period; (rev.) = revised.
## ANNEX Ia: POSTING, CODING AND PREPARATION OF DEBT TABLES – PROJECTION AND HISTORICAL

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Mr. Alexander Stevenson

September 2, 1969

Stanley Please


Major Studies

Mr. Scirolli - study on Tunisian Tax Structure (9 days).

Mr. Gandhi - Initial exploration of the literature relating to the growth and structure of government expenditure in developing countries (9 days); miscellaneous (1 day).

Country and Project Mission Work

Mr. Beier - preparation of his contribution to the report of the economic mission to Malawi (9 days).

Mr. Eklund - returned to Washington on August 25; worked on report of Chandpur Irrigation Project appraisal mission.

Mr. Schebeck - departed from Austria (home leave) for Iran on August 20 to join the economic mission.

Other Activities

Mr. Eklund - lecture on Transportation Projects, IDI (2 days).

Mr. Joshi - worked on paper "Domestic Resource Mobilization and Economic Development" (3 days); comments on Operational Memorandum on DFC (2 days); miscellaneous (2 days); Spanish lessons (2 1/2 hours each day).

Mr. Please - supervision of Division activities. (In the absence of Mr. Please during annual leave, Mr. Scirolli was acting chief for the Division.)

Research Assistants

Miss Bacmonos - extracts of public finance and capital market issues (2 days); Tunisian Tax Structure (1 day); miscellaneous (1 day).

Miss Holdau - interest elasticity of preferential interest rate time deposits in Taiwan (10 days).

Sick/Home/Annual Leave

Mr. Beier - sick leave (1 day)
Mr. Schebeck - home leave (2 days)
Mr. Eklund - annual leave (5 days)
Miss Bacmonos - annual leave (6 days)
Mr. Scirolli - sick leave (1 day)

Please/lo
cc: Messrs. Kanarck and Lewther
Priorities for Work in the Next Twelve Months

Introduction

1. As a basis for subsequent discussion with you and Shlomo I am recording here my version of the priorities for the next few months. Essentially, there are three tasks I would like to accomplish:

   (1.1) Develop the remaining five models for the Livestock Division, and make them operational for routine use by that Division;

   (1.2) Develop some models for the Irrigation Division, and make them operational;

   (1.3) Write a paper on the "design of simulation experiments" to serve as a basis for efficient use of risk analysis in project appraisal work.

I see (1.3) above as an important and urgent task in view of the expanding interest in the use of risk analysis in project appraisal work. Also, the first two are essential ingredients of effective sensitivity analysis in appraisal work. There is substantial interest in both these divisions for the above type of work and we should be able to develop useful tools and promising inroads by working on these problems in collaboration with these two Divisions. A brief outline on timing is given below.

A. Livestock Models

2. I have been working on developing a reasonably general model for a breeding/fattening cattle ranch. This model is now functional and is available for tentative use. Associated with this model is a general write-up intended to be a working paper. This whole effort was very time consuming but now that a framework is available the development of other livestock models (Dairy, Pig, Sheep, etc. ranches) would be much less time consuming. In developing these models I would like to dispense with detailed general write-ups, instead I would like to prepare short notes outlining the assumptions, the input requirements and the resultant output. For operationalizing these models we should (a) hold seminars for the potential users, and (b) participate in missions so as to test the adequacy of the models under real appraisal conditions.

B. Models for the Irrigation Division

3. I have developed a tentative framework for the risk analysis (or sensitivity analysis) of an irrigation project. I am attempting to use it

---

See my memo dated August 29, 1969 to Mrs. H. Angel.
on the Rharb (Sebou Basin) Irrigation Project in Morocco. I think that the framework will work out, as a much less general framework was effectively used for the Rahad Irrigation Project in Sudan. However, in order to improve the depth of my understanding of irrigation projects, I would like to go on an appraisal mission. The project I have in mind is the Southwest Irrigation Appraisal in October (tentatively October 7 - 27). This is a project in Korea and should prove interesting and educational. There is considerable scope for developing the framework for the use of some optimization techniques in irrigation work, but I would like to get the practical feel before attempting their use.

C. Design of Simulation Experiments

4. In this paper I would like to put together a framework which would facilitate the performance of simulation. Simulation is essentially artificial experimentation, i.e., experiments on models of real systems; and just as it is possible to improve the efficiency of real experiments, it is also possible to improve the efficiency of artificial experiments. A substantial amount of work has been done on this subject and we should attempt to use it for improving the bases of our intended work on risk analysis in the Bank. Since the subject of "designing experiments" is vast I would primarily focus on two aspects of experimental design:

(a) Sample Size in Simulation and

(b) Sampling Efficiency

The first refers to the number of replications one should make in a simulation in order to achieve a pre-specified precision in the estimate. The second refers to the type of sampling one should employ in order to get the pre-specified precision with the least sampling effort (smallest sampling size). These two aspects are inter-related and clearly "sample size" is not the only component in sampling effort.

5. Associated with this synthetic effort would be an effort to add to our present stock of theoretical distributions we can sample from. The entire effort should give us some additional guidelines, and a few more computer programs.

Conclusion

6. I believe that the above three tasks can be accomplished in the next twelve months. But superimposed on these development efforts should also be some promotional effort. Seminars for the Livestock and Irrigation Divisions would be an important element in this later effort. However, we should respond more actively to the interest shown by external agencies like the Commonwealth Development Corporation (letter dated, April 1, 1969, copy attached), and the UNDP/FAO Range Management Project in Kenya (letter dated, August 16, 1969, copy attached). If I could participate in the Korean Mission in October I would like to briefly stop over in Nairobi and London to explain the working of our model and our future plans. This shall develop our contacts and make our work available for testing in the field.

Attachments:
Musainingbo
cc. Mr. S. Reutlinger and Mrs. H. Angel
Mr. Don Stoops, Chief,
Livestock Division
IBRD-IDA
1818 H Street,
N.W. Washington, DC. 20433
U.S.A.

Dear Mr. Stoops,

We are very encouraged by your reply of July 31 and are eagerly awaiting Mr. Husain's revision of the livestock development computer program. Since receiving your letter we have held discussions with Mr. D. H. Wood of your Permanent Mission in East Africa, and also with Miss Caren Chappell, of the IBM Organization in Nairobi. In view of possibly three months delay before availability of the revised programme, both Miss Chappell and Mr. Wood agreed that it would be helpful if you could send us a copy of the earlier programme in the interim. The IBM programmers here feel that they might be able to make the adaptation of the earlier programme to the available hardware at least a guide to adaptation of the revised model.

Our eagerness to get the program set up in Kenya is due to the impending disbursement of loan funds to ranches in Taita District and Kaputiei Section by the Agricultural Finance Corporation. Most immediately, AFC is anxious to use the program, in cooperation with this UN Project and Kenya's Range Management Division, to refine and improve earlier hand calculated projections for the ranches which are scheduled to receive loan funds this year. While the unrevised program may not meet with our needs exactly, it will be much better than our immensely time consuming and tedious hand drawn projections.

Eventually, of course, we would like to employ and optimizing revised program to calculate projections for all the ranches to be developed by the eleven million dollar IDA-Swedish-Kenya Government credit.

We have discussed this matter with Mr. Wood of your Nairobi office, and he agrees that arrangements and actual application can be facilitated if a description and listing of the program steps of the existing program can be forwarded to him, or directly to us, as soon as possible.

The application of this computer program will facilitate much better utilization of the IBRD loan, so its cooperative usage by Kenya and IBRD should promote our mutual benefit.
Would it be possible for you to copy all correspondence to the individuals listed under cc: below? They are all directly interested in the adaptation and eventual application of the program.

Thank you for your cooperation and assistance in this endeavour.

Sincerely yours,

(signed)

Doug. Young
Livestock and Economics Division, Survey Section
Mr. J. P. Haynes  
Director, World Economy Division  
Ministry of Overseas Development  
Eland House, Stag Place  
London, S.W. 1, England

Dear Phil:

Thank you for your letter of March 14. We would happily make available to you the general as well as the specific experience we have acquired in the field of simulating livestock projects. We became actively involved in this exercise about a year ago, and focused our attention on developing a simulation model for a specific type of livestock operation – a Breeding/Fattening ranch. We developed a first stage tentative model and used it in the appraisal of a few of our livestock projects. The objective was to discover the major shortcomings of the model. Currently, we are in the process of building the second stage of the model and hope to be able to have a computerized version available in the next two to three months.

We are also planning to develop similar models for a few other types of livestock operations viz dairy ranches, sheep ranches, stud ranches, etc. This work on simulation models at the micro level is being done in the Sector and Project Studies Division of which Herman van der Tak is chief with the help of the programming section of the Statistical Services Division (Arthur Tiemann, chief). On your arrival here, you might find it useful to have a discussion with Mr. van der Tak and some members of his division, and possibly Mrs. Angel who heads the programming section. Beyond that, the dialogue could be continued at the working level either by your man visiting us or vice versa.

I am looking forward to hearing from you.

Sincerely,

Andrew M. Kamarck  
Director  
Economics Department

cc: Messrs. M.P.J. Lynch  
Wapenhans/Stoops  
vander Tak/Husain  

Thusain:AKamarck/vhw
Thank you very much for continuing to send me copies of office memormanda about the Status of Studies. On looking through the edition relating to the first quarter of 1969, a member of my Division was particularly interested in item 4. in part, which refers to a computer programme to calculate the effect on livestock production of various assumptions. We are ourselves considering commissioning somebody to write us a computer programme to facilitate the evaluation of livestock projects but, on seeing the memorandum, we wonder whether there is any way in which it would be possible to benefit from your experience in preparing this computer programme.

It is possible that I may be going to New York for the meeting on the Second Development Decade, 14th April to 2nd May, in which case I would hope to be able to get to Washington for a couple of days either before or after. If this comes off, I hope there will be a chance of seeing you. Nearer the time, if I am in fact coming, it might be useful to drop you a line about subjects I would particularly like to discuss.

Yours

J. P. Hayes
Director, World Economy Division

A. M. Kamarck, Esq.,
Director,
Economics Department,
International Bank for Reconstruction and Development,
Washington D.C. 29433.
Mr. A. M. Kamarck
H. G. van der Tak

Activities of Sector and Projects Studies Division, August 1-15

Agriculture

Ablasser:  Brasil agriculture sector study (8 days); Portugal agriculture sector study (1/2 day); reviewing Iran Agricultural Development Fund draft appraisal report for Agriculture Projects Dept. (1 day); seminar on risk analysis (1/4 day); Spanish (1 day).

Egbert:  Portugal agriculture sector survey mission report (8 days) Portugal agriculture sector study (2 days); Spanish (1 day).

Husain:  Livestock appraisal paper (5 days); computer programming work (4 days); reviewing and commenting on division draft of optimum depth of a port paper (2 days).

Manning:  Mexico agriculture sector report (1/2 day); Mexico irrigation reappraisal study (9/2 days); in Mexico on field work for irrigation reappraisal study (5 days).

Reutlinger:  In Mexico on field work for irrigation reappraisal study (5 days); grain storage projects criteria (9/2 days); division supervision (2 days); seminar on risk analysis (1/2 day); guiding training of Mr. Tewari of Indian Planning Office (1 day); annual leave (1 day).

Seagraves:  Agriculture supply research paper (part time, Raleigh, N.C.) (Consultant)

Kim:  Portugal agriculture sector study (11 days).

King:  Grain storage projects criteria (9/2 days) sick leave (1/2 day)

Wilde:  Grain storage projects criteria (11 days).

Education

Carnoy:  In office August 11-15 on Tunisia education study; Tunisia (Consultant) education study (part time, Stanford, California).

Thias:  Home leave (11 days).

Brandenburg:  Tunisia education study (11 days).
### Transportation

**de Weille:** Transport planning models mission to Colombia (6 days); rail line closure study (1 day); optimum timing of investments study (1 day); transport planning models study (2 days); comments and advice (1 day).

**Harral:** Harvard transport planning models study (5 days); Lockheed Sudan Model (5 days); interviewing for Bank outside division and other administrative work (1 day).

**Israel:** Feeder roads study (2½ days); comments and advice (1½ day).

**Miller:** Transport planning models mission to Colombia (6 days); commenting on optimum depth of a port paper and Korean railway project justification (1 day); transport planning models study (4 days).

**Oorts (Consultant):** Regulation of road transport study (part time, Utrecht, Neth.)

**Ray:** Central American port study (10½ days) ongoing port research, port of Guayaquil data (½ day).

**San (Consultant):** Railway line closure study (11 days).

**Isaac:** Annual leave (11 days).

**Mijares:** Methodology analysis of Lockheed Sudan Model for Mr. Harral (1 day); annual leave (10 days).

**Pernia:** Linear programming for feeder roads study (5 days); preparation for Central American ports mission (6 days).

### Public Utilities

**Anderson:** Assessing Bank methods for demand forecasting and investment appraisal in public utilities (11 days).

### General

**Snell:** Editing Marcel Massé's paper on project benefits methodology (3½ days); collecting progress reports (1 day); reviewing corrections for Kenya education study with Mr. Carnoy (½ day); annual leave (1 day).

**van der Tak:** House leave (2 days); division supervision (9 days).

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cc: Mr. Stevenson  
Mr. Lothar  
HvdanderTak: 240

Major Studies

Mr. Sciolli - study on Tunisian Tax Structure (10 days).

Mr. Gandhi - joined the Division on August 6, 1969. Commenced study on initial exploration of the literature relating to the growth and structure of government expenditure in developing countries (8 days).

Country and Project Mission Work

Mr. Beier - preparation of his contribution to the report of the economic mission to Malawi (10 days).

Other Activities

Mr. Joshi - worked on paper "Domestic Resource Mobilisation and Economic Development" (6 days); miscellaneous (2 days); Spanish lessons (2½ hours each day).

Mr. Please - supervision of Division activities.

Research Assistants

Miss Bocanoss - correlation analysis of revenues and current expenditures to GDP of selected developing countries (3 days); extracts of public finance and capital market issues (5 days); miscellaneous (3 days).

Miss Meldau - interest elasticity of preferential interest rate time deposits in Taiwan (11 days).

Sick/Home/Annual Leave

Mr. Beier - annual leave (1 day)
Mr. Sciolli - sick leave (1 day)
Mr. Schebeck - home leave (11 days)
Mr. Eklund - annual leave (11 days)
1. During the period May to July, 1969, the following operational activities have been undertaken by members of the Domestic Finance of Developing Countries Division.

2. Mr. Please prepared a paper on the problems of domestic resource mobilization in developing countries for Mr. Friedman and Mr. McNamara. This paper was written as a background briefing paper for the preparation of Mr. McNamara's speech to the Governors. It focussed in very general terms on problems of taxation, public expenditure, public enterprise saving, and private savings mobilization.

3. Mr. Please, with the cooperation of Mr. Joshi, prepared a paper on "Development Banks and the Mobilization of Savings". This paper examined the experiences of a sample of development banks in mobilizing funds other than funds from the World Bank, other external sources, and from the government. The paper concluded that these banks had not lived up to expectations in this regard and that there had been a parallel failure to examine the policy issues which thereby arose. This paper was presented to Mr. Diamond for discussion and he agreed that it raised an important problem and one with which he and his Department had been continuously concerned. He further agreed with the paper's conclusion that the exploration of the problem should be undertaken on a country by country basis for those countries where it was felt to be relevant. In order that this work could be facilitated and made more effective he indicated that he would support the participation of members of the Domestic Finance of Developing Countries Division in missions mounted by his Department. Mr. Diamond also asked that the Division should give thought to the possibility of sending a letter to the development banks themselves to alert them to the fact that the Bank is intending to give more attention to this problem and encouraging them to address themselves more seriously to it.

4. Mr. Please was requested by the South Asia Department to involve his Division both in the general fiscal work to be undertaken on Pakistan and specifically in the examination of the fiscal implications of the Chandpur Irrigation Project. This project raises at the micro level the problem of irrigation rates particularly to those farmers at extremely low levels of income. As a consequence it raises the fiscal implications of income transfers within East Pakistan and more widely between West Pakistan and East Pakistan. Mr. Please attended a meeting in Mr. Knapp's office at which this issue was isolated as the crucial issue in relationship to this project. As a consequence of this meeting Mr. Eklund was dispatched immediately to East Pakistan for four weeks to join the appraisal mission for the Chandpur project. Whilst in Pakistan he discussed the more general implications of his project work with the Bank's resident staff in Islamabad which has been examining the recent Pakistan government budget proposals.
5. During May, Mr. Christoffersen proceeded to Pakistan for two weeks to provide advice to the East Pakistan Agriculture and Water Development Program on the question of agricultural credit. His work focussed on the whole problem of the organization of agricultural credit which had been opened up in the new political circumstances existing in Pakistan. Whilst in the field he was appointed as an advisor to the East Pakistan government's committee charged with the responsibility for proposing changes in the organization of agricultural credit in East Pakistan. On his return to Washington he was immediately assigned as Personal Assistant to Mr. McIntasara, but he subsequently participated in discussions to ensure that a consultant was appointed to carry on the work in East Pakistan in which he had become involved.

6. Until mid-May, Mr. Christoffersen was involved with the work of the appraisal mission for the third Agricultural Development Bank project in Pakistan. He was particularly concerned with the discussion of interest rate policy and tariff policy in respect of imported import for the agricultural sector. These two issues were central to the negotiations of this loan and led to one of the few cases in which the Domestic Finance Division enlisted the support of the Economics Department's front office in arguing its case (see memo from Mr. Stevenson to Mr. Gargill, dated May 15, 1969).

7. Mr. Eklund prepared the fiscal and private savings mobilization sections of the economic report on Philippines and participated in discussions in the Area Department on the issues raised in the report. These focussed on the problems of increasing the tax effort of the Philippine authorities for ensuring in particular that government revenues for developmental purposes increased more rapidly and that tax policy was made more consistent with the need to improve income distribution. The discussion also centered around the importance of private savings mobilization in the Philippines and in this regard specifically on the policies of the Development Bank of the Philippines (DBP). The DBP has attempted in the last few years to introduce more realistic interest rate policies in order to mobilise private savings for financing its activities and during the past year has made this policy even more effective by issuing bonds to borrowers rather than cash. These policies are contentious policies and Eklund's work was an attempt to examine their rationale.

8. Mr. Scioli has contributed the public finance section of the economic report on Tunisia, engaged in continuing discussion with the Area Department and the Economic Committee on the report, and initiated work on the Study of Tunisian Tax Structure requested by the Area Department. Public savings are a major issue of economic policy in Tunisia with expenditure control as the main condition for improving performance in this regard. This has been stressed in the course of Bank discussions with Tunisian officials as well as in the economic report and policy paper. An improved public savings performance is also included in a Letter of Commitment which covers various performance areas and which the Tunisian government has been requested to sign. The work on the tax structure is also related to the savings problem. It aims at investigating the causes for the apparent lack of built-in elasticity in the Tunisian tax
Preliminary conclusions indicate that this shortcoming is due to weakness in tax administration, tax exemptions and certain structural relationships between growth of the economy and imports which are a significant source of revenue.

9. Mr. Schnitz (Young Professional assigned to the Division for three months) has been a member of the economic mission to Sudan and has contributed a section of the report dealing with central government financial performance. Fiscal policy is regarded as a crucial element in judging economic performance in Sudan and for determining whether to go ahead with a Bank operation there. This is a country with a high tax ratio but with very rapidly growing current expenditure responsibilities. Schnitz documented these developments and, in addition, has undertaken a more sophisticated analysis of the pattern of expenditure growth in relation to revenue growth.

10. Mr. Beier participated in the work of the economic mission to Mexico and prepared the section on public finance. He particularly focussed on the relationships between agriculture and fiscal measures which he managed to quantify to some extent. In addition he worked very closely with the member of the mission concerned with tax administration which represents a major problem area in the Mexican situation.

11. Since mid-June, Mr. Beier has participated in the work of an unscheduled economic mission to Malawi. The question of availability of resources for development and the general question of fiscal management with which Beier has been concerned are central to the Bank's decision on going ahead with a major project which has been delayed for want of IDA funds but also on fiscal performance grounds. The positive tentative conclusions of the economic mission have been partly responsible for a reappraisal mission for the project which is now in the field.

12. Mr. Please and the Division in general have been regularly concerned in commenting on country economic reports, draft memoranda, studies, etc., which have been produced in the course of Bank operational work. The following represent the main contributions in this area:

Comments on the proposal of the I03 Development Company Limited to an Asian Development Fund. This proposal was specifically aimed at mobilising both local currency in developing countries and foreign funds for economic development. One of the implications which, from the Bank's point of view, appeared to need emphasising was the cost of administration of the fund which, it was hoped by the proponents, would be reduced by using the World Bank Group, the Asian Development Bank and the Private Investment Corporation for Asia as sources of technical assistance to the Fund.

Mr. Joshi has prepared comments on draft appraisal reports of Development Finance Companies Department which have been submitted to us during the quarter. His comments have focussed particularly on the question of the extent to which appraisal teams have examined the policies of these financial institutions.
in mobilizing local resources.

Comments have been prepared on papers written in the Special Studies Study Group on the questions of Bank Lending for Balance of Payments Support and on Minimum Returns on Bank and IDA-Financed Projects.

Comments have also been presented on the paper prepared in the Western Africa Department on the subject of the devaluation of the CFA franc.

cc: Messrs. Stevenson and Lowther
Mr. Andrew M. Kanarck

August 4, 1969

Stanley Please

Report on the Activities of the Domestic Finance of Developing Countries Division, July 15-31, 1969

Major Studies

Mr. Scioll - study on Tunisian Tax Structure (90 days).

Country and Project Mission Work

Mr. Scioll - participated in discussions of the economic working party on Dahomey (2 days).

Mr. Eclund - has been in East Pakistan as member of the Chandpur Irrigation Project Appraisal Team.

Mr. Beier - preparation of his contribution to the report of the economic mission to Malawi (10 days).

Mr. Schaetz - completed his contribution to the report of the economic mission to Sudan (11 days). Terminated his assignment to the Division on July 31, 1969.

Other Activities

Mr. Joshi - comment on paper prepared by IDS Development Company Limited on "The Asian Development Fund" (3 days); miscellaneous (2 days); Spanish lessons (4 hours each day).

Mr. Please - supervision of Division activities.

Research Assistants

Miss Dacunas - correlation analysis of tax revenues and current expenditures in selected developing countries (7 days); statistical work on Sudan (1 day); miscellaneous (1 day).

Miss Meldau - interest elasticity of preferential interest rate time deposits in Taiwan (11 days).

Sick/Leave

Mr. Beier - sick leave (1 day)
Miss Dacunas - sick leave (2 days)
Mr. Schebeck - home leave (11 days)

cc: Messrs. Stevenson and Lowther
Mr. A. Stevenson

S. Neublinger

Activities of Sector and Projects Studies Division, July 17-31

Agriculture

Ablasco: Brazil agriculture sector study (5 days); Portugal agriculture sector study (3 days); feeder roads project study (1 day); Spanish (1 day).

Egbert: Portugal agriculture sector study (1 day); Portugal agriculture sector survey mission report (6 days); Spanish (1 day); special leave (2 days).

Nasain: Livestock appraisal paper (6 days); computer programming work (3 days); sick leave (1 day).

Nenning: Irrigation reappraisal study (4 days); Mexico agriculture sector report (2 days); review of Kenya education study (1 day); annual leave (2 days); sick leave (1 day).

Neublinger: Grain storage projects criteria (2 days); Mexico irrigation reappraisal study (1 day); interviewing Young Professionals for Bank and preparation for Bank risk appraisal seminar lecture (1 day); division administration (5 days); Spanish (1 day).

Seagraves: Agriculture supply research paper (part time, Raleigh, N.C.)

Kim: Portugal agriculture sector study for Mr. Egbert (4 days); annual leave (6 days).

Kling: On loan to Messrs. Saxe and Halley of Development Finance Studies Group for work on interest rate blending and second IDB replenishment (6 days); grain storage projects criteria (4 days).

Wilde: Grain storage projects criteria (10 days).

Education

Carnoy: In office July 17 and 18 on Tunisia education study; Tunisia (Consultant) education study (part time, Stanford, California).

Thies: Home leave (10 days).

Brandenburg: Tunisia education study (9 days); annual leave (2 days).
Transportation

de Veille: On transport planning models mission to Colombia (4 days); transport planning models study and other research (5 days); Mr. Hasee's paper on project appraisal methodology (1/2 day).

Harral: Transport planning models study; highway cost performance model evaluation (3 days); review of Lockheed Sudan Model (1 day); comments and advice (1 day).

Israel: Feeder roads project mission to Tanzania follow-up (1 day); feeder roads project methodology study (6 days); comments and advice (1 day); meetings and interviewing for the Bank (2 days).

Miller: On transport planning models mission to Colombia (1 day); transport planning models study (1 day); annual leave (4 days).

Oort: (Consultant) Regulation of road transport study (part time, Utrecht, Math.)

Ray: Central American port study (9 days); ongoing port research, port of Guayaquil data (1 day).

Sau: (Consultant) Railway line closure study (10 days).

Isaac: Transport planning models study (5 days); annual leave (4 days); sick leave (1 day).

Mijares: Transport planning models study mission to Colombia for Hasee. Miller and de Veille (2 days); methodology analysis of Lockheed Sudan Model for Mr. Harral (4 days); Harvard Transport Model (3 days); sick leave (1 day).

Pernia: Feeder roads project methodology study for Mr. Israel (10 days).

Public Utilities

Anderson: Dennis Anderson joined the division July 17. Orientation (5 days); program development (5 days).

General

Smell: Updating six-month summary of administrative charts (5 days); proofreading Kenya education study manuscript and filing Kenya material (1 day); editing Marcel Hasee's paper on project benefits methodology (1 day).

van der Takt: Home leave (10 days).

Signature:

cc: Mr. Kammrock
    Mr. Lowther
OFFICE MEMORANDUM

TO: Mr. Andrew M. Kamarck
FROM: Bela Balassa

DATE: July 31, 1969

SUBJECT: Report on Activities - July 1969

Continuing Projects

Structure of Protection in Developing Countries
- Corrections in country chapters.

Development Strategies in Semi-Industrial Countries
- Participated in meeting on the project.

Other Studies
- Prepared three papers for the President's office on industrial protection and project evaluation.
- Wrote article on Norway for "Finance and Development".

Other Activities

Notes on Bank Studies and Papers
- Comments on C. Jansen, "The Exchange Rate of the CFA-Franc".

Far East Mission
- Preparatory work.

Argentina Mission
- Preparatory work, policy advisory mission (July 21-25), and report.

cc. Messrs. Stevenson Kalmanoff

BBalassa:alj
Mr. A. Stevenson

S. Reutlinger

Activities of Sector and Projects Studies Division, July 1-16

Agriculture

Ablasser: Agriculture sector planning models study (4 days); Brasil agriculture sector study (2 days); feeder roads project study (2 days); Spanish (1 day); annual leave (2 days).

Egbert: On Portugal agriculture sector survey mission (11 days).

Husain: Livestock appraisal paper (7½ days); computer programming work (2 days); advice and comments to Agriculture Projects Department (1 day); seminar on Trinidad land settlement (½ day).

Manning: Mexico agriculture sector report (8 days); irrigation reappraisal study (2 days); seminar on Trinidad land settlement (½ day); comments on water charges policy paper (½ day).

Reutlinger: Internal administration and supervision (7 days); interviewing Young Professionals for Bank (1 day); grain storage projects criteria (1 day); comments on water charges policy paper (½ day); seminar on Trinidad land settlement (½ day); Spanish (1 day).

Seagraves: Agriculture supply research paper (part time, Raleigh, N.C.); (Consultant) in office for discussion on paper (4 days).

Kam: Portuguese agriculture sector study for Mr. Egbert (3 days); Bank Fortran course (5 days); annual leave (3 days).

King: On loan to MESSA. Saxe and Buley of Development Finance Studies Group for work on interest rate blending and second IDA replenishment (10½ days); sick leave (½ day).

Wilde: Grain storage projects criteria (11 days).

Education

Carney: On Tunisia education project reevaluation mission (2 days).

(Consultant)

Thias: Preparation of note on education and economic development (1 day); revision of Kenya case study (1½ days); administrative work connected with Tunisia education mission (½ day); home leave (8 days).

Brandenburg: Rachel Brandenburg joined the division on July 15. Familiarization with Bank reports and commenting on H. Graves note on education and development (3 days).
### Transportation

<table>
<thead>
<tr>
<th>Name</th>
<th>Activities</th>
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<tbody>
<tr>
<td>de Veille</td>
<td>Highway design standards study (4 days); railway line closure study (2 days); Transport planning models study (2 days); advice and comments (1 day); annual leave (2 days)</td>
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<tr>
<td>Harval</td>
<td>Joined division on July 8; transportation planning models study, cost performance models (6 days); orientation (1 day).</td>
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<tr>
<td>Israel</td>
<td>On feeder roads project mission to Tanzania (8 days); follow-up to mission (2 days); feeder roads project methodology study (1 day).</td>
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<tr>
<td>Miller</td>
<td>Transport planning models study (8 days); trip to Headquarters, Canadian National Railway, Montreal, on railroad models (2 days); comments and advice (1 day).</td>
</tr>
<tr>
<td>Corts (Consultant)</td>
<td>Regulation of road transport study (part time, Utrecht, Neth.)</td>
</tr>
<tr>
<td>Ray</td>
<td>Central American port study (5 days); optimum depth of ports (4 days); ongoing port research, port of Guayaquil data (1 day); sick leave (1 day).</td>
</tr>
<tr>
<td>Sen (Consultant) (Consultant)</td>
<td>Railway line closure study (11 days).</td>
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<tr>
<td>Isaac</td>
<td>Transport planning models study (10 days); annual leave (1 day)</td>
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<tr>
<td>Hijares</td>
<td>Transport planning models study (7 days); Fortran self-instruction (4 days).</td>
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<tr>
<td>Fennin</td>
<td>Feeder roads project research for Mr. Israel (71/2 days); Central American ports work for Mr. Ray (3 days); sick leave (1/2 day).</td>
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### General

<table>
<thead>
<tr>
<th>Name</th>
<th>Activities</th>
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<tbody>
<tr>
<td>Snell</td>
<td>Assembling and proofreading final draft manuscript of Kenya education study for Mr. Thies (8 days); updating administrative charts (3 days).</td>
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<tr>
<td>van der Tak</td>
<td>On home leave (11 days).</td>
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*Mr. A. Stevenson*  
*July 18, 1969*  

*To:* Mr. Kemarck  
*To:* Mr. Lether
Mr. Alexander Stevenson

July 16, 1969


Major Studies

Mr. Sciolli - study on Tunisian Tax Structure (8 days).

Country and Project Mission Work

Mr. Sciolli - participation in discussions with area mission on economic policy memorandum on Tunisia (1 day).

Mr. Ekland - preparation of his contribution to the report of the economic mission to Philippines (3 days). Departed for East Pakistan on July 3 to join the Chandpur Irrigation Project Appraisal Team.

Mr. Beier - has been in Malawi as a member of the economic mission. Returned to Washington on July 15.

Mr. Schautz (Young Professional) - preparation of his contribution to the report of the economic mission to Sudan (10 days).

Other Activities

Mr. Joshi - study on economy of Brazil (9½ days). Spanish lessons (4 hours each day).

Mr. Please - supervision of Division activities

Research Assistants

Miss Bacanovs - preparation of statistical data for Domestic Resources Mobilisation (10 days).

Miss Hledau - interest elasticity of financial asset holdings (6 days).

Annual/Non/Special Leave

Mr. Sciolli - annual leave (1 day)
Mr. Schebeck - non leave (10 days)
Miss Hledau - annual/special leave (4 days)

cc: Messrs. Kazarek and Lowther
Mr. A. Stevenson

July 7, 1969

S. Reutlinger

Activities of Sector and Projects Studies Division, June 17-30

Agriculture

Ablasser: Feeder roads project study (1/2 day); agriculture sector planning models study (1 day); briefing session on Portuguese agriculture appraisal mission with Agriculture Projects Department (1/2 day); advanced orientation (2 days); Spanish (1 day).

Egbert: Portugal agricultural sector study (4 days); on Portugal agricultural sector survey mission (6 days).

Husain: Livestock appraisal paper (4 days); computer programming work (1/2 day); land settlement model and irrigation model discussion with Agriculture Projects Department (1 day); commenting on M. Massie's paper on project appraisal methodology (2 days); participation in joint meeting of Operations Research Society of America and American Astronautical Society in Denver, Colo. (2 days); back-to-office report (1/2 day).

Manning: Mexico agriculture sector report (3/4 days); consultation with Agriculture Projects Department on water charges policy paper (1 day); Mexico irrigation reappraisal study (1/2 day).

Reutlinger: Preparation of lecture for (2 days) and participation in (3 days) meeting of International Institute of Administrative Sciences in Barcelona, Spain; visit to OECD Development Center in Paris (1 day); grain storage projects criteria (1 day); internal administration (2 days); annual leave (1 day).

Seagraves: Agriculture supply research paper (part time, Raleigh, N.C.); (Consultant) in office for discussion and preparation of draft of paper (1 day).

Kim: Portugal agricultural sector study for Mr. Egbert (3 days); sick leave (2 days).

King: Grain storage projects criteria for Mr. Reutlinger (3 days); annual leave (1 day); sick leave (1 day).

Wilde: Grain storage projects criteria (10 days).
Education

Carnoy:
(Consultant)
Revision of Kenya case study; on Tunisia education project re-evaluation mission (10 days).

Thias:
Tunisia education project re-evaluation mission (10 days).

Transportation

de Weille:
Transport planning models study (2 days); railway line closure study (2 days); highway design standards study (2 days); International Symposium on Transportation Pricing at American University (3 days); META systems analysis study on rural transportation (1 day).

Israel:
International Symposium on Transportation Pricing at American University (5 days); feeder roads project methodology study (¾ day); comments and advice (¾ day); preparation for mission (1 day); on feeder roads project mission to Tanzania (3 days).

Miller:
Transport planning models study (9 days); feeder roads project methodology study (1 day).

Cort:
(Consultant)
Regulation of road transport study (part time, Utrecht, Netherlands).

Ray:
Optimum depth of ports study (7 days); International Symposium on Transportation Pricing at American University (½ days); conferring with transport economists visiting the Bank and the transport symposium (¾ day).

Sau:
Mr. R. I. Sau joined the division on June 19 for approximately three months. Railway line closure study (8 days).

Issac:
Transport planning models study; highway cost model sensitivity analysis (10 days).

Mijares:
Transport planning models study (9 days); Fortran self-instruction (1 day).

Perfia:
Survey and summary of materials for feeder roads study (10 days).

General

Weckstein:

Snell:
Editing and assembling final draft manuscript of Kenya education study for Mr. Thias (¾ days); collecting progress report (¾ day)

van der Tak:
On home leave (10 days).

cc: Mr. Kamarck
Mr. Lowther
Mr. Alexander Stevenson

July 7, 1969

Stanley Please

Report on the Activities of the Fiscal Policies of Developing Countries Division, June 16-31, 1969

Major Studies

Mr. Scioli - study on Tunisian Tax Structure (4 days).

Country and Project Mission Work

Mr. Scioli - participation in discussions with area mission on economic policy memoranda on Tunisia (3 days).

Mr. Eklund - preparation of his contribution to the report of the economic mission to Philippines (7½ days).

Mr. Beier - preparatory work for the economic mission to Malawi (4 days). Departed for Malawi on June 18, 1969.

Mr. Schautz (Young Professional) - preparation of his contribution to the report of the economic mission to Sudan (11 days).

Other Activities

Mr. Joshi - consents on "Private Investment Banks and the Development of Brazil's Capital Market" (4 days); "Project Appraisal in Inflationary Conditions" (4 days); "Development Banks and Mobilisation of Savings" (3 days).

Mr. Schebeck - analysis of interest elasticity of deposits in India (5 days); miscellaneous (3 days).

Mr. Please - supervision of Division activities.

Research Assistants

Miss Basume - various statistical analyses on Philippine Government fiscal operations (10 days); preparation of extracts on reinvestment of profits (1 day).

Miss Holzau - interest elasticity of financial asset holdings (5 days).

Annual/Home/Sick Leave

Mr. Scioli - annual leave (4 days)

Mr. Eklund - sick leave (¾ days)

Mr. Schebeck - home leave (3 days)

Miss Holzau - annual leave (6 days)

SPlease/10

cc: Messrs. Kasarck and Louther
Mr. Andrew M. Kamarck

Bela Balassa

Report on Activities - June 1969

Continuing Projects

Structure of Protection in Developing Countries
- Finished final versions of chapters 2 and 3.
- Prepared revised drafts of chapters on Philippines, Norway and Brazil.

Development Strategies in Semi-Industrial Countries
- Preparatory work.

Other Activities
- Meeting with Weiner and other members of the Western Hemisphere Department on problems of industrial protection.
- Discussions on missions to Argentina, Korea and East Africa.
- Participated in meetings and seminars of the Basic Research Center on Projects Numbers 1 and 2.
- Briefed the mission going to Portugal.

Notes on Bank Studies and Papers
- Commented on Dharam Chai's draft chapter on trade in the Pearson Commission Report.

cc. Messrs. Stevenson
Kalmanoff

BBalassaalj
Activities of Sector and Projects Studies Division, June 1 - 16.

Agriculture

Ablasser: Feeder roads project study (6 days); agriculture sector planning models study (4 days); Spanish (1 day).

Egbert: Portugal agricultural sector study (10 days); Spanish (1 day).

Husain: Livestock appraisal paper (8 days); computer programming work (1-1/2 days); memos to Agriculture Projects Department on financial rate of return for farmers (1 day); participation in joint meeting of Operations Research Society of America and American Astronautical Society in Denver, Colo., (1/2 day).

Hanning: Mexico agricultural sector report (11 days).

Reutlinger: Revision of paper on project appraisal techniques under uncertainty for occasional papers series (2 days); grain storage projects paper (1 day); preparation of lecture to be presented to International Institute of Administrative Sciences (2 days); administration and program development (4 days); EDI lecture (1 day); Spanish (1 day).

Seagraves: Agricultural supply research paper (part-time, Raleigh, N.C. (Consultant)

Kim: Portugal agriculture sector study for Mr. Egbert (11 days).

King: Grain storage projects criteria for Mr. Reutlinger (11 days).

Wilde: Mr. Norman Wilde joined division for summer work on June 16.

Education

Carney: Revision of Kenya case study, in office June 1 (1 day); Tunisia education project re-evaluation mission (10 days). (Consultant)

Thias: Revision of Kenya case study (2 days); Tunisia education project re-evaluation mission (9 days).
Transportation

de Weille: Transport planning models study (1 day); highway design standards study (3 days); feeder roads project study (2 days); optimum depth of ports (1 day); Central American port study (1 day); advice and comments (2 days); administration (1 day).

Israel: Feeder roads project methodology study (8 days); advice and comments (2 days); transport pricing seminar at American University (1 day).

Miller: Transport planning models study (9 days); annual leave (2 days).

Oort: Regulation of road transport study (part-time, Utrecht, Netherlands); in office for discussion and preparation of partial preliminary draft of study (5 days).

Ray: Revision of "Economic Benefits of Road Transport Project" with Mr. van der Tak (4 days); optimum depth of ports paper (2 days); processing of port data on Guayaquil, Ecuador (2-1/2 days); Central American port coordination study (1 day); ongoing work on optimum number of berths paper (1/2 day); transport section meetings and other conferring (1 day).

Isaac: Transport planning model study: highway cost model sensitivity analysis (11 days).

Mijares: Transport planning models study (3-1/2 days); Fortran self-instruction (1-1/2 days); annual leave (6 days).

Pernia: Survey and summary of materials for feeder roads study for Mr. Israel (9-1/2 days); annual leave (1 day); sick leave (1/2 day).

General

Weckstein: Submitted revised study on problems of shadow price use (Consultant) in project analysis (part time, Brandeis University, Mass.).

Snell: Editing of Kenya education study for Mr. Thias (9-1/2 days); charts and other work for Mr. van der Tak (1-1/2 days).

van der Tak: Discussions with Mr. Oort on partial preliminary draft of road transport regulation study (3 days); reviewing and discussing other division research (2 days); supervision and personnel (6 days). Began home leave 17 June, expected to return August 4.

cc: Mr. Kamarck
    Mr. Lowther
Stanley Please


Major Studies

Mr. Scioli - initiated study on Tunisian Tax Structure (6 days).

Country and Project Mission Work

Mr. Christoffersen - returned to Washington from East Pakistan on June 11. Preparation of his back-to-office report for East Pakistan (2 days). (Mr. Christoffersen is leaving the Division on June 16 to assume his duties as Personal Assistant to Mr. McNamara.)

Mr. Scioli - preparation of his contribution to the report of the economic mission to Tunisia (4 days).

Mr. Eclund - preparation of his contribution to the report of the economic mission to Philippines (10 days).

Mr. Beier - preparation of his contribution to the report of the economic mission to Mexico (9 days); preparatory work for the economic mission to Malawi (1 day).

Mr. Schauta (Young Professional) - returned to Washington from Sudan on June 9 and has been preparing his contribution to the report of the economic mission (5 days).

Other Activities

Mr. Schebeck - analysis of interest elasticity of deposits in India (7 days); miscellaneous (3 days).

Mr. Joshi - Development Banks and Mobilization of Savings (6 days); miscellaneous (4 days).

Mr. Please - supervision of Division activities.

Research Assistants

Miss Dacusos - various statistical analysis on Philippine Government fiscal operations (10 days).

Miss Waldau - interest elasticity of financial asset holdings (10 days).

cc: Mr. Kanarok
    Mr. Lowther
Mr. Andrew M. Kamarck

Bela Balassa

Report on Activities - May 1969

June 5, 1969

Continuing Projects

Structure of Protection in Developing Countries
- Finished final version of chapter 1.
- Finished second draft of chapter 2 and worked on the second draft of chapter 3.

Other Studies
- Further comments on Ian Little, "Social Cost Benefit Analysis".
- Final revision of "Statistical Indicators of Levels of Industrial Development" (with Mrs. Hughes).
- Wrote preliminary version of "Evaluation of Industrial Projects".

Other Activities
- Lectured at Purdue University on "Patterns and Strategies for Industrial Development".
- Gave two lectures at the EDI on "Development Strategies in Semi-Industrial Countries".
- Commented on Gerald N. Lage, "Welfare Cost of Trade Restrictions: Linear Programming Analysis" at the request of the Western Economic Journal, University of California.
- Participated in the deliberations of the Editorial Committee.
- Attended seminar at A.I.D. on "Import Substitution and Economic Policy".

East African Mission
- Meetings and general correspondence.
Notes on Bank Studies and Papers

- Commented on Jean Baneth's memo on Zaidan's paper.
- Commented on Jan de Weille's Note on the Evaluation of Tourist Projects.

cc. Messrs. Stevenson

Kalmanoff
Mr. A. Stevenson

June 4, 1969

H. G. van der Tak

Activities of Sector and Projects Studies Division, May 16-31

Agriculture

Ablasser: Feeder roads project (5 days); agriculture sector planning models study (3 days); Spanish (1 day).

Egbert: Portugal/sector study (10 days).

Husain: Memo on risk analysis for an irrigation project (5 days); review of Colombia livestock project (1 day); computer programming work (5 day); livestock appraisal paper (3 days).

Naiming: Mexico agricultural sector report (5 days); irrigation reappraisal study (2 days).

Reutlinger: Grain storage projects criteria (1½ days); consultation on agriculture supply research paper with Mr. Seagraves in Raleigh, N.C. (1½ days); preparation for lecture to be delivered at National Institute of Administrative Sciences in Barcelona, Spain (1 day); program development (3 days); personnel and administration (2 days); Spanish (1 day).

Seagraves: Agricultural supply research paper (part time, Raleigh, N.C.) (Consultant)

Kim: Portugal agricultural sector study for Mr. Egbert (10 days)

King: Grain storage projects criteria for Mr. Reutlinger (3 days); annual leave (2 days).

Education

Carney: Revision of Kenya case study (part time, Stanford University) (Consultant)

Thias: Revision of Kenya case study (5 days); preparation for education project reevaluation mission to Tunisia (4 days); personnel (1 day).

Transportation

de Weille: Transport planning models study (2 days); feeder roads project study (2 days); review of project appraisal methodology paper (1 day); Dehoney Land Transport Study (1 day); highway design standards study (1 day); advice and comments (2 days); annual leave (1 day).
Transportation (cont'd)

Israel:
- Feeder road appraisal in Tanzania (1 day) advice and comments (1/2 days); feeder roads project study (7/4 days).

Miller:
- Transport planning models study (10 days).

Cortis:
- Regulation of road transport study (part time, Utrecht, Netherlands).

Ray:
- Optimum depth of ports study (10 days).

Issac:
- Transport planning models study; highway cost model sensitivity analysis (9 days); sick leave (1 day).

Mijares:
- Transport planning models study (3/4 days); Fortran self-instruction (1/4 days).

Fermia:
- Completion of railway and port projects survey (3/4 days) and survey and review of feeder roads bibliography (5 days), both for Mr. Israel; sick leave (1/2 day).

General

Weckstein:
- Revising study on problems of shadow price use in project analysis (part time, Brandeis University, Mass.).

Sneil:
- Editing and rewriting Kenya education study (3 days); collecting progress reports (1/2 day).

van der Tak:
- East Africa Transport Study (1 day); miscellaneous and supervision (7 days); annual leave (2 days).

cc: Mr. Kamarok
    Mr. Lowther
June 3, 1969

Mr. T. Cofaigh
Department of Finance
Upper Merrion Street
Dublin 2
IRELAND

Dear Mr. Cofaigh:

Responding to your suggestion transmitted to me by Mr. Maurice Horgan, I am sending you a copy of my letter to Mr. Raymond Nottage. I am grateful to you for attending to the requested information in case Mr. Nottage should be away from his office.

Sincerely,

Shlomo Reutlinger
Sector and Projects Studies Division
Economics Department

cc. Mr. M. Horgan, Executive Director, IMF
June 3, 1969

Mr. Raymond Nottage, Director
Royal Institute of Public Administration
24 Park Crescent
London, W. I.
ENGLAND

Dear Mr. Nottage:

As you may have been informed by now, IBRD has reached a decision to the effect that I should travel to the Barcelona meeting and present a talk to the Committee on Administrative Practices. My purpose in writing to you at this time is to get some additional essential and peripheral information for planning my talk.

First, I need to know as soon as possible the exact day during the week beginning June 23 at which you wish to schedule my talk. As I am planning not to stay in Barcelona for more than two days, I need to have this information for booking a flight reservation.

Furthermore, it would be very helpful to me if you could give me additional information on the interests and background of the participants at the meeting. Are they mostly practicing administrators and do many have an academic interest in administrative science? Are many participants familiar with some operations research methods and tools of economic analysis such as cost-benefit methods, computer simulation and risk analysis? Very tentatively, I am thinking to include in my talk a brief description of currently used cost-benefit analysis methods in different types of IBRD appraised projects to be followed by a somewhat more technical discussion of computer based methods currently being introduced in appraisal work, largely for the purpose of sensitivity analyses and appraising the likelihoods of various different project results. An appropriate title for such a talk could be: "Quantitative Techniques Used and Evolving in Appraising IBRD Projects".

Since there is so little time between now and the date of the meeting I do not think that it would serve much purpose to distribute an outline of the paper, particularly since I would prefer to tailor the talk to the interests of the audience. After receiving your comment on this point I will see whether I should prepare a more formal outline for distribution and if so, prepare enough copies to be handed out at the meeting.

For your own information, I am attaching a brief biographical sketch. I am looking forward to hearing from you and meeting you in person at the Barcelona meetings.

Sincerely,

Shlomo Reutlinger
Sector and Projects Studies Division
Economics Department

Attachment

Shlomo Reutlinger: bso
cc. Mr. H. G. van der Tak
Research for Praeger Special Studies

1. Frederick A. Praeger, Publishers, has offered me a contract (copy enclosed) to prepare a study on coffee to be published as part of the Praeger Special Studies program. I enclose a copy of the tentative outline that I have in mind. I intend to invite contributions of two or three chapters or essays from other experts in the field. Praeger has indicated that it would welcome my associating other writers. Praeger has also indicated that it would like Dr. Kamarck to write the introductory chapter.

2. I feel that I can complete the study in about nine months of moonlighting, that my undertaking this study will not impair my ability to cope with my normal work as an employee of the Bank, and that no conflict of interest would be involved because I do not intend to use any confidential information or material that I may have acquired in the course of my work at the Bank. On the contrary, my work in the field may improve my usefulness to the Bank. Therefore, I shall be grateful for the Bank's clearance to undertake the proposed study.

Attachments

SSinghirk
Mr. Alexander Stevenson

Stanley Please

June 2, 1969


Country and Project Mission Work

Mr. Christoffersen - has been in East Pakistan in connection with the Agriculture and Water Development Program of East Pakistan.

Mr. Scioli - preparation of his contribution to the report of the economic mission to Tunisia (9 days).

Mr. Eclund - preparation of his contribution to the report of the economic mission to Philippines (10 days).

Mr. Beier - preparation of his contribution to the report of the economic mission to Mexico (6 days); preparatory work for the economic mission to Malawi (3 days).

Mr. Schauts (Young Professional) - has been in the Sudan as a member of the economic mission.

Other Activities

Mr. Sobeck - analysis of interest elasticity of deposits in India (8 days); miscellaneous (2 days).

Mr. Joshi - prepared a note on Development Banks and Mobilization of Savings (7 days); miscellaneous (3 days).

Mr. Please - supervision of Division activities.

Research Assistants

Miss Daumos - preparation of projections of Philippine Government revenues and expenditures (9 days); miscellaneous (1 day).

Miss Meldau - Interest Elasticity of Financial Asset Holdings (10 days).

Annual/Sick Leave

Mr. Scioli - annual leave (1 day)
Mr. Beier - sick leave (1 day)

cc: Mr. Kanarck
A Short Cut Method of Projecting Balance of Payments Flows from Foreign Direct Private Investment

1. This memo describes a short cut method for projecting the role of foreign direct private investment in a country's balance of payments and for analyzing the sensitivity of the net balance of payments effect to differing assumptions regarding three basic parameters. It may be of interest to other country economists making long-term balance of payments projections. In addition to an estimate of the initial foreign equity, information is required on three basic parameters. These are:
   - a = Remitted profits as a percent of equity
   - b = Reinvested profits as a percent of equity
   - c = New direct investment expressed as a percent of equity.

2. "Equity" in all cases is measured as of the start of the year under consideration. While new direct investment usually may be thought of as an absolute amount rather than as a percent of existing equity, the latter approach seems at least equally logical. If one makes the further assumption that depreciation allowances are reinvested and are just enough to restore the level and profitability of foreign equity to the pre-depreciation figures, then the balance of payments flows are very easily projected.

3. Each of the flows associated with foreign investment grows by the rate of increase in the foreign equity; the latter grows at a constant rate equal to b+c. The outflow in the current account is equal to a+b, while the inflow in the capital account is equal to b+c (in both cases expressed as a proportion of foreign equity as the start of the year). The net balance of payments effect (expressed as a percent of start-of-year equity) thus is equal to c-a. A set of compound interest tables provides indices of the various flows; levels for a distant future year can be easily obtained without calculating the values for all the intervening years.

4. The sensitivity of the net balance of payments effect to different assumptions regarding the basic parameters is easily seen by looking at c-a. In general (and excluding those cases where direct foreign investment takes the form of occasional major projects rather than a fairly steady flow) one would expect the investment rate (b+c) to rise in response to an increase in profitability (a+b) and to fall in response to a decrease. Thus changes in c should (with some lag) dampen the effect of changes in 'a' due to an exogenous fall in the profit rate. When the main interest is in forecasting external debt, debt service payments, and the level of gross foreign borrowing necessary to finance a given resource gap, it is only the net flow from foreign investment that influences the result. This net flow may vary substantially less than the individual gross flows from which it is calculated.
Moreover, inadequacies in the data on reinvested profits do not influence the estimate of required foreign borrowing.

5. Information on the historical values of the three basic parameters can frequently be calculated from balance of payments data if a reasonable estimate of foreign direct investment is available for some point in time. (For United States investment the needed information is usually available in the annual Survey of Current Business article on foreign private investment.) For countries where amortization of direct investment is an important outflow item, the model is easily adapted to take this into account.

6. It is not suggested that the flows associated with foreign direct private investment either are or should be constant over an extended period of time. The approach outlined above can be used to illustrate the dangers of such an assumption. For example, assume the growth rate of foreign equity \( b+c \) is 11 percent per year, that this rate applies to the manufacturing sector where foreign investments now represent 25 percent of total equity, and that (with constant capital-output and debt-equity ratios) manufacturing activities are expanding at a rate of 7 percent per year. The assumed figures clearly imply a gradual takeover by foreign investors; on the basis of the 7 and 11 percent rates the foreigners would own the entire manufacturing sector of the country at the end of 38 years. Something is certainly likely to change radically long before this conclusion is reached! Thus in such circumstances an 11 percent rate should not be used in a long-run projection; a model with shifting foreign investment parameters seems more appropriate. One approach would be to reduce gradually the \( b+c \) parameter to a level equal to the weighted average rate of growth of the sectors in which foreign investment is significant (e.g., mining and industry). Profits' remittances would, of course, rise and this would increase the required inflow from gross foreign borrowing.

cc: Mr. Atle Elsaas
    Mr. Marto Ballesteros
Mr. A. Stevenson

H. G. van der Tak

May 20, 1969

Activities of Sector and Projects Studies Division, May 1-15

**Agriculture**

**Ablasser:** Orientation (2 days); feeder roads study (4 day); Portugal sector study (6-3 days); Spanish (1 day); special leave (1 day).

**Egbert:** Portugal sector study (11 days).

**Hasan:** Livestock appraisal paper (3 days); review of Colombia livestock project (2 days); work with computer programming staff (1-3 day); miscellaneous (1-3 day).

**Hawing:** On mission to Mexico (2 days); Mexico agricultural sector report (3 days); sick leave (1 day).

**Kautling:** Grain storage projects criteria (11 days); Mr. Lall's paper on inflation and project appraisal (1 day); administration (5 days); Spanish (1 day).

**Seagraves:** Agriculture supply research paper (part time, Raleigh, N.C.)

**Kim:** Portugal sector model for Mr. Egbert (11 days).

**King:** Grain storage projects criteria (11 days).

**Education**

**Carnoy:** Revision of Kenya case study (part time, Stanford University, California).

**Thomas:** On mission to Tunisia (5 days); mission follow-up work (3 days); revision of Kenya case study (3 days).

**Transportation**

**de Weille:** Highway design standards study (3 days); transport planning models study (2 days); feeder roads study (2 days); project appraisal methodology (2 days); urban systems symposium at MIT, Cambridge, Mass. (1 day); comments and advice (1 day).

**Israel:** Feeder roads study (9 days); comments and advice (1 day); sick leave (1 day).

**Miller:** Transport planning models study (11 days).
Transportation (cont'd)

Oort: (Consultant) Regulation of road transport study (part time, Utrecht, Netherlands).

Ray: Optimum depth of ports study (3 days); processing of port data on Guayaquil, Ecuador (2 days); comments and advice (1 day).

Issac: Transport planning models study; highway cost model sensitivity analysis (11 days).

Mijares: Transport planning models study (10 days); Fortran instruction (1 day).

Pernia: Survey of road, railway and port projects for Mr. Israel (11 days).

General

Masse: Project appraisal methodology (11 days); transferred to Transportation Projects Department as of May 15.

Wechstein: (Consultant) Revising study on problems of shadow price use in project analysis (part time, Brandeis University, Mass.).

Small: Finished editing of L. Foulques's paper on road project evaluation model (2 days); editing of Mr. Lall's paper on inflation and project appraisal (2 days); editing and re-writing of Kenya case study for Mr. Thies (7 days).

van der Tak: In Nairobi to review East African Transport Study (5 days); in London for East African Study (1 day) and for consultations with Road Research Laboratory on highway design standards study (1 day); follow-up of mission on East Africa (1 day); miscellaneous and supervision (3 days).

cc: Mr. Kasarok
Mr. Leathar
Mr. Alexander Stevenson

Stanley Please

May 19, 1969


Country and Project Mission Work

Mr. Christofferson - preparation of his contribution to the report of the Agricultural Credit Appraisal Mission to Pakistan (7 days); preparation for mission in connection with the East Pakistan Agriculture and Water Development Program (4 days). Departed for East Pakistan on May 16.

Mr. Scioli - preparation of his contribution to the report of the economic mission to Tunisia (11 days).

Mr. Edlund - returned to Washington from Philippines on May 11; preparation of his contribution to the report of the economic mission to Philippines (3 days).

Mr. Baker - returned to Washington from Mexico on May 5; preparation of his contribution to the report of the economic mission to Mexico (9 days).

Mr. Jenkins (Young Professional) - joined the Division on May 1, and departed for the Sudan on May 9 as a member of the economic mission.

Other Activities

Mr. Schebeck - worked on analysis of interest elasticity of deposits in India (9 days); miscellaneous (2 days).

Mr. Joshi - prepared comments on Tax Incentives and Types of Business Organizations (3 days); appraisal of development finance corporation of Ceylon (2 days); mutual funds as a vehicle for portfolio investment in developing countries (2 days); draft appraisal report on National Investment Bank for Industrial Development (Greece) (2 days); miscellaneous (1 day).

Mr. Please - supervision of Division activities.

Research Assistants

Miss Dacumos - preparation of extracts on public finance and capital market issues of developing countries (8 days); miscellaneous (1 day).

Miss Holden - Interest Elasticity of Financial Asset Holdings (11 days).

Annual/Sick/Special Leave

Miss Dacumos - sick leave (1 day)
Mr. Joshi - special leave (1 day)
Mr. Edlund - sick leave (1 day)

cc: Mr. Kanarck
Division Chiefs

Enrique Lerdau

Economic Work 1968/69 and 1969/70

May 19, 1969

Attached please find, for your records, the information which you gave me on the above, and which served as the basis for my memorandum to Mr. Alter of today (copy attached). In one or two cases the absence of the Division Chief, or the recent shifting of countries between Divisions made me call on other staff for information on the past. Since the work was done during the absence of Messrs. Weiner and Ross, some subsequent adjustments in the desired 1969/70 program may become necessary after they have reviewed the material.

cc: Messrs. Weiner
    Ross

ELerdau: jd
May 15, 1969

Professor J. A. Seagraves
Department of Economics
Patterson Hall
North Carolina State University at
Raleigh
North Carolina

Dear Jim:

Shlomo has passed on your interchange with Anderson and Dillon over the justification of additional research. Far from suggesting an alternative analysis, my impression is that you are pointing out an additional source of uncertainty to be taken into consideration. Putting the thing very simply, you emphasize the "horizontal" variability unexplained by the estimated production function while A-D emphasize the "vertical" variability.

Given the regression analysis used in deriving their "quadratic" response relation (actually it is a second order polynomial) this emphasis on the vertical error is obviously the most accessible. If some basis were chosen to incorporate estimates of both types of error, would not this imply a different form of estimation of the response function? May be some sort of multivariate orthogonality is implied.

It is certainly just as appealing to box in the recommendation as to box in the expected yields. I have not read the Wayne Fuller article, but it would seem that his approximate methods might lead to a 95% x 95% confidence quadrangle, the area of which conceivably be a useful quantum for inclusion in the utility function of someone selling advice to farmers. On the other hand, the farmer himself might be better served by receiving advice on the probable range of profits under a variety of (fertilization) practices. In the case discussed by A-D, the farmer is selling advice to himself but this is not a condition that would normally apply.

The most significant weakness of the A-D articles lies in the heavy reliance on experimental error (either prior or posterior) as a measure of yield variability to be translated into riskiness of net income. One must conclude that this is only valid in those cases where the prior experimental work is of such high quality that the analysis of returns to future research is a waste of time.
My visit to Mexico in April allowed me to visit a whole host of research stations and, once more, gave rise to the depressing picture of widespread use of factorial fertilizer experiments over R.C.B. designs with no attempt to take account of the fertilizer-water relationship. I did some evangelizing and got some interest. We certainly need good arguments in favor of more practically oriented research, but whether we need a criterion more elaborate than the public investment constraint for deciding whether to do more of the same type of research that has been done in the past is still not too clear for me. Maybe the best point of departure would be a study of the present limitations to research, it could be that funds are nowhere near so scarce as we presently think.

On a more personal note, we are now reasonably well settled in our home at 6101 Rudyard Drive, Bethesda, Md. 20014. The phone is 530-1721 and anytime you need to be passing this way please give us a call. We would love to be able to put you up or, or least, have you come out to the house. My trip to Mexico rather put me out of the swing of household activities, but I expect to be hard at the home improvements again this weekend. Judy did a lot of planting while I was away and the place really does look very nice. We are still drastically short of furniture.

What news of the Simons? Dick never replies to anybody's letters so it is hard to tell what is going on. All the very best to you, Helen and the children.

Yours sincerely,

Richard C. Manning
Mr. A. Stevenson

Jan de Weille

May 7, 1969

Impact of Our Work: An Example

1. I attach a letter plus report I received a few days ago from Costa Rica.

2. It is one more example (see page 1 of the report) showing that the Economics Department's research work does have a practical impact, albeit with some delay.

3. I thought that this would interest you. Could you return the letter plus report to me?

Attachment

JdeWeille:Jln
May 12, 1969

Mr. I.P.M. Gargill

E. Bevan Wade

Future Economic Work

I understand that Mr. Friedman wishes, at short notice, to discuss with you our plans for economic work on India during FY 1970. I have the following general observations which might be useful for the meeting, although they are not of course intended to commit us to a particular course of action. The main point would seem to be that our economic work during the coming years will need to change its focus to give more emphasis to sectoral studies and investment planning.

There are two reasons for this. Firstly, given the decision to concentrate on project lending after two years of almost complete reliance on industrial imports credits, we face the prospect of a further proliferation of project identification and appraisal missions and subsequent lending operations. If we are to undertake competent appraisals on the one hand, and on the other to learn about sectoral developments from such missions, then a number of economists (say 3 or 5) will need to concentrate on particular sectors, principally agriculture, transport, and public utilities. The basic objective should be, I think, to help define the issues that Projects Department missions should concentrate on, and this requires a familiarity with the sector in question that can only be obtained by prolonged work in that sector, much of which will have to be in the field. For example, I think we need to be familiar with trends in agricultural pricing policy, with food zone policy, and with input pricing and distribution questions, as for example with fertilizer and water. As far as agricultural credit is concerned we need to be able to back up our work on this with a thorough knowledge of interest rate structures. In telecommunications, to take another example, our work on rate structures and on planning for an optimal allocation of investment in new connections has not, because of shortage of time, been definitive, although these may be key issues in the long run growth of efficiency in telecommunications.

The second reason for suggesting more emphasis on sectoral work is the problem of internal resource generation. This has to be tackled from several directions, one of which is improving the efficiency with which existing investments are used, and also ensuring that proposed investments are well conceived. This is clearly closely related to the other general area of work - the macro-economic work.
For example, work on the generation of internal resources is closely related to the pricing policy of public enterprises, to agricultural tax policy, to interest rate structures, and to the general question of state/centre relations. Likewise, work on export commodities such as tea, jute and iron ore, as well as non-traditional exports, is related to work on the transport sector.

In general, however, the amount of work done on macro-economic topics will probably need to be about the same next year as this year. This includes the time spent on servicing the India Consortium which, although partly administrative, is nevertheless work that has to be done by an economist. For example, work on aid flows, external debt and debt relief, etc., will continue to absorb a lot of time. This implies that additional economists would need to be assigned to sector work, which I believe is contemplated in the department's budget for FY 1970.

As far as missions are concerned, the kind of work described above probably will not require any major economic missions. However, substantial travel by members of the India Division on the topics discussed above will doubtless continue and there will also be a need for a number of small specialized missions, with personnel from within the Bank, for example, for updating our knowledge of export commodities and examining specific sector problems, as has been done recently for the industry sector, and for jute, as well as for the dairy industry. The bulk of the missions to India will, however, be project appraisal or identification missions of which perhaps 15 or more can be expected in FY 1970. Preparing for these missions, and guiding their field work, will be a more and demanding claim on the time of economists both here and in Delhi.

cc: Messrs. Votaw
    King
    Mobel
    Gilmartin
    Kirk

/pa
Mr. Andrew M. Kamarok

Arthur E. Tiemann

Clerical Jobs Done in the General Statistics Section

May 7, 1969

The following table is a summary of the total man-hours used by statistical assistants in the General Statistics Section in doing routine statistical clerical jobs for other departments for the last six months period from October 1, 1968 through March 31, 1969. These jobs include the following three main categories:

1. Rate of Return: From cost and benefit data, figures are put in certain order for punching of cards, and then a few operation cards are prepared for computer run.

2. Routine checking: Arithmetic checking; (i.e. totals, percentages, etc.) of the tables included in the yellow cover reports.

3. Simple tabulations and calculations: Requires arranging available data in a tabular form and simple calculations. No data search is involved.

Total Man-Hours Spent on Statistical Clerical Jobs by Requesting Department October 1968 through March 1969

<table>
<thead>
<tr>
<th>Requesting Department</th>
<th>Rate of Return</th>
<th>Routine Checking</th>
<th>Simple tabulations &amp; calculations</th>
<th>Grand total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
<td>136</td>
<td>36</td>
<td>216</td>
<td>388</td>
</tr>
<tr>
<td>Transportation</td>
<td>26</td>
<td>50</td>
<td>128</td>
<td>206</td>
</tr>
<tr>
<td>Public Utilities</td>
<td>27</td>
<td>-</td>
<td>82</td>
<td>109</td>
</tr>
<tr>
<td>Education</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>Tourism</td>
<td>-</td>
<td>4</td>
<td>-</td>
<td>4</td>
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<tr>
<td>Sub-total</td>
<td></td>
<td></td>
<td></td>
<td>711</td>
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<tr>
<td>Administration:</td>
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<td>Legal</td>
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<tr>
<td>Area:</td>
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<tr>
<td>Western Hemisphere</td>
<td>-</td>
<td>-</td>
<td>16</td>
<td>16</td>
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<tr>
<td>Eastern Africa</td>
<td>-</td>
<td>16</td>
<td>-</td>
<td>16</td>
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<tr>
<td>East Asia and Pacific</td>
<td>-</td>
<td>-</td>
<td>152</td>
<td>152</td>
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<tr>
<td>Sub-total</td>
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<td>164</td>
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<tr>
<td>President's Office:</td>
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<tr>
<td>IFC</td>
<td>36</td>
<td>2</td>
<td>64</td>
<td>102</td>
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<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>1,070</td>
</tr>
</tbody>
</table>
In addition to the above, the utilization of statistical assistants in this Section has included: 1) 107 man-hours on the coding of data of the "Annual Survey of Industries in India: for analysis by South Asia Department, 2) 1200 man-hours on the coding of the data of the Honbassa Port Study for the Sector and Projects Division of the Economics Department, 3) 107 man-hours on the calculations of Customs and Excise revenues on the Imports for Developing Countries for Mr. Balassa.

Hence the total time spent on all statistical clerical jobs was 279½ man-hours; or about 35% of the total available man-hours during the period. Projects Departments request utilize approximately one man year per year for this type of clerical work. It may be noted that about 300 hours of professional's time have been spent on supervision of clerical jobs.

Since the above jobs are simple statistical clerical jobs, and since our people are selected on the basis of technical statistical academic background and experience, these more routine duties, when they become extensive, have an adverse affect on morale and prove to be an inefficient use of technical skills. If Projects Departments could absorb these simple clerical jobs within their own staffing, more manpower would be available for requests which call for the statistical skills which the statistical assistants currently possess.

cc: Mr. Stevenson
Mr. Andrew M. Kamarck  
May 5, 1969  

Bela Balassa  

Report on Activities - April 1969  

Continuing Projects  

Structure of Protection in Developing Countries  
- Completed second draft of Chapter I, "The Effective Rate of Protection: Conceptual and Theoretical Issues".  
- Completed first draft of Chapter II, "Methodological Problems".  
- Commented on Preben Numthe, "Norway's Trade Policy".  
- Further correspondence on Malaysian, Philippine and Chilean studies.  

Other Studies  
- Final revision of "The Economic Reform in Hungary" at the request of Economica.  
- Final revision of "Import Taxes and Export Taxes on Products of Developing Countries" and comments on Action Evaluation Paper No. 7.  

Other Activities  
- Commented on "Differential Tariffs, Negative Value-Added and the Theory of Effective Protection" by Augustine H. H. Tan at the request of the American Economic Review.  
- Commented on chapters I, II and IV of Raymond Bertrand, "Balance de paiements" at the request of OECD.  
- Participated in the deliberations of the Editorial Committee.  
- Lectured at EBI and at the University of Cornell on "Patterns and Strategies for Industrial Development".  
- Attended all-day seminar and wrote comments on Ian Little, "Social Cost Benefit Analysis".  

East African Mission  
- Further preparations on proposed industrial mission and memo to Files.
Notes on Bank Studies and Papers

- Commented on Bertil Walstad, "Evaluation of Economic Benefits in Industrial Projects".

- Commented on Research Project No. II of the Basic Research Center.

- Commented on Peter G. Van der Spek, "The Industrialization of Latin America: Progress, Problems and Policies".

- Commented on joint IBRD/RFF Research of Urbanization in Developing Countries.

- Attended seminar and wrote comments on George Zaidan, "The Foregone Benefits and Costs of a Prevented Birth: Conceptual Problems and an Application to the UAR".

cc. Mr. Stevenson
Mr. Kalmanoff

Balassa:alj
May 2, 1969

Mr. Alexander Stevenson

Stanley Please


Country Mission Work

Mr. Christoffersen - preparation of his contribution to the report of the economic mission to Pakistan (3 days); and his contribution to the report of the Agricultural Credit Appraisal Mission to Pakistan (6 days).

Mr. Scioli - returned to Washington from Tunisia on April 23, and has since been preparing his contribution to the report of the economic mission.

Mr. Edlund - has been in the Philippines as a member of the economic mission.

Other Activities

Mr. Schebeck - worked on "Capital Flows between the Agricultural and Non-Agricultural Sectors of India" (4 days); analysis of interest elasticity of deposits in India (3 days); miscellaneous (4 days).

Mr. Joshi - prepared comments on Tax Incentives for Public Companies (4 days); Financial Markets in Developing Countries (1 day); Interest Rates and Structure of a Commercial Banking System under Inflationary Conditions in Brazil (2 days); Value Linking of Financial Contracts and miscellaneous (4 days).

Mr. Christoffersen - prepared comments on paper on loan security by the Korea Development Finance Corporation as requested by Development Finance Companies Department (1 day); external reader on the draft economic memorandum on El Salvador (1 day).

Mr. Please - delivered a lecture at the Institute of Development Studies at Sussex University, England, April 23rd, and participated more widely on an Aid Administration Course at the Institute. Supervision of Division activities.

Research Assistants

Miss Dacumes - Tax Incentives for Public Companies (3 days); Semi-Logarithmic Analysis of Indian Investment (2 days); preparation of extracts on public finance and capital market issues of developing countries (5 days).

Miss Heldau - Central American Road User Charges Study (2 days); Income Elasticity of Financial Assets (6 days); miscellaneous (1 day).

Annual/Sick Leave

Miss Dacumes - sick leave (1 day).
Work Program of the Quantitative Techniques and Analysis Division for the Two-week Period Ending April 30, 1969

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<tr>
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<td>N. Carter: Mexico Mission field work (10 days)</td>
<td>General Supervision (2 days)</td>
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<td>E.K. Hawkins:</td>
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<td>A. Shourie: Kenya Mission field work (10 days)</td>
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<td>E.P. Holland: Harvard Colombia Transport Model</td>
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<td>E.P. Holland: Simulation Project (2 days)</td>
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<td>E.P. Holland: Preparatory Committee for</td>
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<td>E.P. Holland: Second Development Decade (U.N.)</td>
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<td>E.P. Holland: Attendance and desk work (5 days)</td>
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<td>W.L. van der Valk:</td>
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<tr>
<td>W.L. van der Valk: Assistance to Mr. Carter</td>
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<td>W.L. van der Valk: Jamaica Model: Simultaneous</td>
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<tr>
<td>W.L. van der Valk: Jamaica Model: Simulation</td>
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<tr>
<td>W.L. van der Valk: Jamaica Model: (10 days)</td>
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<tr>
<td>S.W. Kohlhagen:</td>
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<tr>
<td>S.W. Kohlhagen: Assistance to Mr. Hawkins (report</td>
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<tr>
<td>S.W. Kohlhagen: UNTAD on Bank loans (1 day)</td>
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<tr>
<td>S.W. Kohlhagen: Assistance to Mr. Shourie -</td>
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<tr>
<td>S.W. Kohlhagen: Kenya Model (1 day)</td>
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<tr>
<td>S.W. Kohlhagen: Assistance to Mr. Carter (general</td>
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</tr>
<tr>
<td>S.W. Kohlhagen: work and Jamaica Model (4 days)</td>
<td></td>
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<tr>
<td>Sick leave (4 days)</td>
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</tr>
</tbody>
</table>

EK Hawkins: pywrr

cc: Messrs. Stevenson, Louther
Work Program of the Population Studies Division for the Two-week Period Ending April 30, 1969

May 2, 1969

Mr. Andrew Kamarek

E.K. Hawkins

Major Studies

E.K. Hawkins
  Interagency Committee Meeting on Population & Development (1 day)

G. Zaidan
  Jamaica Mission report (2 days)

D. Miller
  Tunisia Mission field work (7 days)
  Desk work (3 days)

Research Assistant

Dawn Elvis
  Assistance to Mr. Hawkins and Mr. Miller:
  General work on population including Library Research,
  Preparation of Cost-Benefit Bibliography, Population Charts
  and Panama Brief (10 days)

General population work (4 days) including Projects Department Work
General Supervision (2 days)
Annual leave (1 day)
Home leave (8 days)

cc: Messrs. Stevenson, Lowther
May 2, 1969

Mr. F.S. Brooman  
Senior Lecturer  
Economics Department  
University of Bristol  
Bristol  
England

Dear Mr. Brooman:

I have just come across your very interesting article "Operating Costs and the Size of Banks - Some evidence from Argentina," in the Bankers' Magazine of January 1969. As I have undertaken somewhat similar work on banks in Brazil, I am sending you a copy of a paper which is going to be published in Brazil next month (Revista Brasileira de Economia). I would very much like to pursue these issues further both in the case of Brazil as well as for other developing countries. Your comments would be very much appreciated. I hope we can keep in touch if you have a continuing interest in this field.

Yours sincerely,

Leif E. Christoffersen  
Economics Department

encl.

LEChristoffersen/nds

lee
Activities of the Sector and Projects Studies Division: April 1-15

Agriculture

Ablasser: Joined division April 1; orientation (3 days); familiarization with Bank agriculture work and preparation for agriculture sector planning models study (3 days).

Egbert: Portugal sector study, background data (10 days); Spanish (1 day)

Husain: Livestock appraisal paper (6½ days); livestock models discussion with Agriculture Projects Dept. staff (1 day); discussion with computer programming staff (1 day); Sudan irrigation project review for Agriculture Projects Dept. (2 days); sick leave (½ day).

Manning: On mission to Mexico.

Neutlinger: Annual leave (6 days); comments and advice to other departments (½ day); grain storage project criteria (1 day); administrative (3½ days).

Seagraves: Agriculture supply research paper (part time, Raleigh, N.C.).

Kim: Portugal sector study for Mr. Egbert (10 days); sick leave (1 day).

King: Grain storage project criteria (10 days); miscellaneous (1 day).

Education

Garnoy: Revision of Kenya case study (part time, Stanford University, California).

Thias: Revision of Kenya case study (4 days); discussions with consultant, Education Projects staff and UNESCO staff (2½ days); preparation for economic mission to Tunisia (2½ days); annual leave (1 day); on mission to Tunisia (2 days).

Abudabbah: Kenya case study (4 days); left division (Bank) April 4.
Transportation


de Veille: Feeder roads study (3 days); Trans-Saharan highway project review (3 days); Transport planning models study (2 days); comments and advice (1 day); railway branch line closure study (1 day); miscellaneous (1 day).

Israel: Preparation for Tanzania feeder roads project mission (3 days); feeder roads study methodology and work progress (6 days).

Miller: Transport Planning Models Study (3 days); Pakistan railroad project appraisal report (2 days); sick leave (1 day).

Cort: Regulation of road transport study (part time, Utrecht, Netherlands).

Day: Optimum depth of berths in a port paper (7 days); revision of optimum number of berths paper (2 days); comments on project draft reports for other departments (2 days).

Isaac: Transport Planning Models study (3 days); Colombia macro-economic input-output matrix (2 days); special leave (1 day).

Milares: Transport Planning Models study (11 days).

Femia: Queueing model computations for Mr. Day (4 days); gathering and reviewing material for feeder roads study for Mr. Israel (7 days).

General

Hansen: Yugoslav country memorandum; assigned to Europe, Middle East and North Africa Department.

Smell: Kenya case study revision and meeting with Education Projects staff (7 days) work for Mr. van der Tak (2 days); editing of deployment of computer simulation for Mr. Reutlinger (1 day); editing of Mr. Pouliquen's computerized rate-of-return model for road project evaluation (1 day).

van der Tak: Drafted notes on investment, capital cost and current expenditure (1 day); reviewed East African Transport Study (3 days); research and supervision (7 days).

cc: Mr. Kamarek
Mr. Bhatia
Mr. Alexander Stevenson

Stanley Please

April 17, 1969


Major Studies

Mr. Beier - revising the Pakistan Electricity Load Control Study (4 days). Departed for an economic mission to Mexico on April 7.

Mr. Edlund - revising the Earmarking of Tax Revenues Study (2 days). Departed for an economic mission to Philippines on April 2.

Country Mission Work

Mr. Christoffersen - preparation of his contribution to the report of the economic mission to Pakistan (10 days); and his contribution to the report of the Agricultural Credit Appraisal Mission to Pakistan (1 day).

Mr. Scioli - has been in Tunisia as a member of the economic mission.

Other Activities

Mr. Schebeck - worked on "Capital Flows between the Agricultural and Non-Agricultural Sectors of West Pakistan" (11 days).

Mr. Joshi - prepared comments on the draft paper for the Tilberg Conference (2 days); Bellagio Conference (2 days); Korea Development Finance Corporation (2 days); Economic Committee Report on India (2 days). Miscellaneous (3 days).

Mr. Please - supervision of Division activities.

Research Assistants

Miss Malden - Central American Road User Charges Study (11 days).

Miss Decumos - Capital Flows between the Agricultural and Non-Agricultural Sectors of India (6 days); miscellaneous (5 days).

Stanley Please

cc: Mr. Kazarck
Mr. Bhatia
Mr. Andrew M. Kamarck

Bela Balassa

Report on Activities - March 1969

Other Studies
- Wrote paper on "Import Taxes and Export Taxes on Products of Developing Countries" at the request of Mr. Friedman.
- Revised proposal on "Development Strategies in Semi-Industrial Countries".
- Revised paper on "Statistical Indicators of Levels of Industrial Development" with Helen Hughes.

Other Activities
- Comments on Pouliquon's study on project appraisal.
- Comments on van der Tak and Ray, "Economic Benefits of Road Transport Costs".
- Participated in meeting on "Evaluation of Economic Benefit of Industrial Projects".
- Participated in meeting on "Dualism and Economic Development," a research project proposed by the Basic Research Center.

cc. Mr. Stevenson
Mr. Kalmanoff

B.Balassa:alj
April 4, 1969

Mr. M. F. Simonselli  
Chef des Relations Extérieures,  
Cassa per il Mezzogiorno  
Piazzale Kennedy 20 (EUR)  
Roma, ITALY

Dear Mr. Simonselli,

I am writing to express my regret and disappointment at not being able to join the Study Trip which you so kindly arranged for the 27th, 28th and 29th March. I telephoned your office to cancel the Alitalia reservations as soon as I knew that my plans would have to be changed.

I am especially interested in computerization topics and would appreciate being able to call on you sometime in the future to discuss them.

Yours sincerely,

R. A. Arnould  
Technical Supervisor

RAA/va

cc: General Files
April 4, 1969

Mme L. Paretti
Information & Diffusion
INIF
Piazzale Indipendenza, 11/B
00185 Roma, Italy

Dear Madame Paretti,

I am writing to express my disappointment at not being able to visit INIF on the 26th March at the President’s invitation. A sudden change of plans forced me to concentrate on technical details concerned with the Development Enquiry Service. I would appreciate the privilege, however, of being able to call on you sometime in the future to discuss computerisation topics.

Yours sincerely,

R. A. Arnould
Technical Supervisor

RAA/va

cc: General Files
Mr. Irving S. Friedman

Barend A. de Vries

April 4, 1969

1. Our mission in connection with the "model" creditworthiness study on Kenya is expected to be in Kenya during April 15 and May 21. I propose to join the mission for a week (May 3 - 10) in order to get first hand acquaintance with its field work. En route I propose to stop in London for a job interview and a visit to the Ministry of Overseas Development.

2. On my return I propose to give a talk at the University of Sussex (as part of an arrangement made by the Bank to contribute to a seminar on development planning) and on May 15 I would spend a day at the Institute for Social Studies to present a seminar which you had approved earlier.

3. Please let me know whether you approve of this plan so we may proceed with the necessary arrangements.

BAdeV:yp.
Activities of the Sector and Projects Studies Division: March 15-31

Agriculture

Egbert:  Pakistan mission report (5 days); Portugal sector study (4 days); Spanish (1 day).

Husain:  Livestock appraisal paper (6 days); model discussion with agriculture Projects staff (2 days); reviewing and commenting on Spain Livestock project appraisal (2 days).

Manning:  Mexico mission work (6 days); Irrigation re-appraisal study proposal (2 days).

Reutlinger:  Grain storage project criteria (3 days); simulation models for project appraisal (2 days); miscellaneous (4 days); Spanish (1 day).

Seagraves:  Agricultural supply research paper (part-time, Raleigh, N.C.).

(Consultant)

Kim:  Preparation of Portugal agricultural-regional linear programming model for Mr. Egbert (9 days); sick leave (1 day).

King:  Grain storage projects criteria for Mr. Reutlinger (10 days).

Education

Carnoy:  Kenya case study (part-time, Stanford University, California).

(Consultant)

Thias:  Revision of Kenya case study draft (7 days); preparation of draft proposal for re-evaluation of education projects (3 days).

Abudabbbeh:  Kenya case study (4 days); annual leave (6 days).
Transportation

de Weille: Highway design standards study (4 days); Transport Planning Models Study (1 day); feeder roads study (1 day); comments and advice outside division (2 days); sick leave (2 days).

Israel: Feeder roads study (7 days); special leave (2 days); miscellaneous (1 day).

Miller: Transport Planning Models Study (10 days).

Oort: Regulation of road transport study (part-time, Utrecht, Netherlands). (Consultant)

Ray: Revision of economic benefits of road projects paper (5 days); revision of optimum number of berths in a port paper (4 days); sick leave (1 day).

Isaac: Transport Planning Model Study (9½ days); annual leave (½ day).

Mijares: Transport Planning Model Study (7½ days); IBM Fortran instruction (2 days); annual leave (½ day).

Pernia: Graphs and computations on queuing model for Mr. Ray (5 days); outline preparation and library work on reappraisal of feeder roads project in El Salvador for Mr. Israel (5 days).

General

Masse: On mission in Yugoslavia. Assigned to Europe, Middle East, and North Africa Department.

Snell: On loan to Mr. Jaycox of Transportation Projects Department to edit Mr. Pouliquen's computerized rate-of-return model for road project evaluation (3½ days); chart-making and other work for Mr. van der Tak (4 days); re-write for Mr. Pouliquen's risk analysis paper (½ day); editing Mr. Neutlinger's paper on computer simulation (1½ days); Kenya case study (½ day).

van der Tak: On mission in Europe (5 days); miscellaneous and supervision (5 days).

cc: Mr. Kamarck
Mr. Bhatia
April 2, 1969

Mr. Alexander Stevenson

Stanley Please


Major Studies

- **Mr. Beier** - revising the Pakistan electricity load control study (10 days).
- **Mr. Eklund** - revision of Earmarking of Tax Revenues Study (7 days).

Country Mission Work

- **Mr. Christoffersen** - preparation of his contribution to the report of the economic mission to Pakistan (10 days).
- **Mr. Sciollì** - preparation for economic mission to Tunisia (2 days).
  (Departed for Tunisia on March 23.)
- **Mr. Schebeck** (Young Professional) - preparation of his contribution to the report of the Agricultural Credit Reconnaissance Mission to India (2 days).

Other Activities

- **Mr. Eklund** - worked on paper on "Capital Flows between the Agricultural and Non-Agricultural Sectors of West Pakistan" (2 days).
- **Mr. Schebeck** - worked on "Capital Flows between the Agricultural and Non-Agricultural Sectors of India" (8 days).
- **Mr. Please** - supervision of Division activities.

Research Assistants

- **Miss Haldau** - Central American Road User Charges Study (10 days).
- **Miss Dacunso** - Central American Road User Charges Study (3 days); collection of data on public finance in Latin American countries (4 days); regression analysis on GVA - agriculture in India (2 days); miscellaneous (1 day).

S Please/lo

cc: Mr. Kazarck
    Mr. Bhatia
Work Program of the Quantitative Techniques and Analysis Division for the Two-Week Period Ending March 28, 1969

**Major Studies**

<table>
<thead>
<tr>
<th>Name</th>
<th>Project/Task</th>
<th>Duration</th>
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<tbody>
<tr>
<td>N. Carter</td>
<td>Jamaica Research Project</td>
<td>2 days</td>
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<td></td>
<td>Ghana Mission desk work</td>
<td>3 days</td>
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<tr>
<td></td>
<td>Mexico Mission preparation</td>
<td>3 days</td>
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<tr>
<td>E.K. Hawkins</td>
<td>Kenya Model (6 days)</td>
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<tr>
<td></td>
<td>Transport Model (4 days)</td>
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<tr>
<td>E.P. Holland</td>
<td>Harvard Transport Model (Colombia) (5 days)</td>
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<td>Simulation Project (5 days)</td>
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<tr>
<td>W. van der Wal</td>
<td>Assistance to Mr. Carter Small Models project (10 days)</td>
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<tr>
<td>S. Kohlhagen</td>
<td>Assistance to Mr. Hawkins on Population (1 day)</td>
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<td>Assistance to Mr. Carter Jamaica (2 days)</td>
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<tr>
<td></td>
<td>Assistance to Mr. Shourie Kenya Model (7 days)</td>
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**Other Activities**

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<tr>
<th>Name</th>
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<th>Duration</th>
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<tr>
<td></td>
<td>Miscellaneous minor projects</td>
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<td>General supervision</td>
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<td>General supervision</td>
<td>1 day</td>
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</tbody>
</table>

cc: Mr. Stevenson
    Mr. Hawkins
    Mr. Bhatia
Mr. A. Stevenson

March 18, 1969

S. Reutlinger

Activities of the Sector and Projects Studies Division: March 1-14

Agriculture

Egbert: Pakistan mission report (8 days); Portugal sector study (1 day); Spanish (1 day).

Husain: Livestock appraisal paper (7 days); livestock models discussion with Agriculture Projects staff (3 days).

Manning: Mexico mission work (6 days); orientation course (2 days); Mexico Irrigation Projects Reappraisal (2 days).

Reutlinger: Grain storage project criteria (5 days); irrigation projects evaluation paper (1 day); Spanish (1 day); internal administration (1 day); personnel (1 day); program development (1 day).

Seagraves: Agricultural supply research paper (part time, Raleigh, N.C.). (Consultant)

Kim: Portugal regional linear programming model for Mr. Egbert (8 days); Pakistan crop production and tubewell irrigation data for Mr. Egbert (1 day); finalization of queueing formulas for Mr. de Weille (1 day).

King: Grain storage project criteria (5 days); sick leave (1 day); annual leave (4 days).

Education

Carnoy: Kenya case study (part time, Stanford University, California). (Consultant)

Thias: Kenya case study draft revision (5 days); education section program development (4 days); miscellaneous (1 day).

Abudabbbeh: Kenya case study (5 days); annual leave (5 days).
Transportation

De Weille: Highway design standards study (4 days); Transport planning models study (3 days); optimum number of berths paper (1 day); regulation of road transport industry (1 day); miscellaneous (1 day).

Israel: Joined division March 3; orientation (4 days); feeder roads study (5 days); review of appraisal reports for Mauritania and Lebanon (1 day).

Miller: Transport Planning Models Study (3 days); miscellaneous (2 days).

Oort: (Consultant) Regulation of road transport study (part time, Utrecht, Netherlands).

Bay: Home leave (5 days); optimum number of berths paper revision (2½ days); economic benefits of road transport projects paper revision (2 days); comment on Tunisia highway project report and miscellaneous (1 day).

Issac: Selection of input data from Harvard Transport Model to send to Colombia, for Mr. Miller (10 days).

Mijares: Transport Planning Models Study, Harvard Model, (5 days); meetings with Mr. Krasco, consultant from Harvard University (2 days); IBM Fortran instruction course (2 days).

Pernia: Familiarisation with Bank transport studies and appraisal reports and other transport material (7½ days); graph work on optimum number of berths paper for Mr. Bay (1 day); discussion with Mr. Israel on proposed work agenda (¾ day); special leave (1 day).

General

Masse: Project benefits and costs criteria (5 days); on mission to Yugoslavia (5 days).

Snell: Editing and proofreading working paper on risk analysis by Louis Pouliquen (5½ days); editing working paper on irrigation projects evaluation for Mr. Neutlinger (2 days); editing Mr. Egbert's annex to Pakistan country report (½ day); on loan to Mrs. Hughes of Industrialization Division for food processing industries paper (½ day); work for Mr. van der Tak (1 day); annual leave (¾ day).

van der Tak: Miscellaneous and supervision (7 days); on mission to Europe (3 days).

cc: Mr. Kamrock
    Mr. Bhatia
March 18, 1969

Mr. Alexander Stevenson

Stanley Please


Country Mission Work

Mr. Beier - preparation for economic mission to Mexico (6 days).

Mr. Christoffersen - preparation of his contribution to the report of the Agricultural Credit Appraisal Mission to Pakistan (5 days), and his contribution to the report of the economic mission to Pakistan (5 days).

Mr. Scialli - preparation of his contribution to the report of the economic mission to U.A.R. (10 days).

Mr. Schebeck (Young Professional) - preparation of his contribution to the report of the Agricultural Credit Reconnaissance Mission to India (2 days).

Other Activities

Paper for Mr. McNamara on "Capital Flows and Income Transfers Within and Between Nations to Sustain the Agricultural Revolution":

Mr. Eklund - (10 days)
Mr. Schebeck - (3 days)

Mr. Please - supervision of Division activities.

Research Assistants

Miss Dasgupta - assistance in preparation of paper for Mr. McNamara for the Bellagio Conference (3 days); Central American Road User Charges Study (2½ days); tables for the report of the Agricultural Credit Appraisal Mission to Pakistan (1½ days); miscellaneous (3 days).

Miss Haldán - assistance in preparation of paper for Mr. McNamara for the Bellagio Conference (10 days).

Leaves

Mr. Beier - sick leave (4 days).

Please/report

cc: Mr. Kazarek
Mr. Andrew Kamarck

Nicholas G. Carter

Work Program of the Quantitative Techniques and Analysis Division for the Two-Week Period Ending March 14, 1969

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<td>Jamaica Research Project (1 day)</td>
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<td>Simulation Studies (1 day)</td>
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<td>Mexico Mission (1 day)</td>
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<td>Ghana Mission (4 days)</td>
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<tr>
<td>E. K. Hawkins</td>
<td>General supervision (3 days)</td>
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<td>General supervision (2 days)</td>
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<tr>
<td>A. Shourie</td>
<td>Simulation study (3 days)</td>
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<td>Colombia Transport Model (5 days)</td>
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<tr>
<td>E. P. Holland</td>
<td>Orientation (2 days)</td>
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<td>Assistance to Mr. Carter (10 days)</td>
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<tr>
<td>W. van der Walk</td>
<td>Assistance to Mr. Shourie (8 days)</td>
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<tr>
<td></td>
<td>Assistance to Mr. Carter (2 days)</td>
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<tr>
<td>S. Kohlhagen</td>
<td>Assistance to Mr. Carter (2 days)</td>
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</table>

Mr. Carter: pmrr

cc: Mr. Stevenson
    Mr. Hawkins
    Mr. Bhatia
<table>
<thead>
<tr>
<th>Major Studies</th>
<th>Other Activities</th>
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<tbody>
<tr>
<td>E.K. Hawkins</td>
<td>Visit to New Orleans to discuss Family Planning program (2 days)</td>
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<td>Budget preparation (2 days)</td>
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<td>G. Zaidan</td>
<td>General Supervision (4 days)</td>
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<tr>
<td>D.I. Miller</td>
<td>Jamaica Mission report (10 days)</td>
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<td></td>
<td>Population work related to specific countries (5 days)</td>
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<tr>
<td></td>
<td>General work on population (5 days)</td>
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</table>

Research Assistant

| Dawn Elvis                                     | General work on population (10 days) |

cc: Messrs. Stevenson, Bhatia
<table>
<thead>
<tr>
<th>Staff Member</th>
<th>Country</th>
<th>In field</th>
<th>Period</th>
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<tbody>
<tr>
<td>L. Christoffersen</td>
<td>Pakistan</td>
<td>January - 4 weeks; February - mid March</td>
<td></td>
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<tr>
<td>M. Shrenk</td>
<td>Pakistan</td>
<td>January - 4 weeks; February - mid March</td>
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<tr>
<td>G. Scioli</td>
<td>U.A.R.</td>
<td>January - 4 weeks; February - mid March</td>
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<tr>
<td>J. Datas Fanero</td>
<td>Honduras</td>
<td>January - 3 weeks; February - 4 weeks</td>
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<tr>
<td>A. Cilingiroglu</td>
<td>Tunisia</td>
<td>February - 3 1/2 weeks; March - mid April</td>
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<tr>
<td>A. Novicki</td>
<td>India</td>
<td>February - 5 weeks; March - end April</td>
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<tr>
<td>Mrs. H. Hughes</td>
<td>Brazil</td>
<td>mid March - end April; May - end June</td>
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<tr>
<td>B. Balassa</td>
<td>Mali</td>
<td>end March/April</td>
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<tr>
<td>G. Scioli</td>
<td>Tunisia</td>
<td>April - 4 weeks; May - end June</td>
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<tr>
<td>A. Shourie</td>
<td>Kenya</td>
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<td>B. Wolstedt</td>
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<td>G.J. Bailer</td>
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<td>N.G. Carter</td>
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<td>R.C. Manning</td>
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<tr>
<td>L. Christoffersen</td>
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<td>A. Egbert</td>
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<td>J. Plucine</td>
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<tr>
<td>E. Schaebeck</td>
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<td>G. Zaidan</td>
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1/ This will be updated at fortnightly intervals. Items in capital letters indicate changes from the previous report dated February 20, 1969.
<table>
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<tr>
<th>Staff Member</th>
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<td>H.G. VAN DER TAK</td>
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<td>CHILE</td>
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</tbody>
</table>
Mr. Andrew M. Kasarck

March 10, 1969

Bela Balassa

Report on Activities - February 1969

Continuing Projects

Structure of Protection in Developing Countries

- Further correspondence on Chilean study.
- Continued work on Chapter 3, Economic Structure and Growth Performance.

Other Studies

- Final revision of "Country Size and Trade Patterns" for publication in the American Economic Review.
- Final revision of "Development Strategies in Semi-Industrial Countries".
- Final revision of comment on Travis, "The Effective Rates of Protection and the Question of Labor Protection in the United States".
- Continued work on the "Classification of Developing Countries" study.

Other Activities

- Review of Nasson's project on Central American Common Market for Personnel Department.
- Discussions on proposed industrial mission to East Africa.
- Discussions on proposed mission to Mali.
- Commented on Maurice Scott, "Effective Protection and the Measurement of Output" at the request of the OECD Development Center.
- Note on budget for proposed Development Strategies in Semi-Industrial Countries project.
- Delivered lecture at EBI on The Protection of Infant Industries.
- Participated in the deliberations of the Editorial Committee.

cc. Mr. Stevenson
    Mr. Kalmannoff
Activities of the Sector and Projects Studies Division: February 15-28

**Agriculture**

**Egbert:** Portugal sector study (4 days); Pakistan mission report (3 days); Spanish (1 day); miscellaneous (1 day).

**Husain:** Livestock appraisal paper (5 days); livestock models discussion with Agriculture Projects staff (2 days); computer programmers talks, irrigation study and livestock discussion with New Zealand agriculture department spokesman (1 day); special leave (1 day).

**Manning:** Mexico mission work (7 days); orientation (1 day); Ghana fisheries project review (1 day).

**Meron:** Litani River Basin simulation study (8 days); French (1 day).

**Reutlinger:** Grain storage project criteria (2 days); irrigation projects performance review (1 day); simulation models for project appraisal (2 days); miscellaneous (3 days); Spanish (1 day).

**Seagraves:** Agricultural supply research paper (part time, Raleigh, N.C.) (Consultant)

**Kim:** Pakistan crop production and tubewell irrigation data (5 days); and Portugal sector model (4 days) for Mr. Egbert.

**King:** Grain storage project criteria for Mr. Reutlinger (4 days); sick leave (5 days).

**Education**

**Carnoy:** Kenya case study (part time, Stanford University, California). (Consultant)

**Thias:** Kenya case study (3 days); education and manpower studies development (3 days); Korea education project appraisal review (1-1/2 days); miscellaneous (1-1/2 days).
Abudabbeh:  Kenya case study (5 days); computer course (1 day); special leave (2 days); sick leave (1 day).

**Transportation**

de Weille:  In Colombia transport mission (5 days); Transport Planning Models Study (2 days); highway design standards study (2 days); miscellaneous (1 day).

Miller:  On Colombia transport mission (5 days); Transport Planning Models Study and model data requirements (5 days).

Gort:  Regulation of road transport study (part time, Utrecht, Netherlands).

Ray:  On home leave.

Isaac:  Maternity leave (4 days); Colombia macro-economic input-output matrix (5 days).

Mijares:  Transport Planning Models Study (6-1/2 days); IBM instruction course (2 days); annual leave (1/2 day).

Pernia:  Joined division February 24; familiarization with transport studies (4 days); checking queuing formula computations (1 day).

**General**

Massé:  Project benefits and costs criteria (5 days); country economic work in Europe, Middle East and North Africa Department (4 days).

Weckstein:  Submitted revised and expanded draft of study on problems in using shadow prices in project analysis (part time, Brandeis University, Massachusetts).

Snell:  Writing working paper on risk analysis by Louis Foulquen (7-1/2 days); on loan to Mrs. Hughes of Industrialisation Division for food processing paper (1 day); work for Mr. van der Tak (1/2 day).

van der Tak:  Miscellaneous and supervision.

cc: Mr. Kamarock
    Mr. Bhatia
Mr. A. M. Kasarck

March 1, 1969

Emmanuel Levy

Work Progress Report for the Comparative Data Division for the Period February 16-28, 1969

Five-Year Projection Exercise

1. Work was continued under the supervision of Mr. Eory on the updating and extension of the basic data tables for the 5-Year Projection Exercise.

2. All the required basic data sheets have been sent to the Area Departments. Some 15 have been returned to the Division and the computations for the final summary table have immediately been started. These summaries have been typed for about 8 countries.

Computer Data Bank

3. Mr. Novak continued to work on the Data Bank coding system and on the supervision of the research assistants engaged in filling in blanks for some series to be included in the Data Bank. Special effort has been made to complete the series on national product and production indexes for East-European countries.

World and Regional Summaries

4. Some progress has been made in the preparation of the summary data to be included in the Annual Report of the Bank and the supplement to the World Tables.

Summary Indicators for the President

5. The collection of basic data on education has been commenced. As soon as finished, these will be sent to the Education Projects Department for revision and completion.

6. Work on the collection and compilation of the demographic indicators will begin soon.

7. On February 19, Mr. Levy and Miss Vial met with Messrs. Hendry and Takahashi of the Agriculture Projects Department to discuss the basic data on agriculture to be prepared for Mr. Molanara.
8. On February 27 and 28, Miss Vial met with Messrs. Jay Atkinson and Charles Gibbons, members of the staff of the Economic Research Service of the USDA to discuss the main sources of agricultural data. The publications suggested by the USDA are being studied in order to design a worksheet for the preparation of the basic agricultural data for the President.

Mr. Stevenson

cc: Mr. Stevenson
### Man-Days Worked

**February 16-26, 1969**

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<tr>
<th>I. Professionals</th>
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<th>5-Year Plan</th>
<th>Data Bank</th>
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| Total                  | 113| 16.5| 36| 18.5| 11.5| 0.5 |
Mr. Alexander Stevenson

March 4, 1969

Stanley Please


Major Studies

Mr. Basoah - worked on the completion of his study on "Administrative Expenditures in Selected LDC’s" (9 days). (Mr. Basoah terminated his services with the Bank, effective March 1, 1969.)

Country Mission Work

Mr. Schmitt - worked on completion of his report as head of the Economic Mission to Greece (9 days).

Mr. Christoffersen - preparation of his contribution to the report of the Agricultural Credit Appraisal Mission to Pakistan (5 days), and his contribution to the report of the Economic Mission to Pakistan (4 days).

Mr. Sciolli - preparation of his contribution to the report of the Economic Mission to U.A.R. (7 days).

Other Activities

Paper for Mr. McNamara on "Capital Flows and Income Transfers Within and Between Nations to Sustain the Agricultural Revolution":

Mr. Please
Mr. Beier - (9 days)
Mr. Eklund - (9 days)
Mr. Schebeck - (9 days)
Mr. Sciolli - (2 days)

Mr. Please - Supervision of Division activities.

Research Assistants

Miss Meldau - assistance in preparation of paper for Mr. McNamara for the Bellagio Conference (9 days).

Miss Daumos - assistance in preparation of paper for Mr. McNamara for the Bellagio Conference (5 days); Central American Road User Charges Study (4 days).

Leaves

None.

cc: Mr. Kasarick
Mr. Andrew Kamareck

E.K. Hawkins


<table>
<thead>
<tr>
<th>Major Studies</th>
<th>Other Activities</th>
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<tbody>
<tr>
<td>M.K. Hawkins  White Paper on Population (6 days)</td>
<td>Visit to Ford Foundation in New York to discuss Rand proposal (1 day)</td>
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<tr>
<td>G. Zaidan Jamaica mission field work (4 days)</td>
<td>General work on population (1 day)</td>
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<tr>
<td>D. Miller</td>
<td>Back-to-Office report of Jamaica Mission (5 days)</td>
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<td>Desk work on Rand Proposal (1 day)</td>
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<td></td>
<td>Visit to Ford Foundation in New York to discuss Rand Proposal (1 day)</td>
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<td>General work on population (5 days)</td>
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<td>Preparation of Country Briefs (1 day)</td>
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<tr>
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<td>Work on budget (1 day)</td>
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Research Assistant

Dean Elvis White paper and general work on population (9 days)

cc: Messrs. Stevenson, Hatia
Mr. Andrew Kasarck

March 3, 1969

Nicholas G. Carter

Work Program of the Quantitative Techniques and Analysis Division for the Two-Week Period Ending February 26, 1969

Major Studies

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<td>N.G. Carter</td>
<td>Mexico mission report</td>
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<td>Ghana mission report</td>
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<td>E.K. Hawkins</td>
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<td>A. Shourie</td>
<td>Kenya Model</td>
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<td>Transport Model</td>
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<td>E.P. Holland</td>
<td>Colombia Transport Model</td>
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<tr>
<td>W. van der Valk</td>
<td>Assistance to Mr. Carter</td>
<td>9 days</td>
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</table>

Other Activities

- General Supervision (1 day)
- E.D.I. Lecture (1 day)
- General Supervision (1 day)
- Resettlement (4 days)
- Review of papers (1 day)

cc: Mr. Stevenson  
    Mr. Hawkins  
    Mr. Bhatia
Economics Department: Sector and Projects Studies Division - Work Program

1. We have discussed with Messrs. van der Tak and Reutlinger the agricultural component of the Sector and Projects Studies Division's work program as set forth in Mr. van der Tak's paper of December 5. We are particularly interested in seeing that the Division give priority to the initiation of systematized reporting procedures and data collection on on-going projects, the review and analysis of evaluation criteria for grain storage projects (benefits other than avoidance of storage losses), the review of the applicability of modern operations research methods for water resource development planning with emphasis on river basin development aspects, and review and suggestions for systematized sector review work. At the same time work on standardizing and simplifying certain aspects of project appraisal such as return calculations, farm models, sensitivity analysis, risk analysis, etc., should continue. We feel that there is less urgency for work on production functions and planning models for individual irrigation projects.

2. Mr. van der Tak is well aware of our interests and relative priorities and I think it would be up to his Division to make a proposal as to the staff implications and timing including target dates for the specific research activities.

cc: Messrs. Evans, Hendry

WAWapenhaus; at
Mr. Irving S. Friedman

Ugo Sacchetti

February 25, 1969

Visit to International Agencies in Europe.

As I mentioned to you last week, I shall be going to Europe at the beginning of March to establish contacts and channels of communication with international agencies. The agencies are listed below, with a general indication of the matters to be covered in the discussions.

OECD, including DAC: Flows of aid; countries' economic developments; capital markets.

BIS: Capital markets; international monetary arrangements.

EEC: Aid arrangements (FED, food aid, etc.); capital markets; favorable treatment of imports from LDC's; restrictions on imports from LDC's.

If it proves possible, I will pay a brief visit to the EIB in Luxembourg.

I also plan discussions with the Paris Office, as appropriate, on the above matters and, in general, on collaboration between DFS and that office. I have been in contact with Mr. Hoffman on this point.

I shall leave on March 4 and plan to return on March 15 or 18.

U. Sacchetti/fm
TO: Files

DATE: February 19, 1969

FROM: Thomas W. Berrie

SUBJECT: Economics Department
Sector and Projects Studies Division
Work Program - Major Research Areas
Dated December 5, 1969

A meeting was held on Friday February 14, 1969 between Mr. Van der Tak, Mr. Thomas W. Berrie and Mr. Walter J. Armstrong in the latter's office to discuss the above Work Program. Mr. Van der Tak agreed to carry out two specific items of work for Public Utilities.

1. Power Planning Models

This comprises item 21 of Mr. Van der Tak's program. A new member of staff, who has had some considerable experience of power system planning, was expected to join Mr. Van der Tak's division in mid-1969. He would begin by examining what range of models were available (from the simplest to the more complex) which might be made suitable for use in the Bank's appraisal work. The aim was to provide the models in such a form that they could be used directly by the team on Pre-Appraisal, Appraisal and Review Missions. This should be quite straightforward for all but the complex models. In this case the economists of the Public Utilities Projects Department were available to give more specialist advice. The staff member from Mr. Van der Tak's division would also go out on selected missions to obtain first hand impressions of the work. In any case he would work in very close collaboration with Public Utilities Projects Department, with Mr. Berrie forming the link. The above work should have some "spin-off" benefits for telecommunications work, but little for urban water supply.

2. Load Forecasting

In order to make specific progress in a defined area of data, Mr. Van der Tak agreed to carry out quickly a simple exercise on retrospective testing of the accuracy of load forecasting for power as shown from a selected cross section of appraisal reports. He expects to use an existing member of his staff for this.

Other Factors

With respect to Public Utility Pricing Problems, as Mr. George Beier is not a member of Mr. Van der Tak's division, it was agreed that Mr. Berrie would attempt (a) to bring the work of Mr. Beier to a final version and (b) consider how to proceed with other aspects either in parallel with it or following its completion.
Attached is a list of suggestions from Public Utilities Projects Department which was not formally handed to Mr. Van der Tak but was used as a basis for discussion at the meeting on February 14, 1969.

Operational Files
Department Files

T.W. Berrie: ms.
IBRD
WORK PROGRAM OF SECTOR AND PROJECTS STUDIES

DIVISION OF ECONOMICS DEPARTMENT

Suggestions From Public Utilities Projects Department

ITEMS

1. Techniques of Load Forecasting Used by Borrowers
2. System Economic Models
3. Data and Appraisal Projects
4. Public Utility Pricing
5. Risk Analysis and Planning for Uncertainty

GENERAL COMMENTS

a. Throughout it is assumed that these projects would be handled with close cooperation with the Public Utilities Projects Department.
b. Items in the work program would need to some extent to be built around the personnel available in both the Economics and the Projects Departments.
c. Projects selected should be a mixture of some with a short pay-off period and some with a long.
d. Advantage should be taken to finish off some work already started e.g. pricing and demand.

1. Techniques of Load Forecasting Done by Borrowers

a. A large number of techniques are in use throughout the world especially for power. They include:

   - Econometric Forecasts - often in connection with National Plans
   - Fuel Sector Forecasts - often with National Planning Fuel Policy
   - Electricity Sectors - perhaps the most common of all
   - Extrapolation and Trends - simplest to evaluate
Aggregation of Local Views - adding balance to the rest

Commercial Forecasts - usually pessimistic

b. What are the types of forecast in most common usage by our borrowers? Are there any correlations between types of forecasts used, type of country, geography, state of development, etc?

c. What has been the success of these techniques' ex post? Test retrospectively predictions for 1 to 7 years ahead. Have any techniques been able to give warning of change.

Basic Reasons for Greater Inaccuracies.

Synthetic Testing by Variants.


Adding back known load shed - how to measure?

Allowance for voluntary shedding.

How to allow for loss of business under poor supply.

Effect of voltage and frequency reduction - how to measure?

Should allowances be added in and then load forecast or, should load be forecast from demand met and then allowance be made?

e. Where should the Forecast be Pitched?

Work to Mean Expectation (50/50 Estimate) always?

Work to a Range?

f. Revision of Forecasts

How often should be revised? How far ahead?

Should Plant Program be Adjusted on Revision?
Should other things then be revised e.g. Financial Targets?

2. System Economic Models
   a. The most numerous models are in power. These should be examined for their suitability for use in the Bank. To be used for project work they must be readily workable, if possible by the project appraiser himself.
   b. List the categories of basic types of system at present dealt with by the Bank in a manner directly connected with complexity of models. This requires some knowledge of model building. Important factors are also (i) to bear in mind future requirements of the early 1970's and (ii) the value of the loans made. Types of system depend on:
      i. Number of nodes
      ii. Degree of interconnection
      iii. Network structure and geography
      iv. Plant mix
      v. Fuel Resources
      vi. Shape of Load Curve
   c. At the same time examine the models which have been developed in the world and the purpose for which they were developed from:
      i. Published literature.
      ii. International Conference e.g. UNIPEDE, PSCC, etc.
      iii. Direct contact through people at the Bank who have worked for Power Authorities.
      iv. Computing Manufacturers e.g. SHARE and IBM.
      v. Universities and Research Institutes.
      vi. Consultants.
d. Examine suitability of existing models for Bank's needs present and future.

e. Discussions with computing and statistical services divisions of economics and practicability of modifying the suitable models for use on Bank's computer.

f. Determine the need for any new models to be developed. Evaluate economics and man-hour requirements.

g. Allocate a target program for above with
   i. Priorities
   ii. Man hours requirements from each department
   iii. Defined responsibilities between departments
   iv. Method of collaboration between departments
   v. Pilot schemes as a trial

3. Data and Appraisal Projects

   a. An examination of what data to measure, in what form it should be, how it should be measured and whether vital parameters should be controlled (e.g. demand by price and tariff policies has sometimes been suggested).

   b. What data is important at the appraisal stage? This will vary between situations and between projects.
      i. Examine a cross section of appraisals to study sensitivity of recommendations to data change.
      ii. Take part in a cross section of appraisal missions to examine data at first hand.

   c. List from the data point of view the types of project appraised by the Bank and those likely to be appraised in the next few years or so. These will depend on:
i. Whether project is single or part of a development.
ii. Whether "judgement" decisions play a leading part.
iii. Whether new loan or not.
iv. Whether loan is basically for a complete project or is diversified into portions of different projects.
d. Examine how many projects (as a proportion of total) fall into the types listed in c, by number of loans and amount ($).
e. Bearing in mind output requirements upon which decisions are made now (and those likely to be required in future), list important data for each type of project, then:
   i. What form should it be in?
   ii. How accurate should it be?
   iii. How should it be measured?
f. Pilot schemes for testing the conclusions and evaluating chance of controlling the important parameters in a given situation.
g. Arrangements for coordination of this work between departments.

4. Public Utility Pricing
a. Examination of the practicability and desirability of closing the demand/price loop:
   i. Which cases would it be worthwhile for, if any?
   ii. In which circumstances would it affect the loan decision?
   iii. How practical is it to close the loop?
b. Examine the proportion of electricity of total expenditure costs for different classes of consumer and:
   i. Any evidence of correlation of price change and demand?
   ii. Any evidence of gross distortion by "end-use" if there is cross subsidization?
iii. Rank industries in order of power intensity.

iv. Value added basis.

Use data from published sources plus the Bank's own data as collected from missions.

c. Examine the practicability and likely success, together with manpower requirements, of mounting a controlled experiment in one or two territories where the Bank is making loans and where the borrower is known to be sympathetic to such an approach (George Beier's original terms of reference for a study in West Pakistan):

   i. What form would such an experiment take i.e. analytical only or inclusion of experimental metering/tariffs?
   
   ii. How long would it need to run?
   
   iii. How can distortion due to experimental conditions be kept to the minimum?

   Any such experiment would probably be best handled outside the normal mission terms of reference i.e. to basically help the Bank's appraisal technique rather than to help the borrower.

d. What number of man-hours would be needed? Draw up a provisional program for any such experiment.

5. Risk Analysis and Planning for Uncertainty

a. The Bank must be satisfied that any loan will make its financial return plus doing the job that the loan is being made for. All planning involves uncertainty, the amount varying with conditions in particular countries, the type of the loan, the type of project etc. The process of being satisfied involves taking a calculated risk of the uncertainties involved, whether these can be evaluated more precisely or just on a judgement basis.
b. What tolerances should there be in the mean expectations of such things as:
   i. Financial rate of return?
   ii. Economic rate of return?
   iii. Chance of meeting the demand?

Does past experience, e.g. on load forecasting errors, help? Or would an examination of construction costs compared with estimates help? What other parameters should be examined? Have some borrowers been better than others in meeting their targets financially and economically?

c. Can some simple rules be produced to help appraisal missions to judge whether unnecessary risks are being taken? For example concerning the allowances in a plant program for:
   Load Estimating Errors?
   Plant Lateness?
   Plant Breakdown?
   Transmission and Distribution Constraints?
   Pricing Effects?

Are realistic allowances being made by our borrowers?

d. Classify the different types of economy so far as risk analysis is concerned:
   i. State of development.
   ii. Accuracy of economic and other data.
   iii. Experience in satisfying borrowing conditions.
   iv. Coordination of sector planning.

TWeRries:ms.
February 13, 1969
Mr. A. Stevenson
February 17, 1969

H. C. van der Tak

Activities of the Sector and Projects Studies Division: February 1-14

Agriculture

Egbert:
- Program development (5 days); orientation (2 days);
- miscellaneous (1 day); Spanish (1 day).

Husain:
- Livestock appraisal paper (5½ days); livestock models
discussion with Agriculture Projects staff (1 day);
discussion with computer programmers and work on
Litani River study (½ day).

Manning:
- Joined division February 3; orientation (5 days);
familiarization with Bank project follow-up (4 days);
Ghana fisheries project critique (1 day).

Meros:
- Litani River Basin simulation study (7 days); French (1 day);
sick leave (2 days).

Reutlinger:
- Grain storage project criteria (1 day); sector studies
research (2 days); miscellaneous (5 days); Spanish (1 day).

Seagraves:
- Agricultural supply research paper (part time, Raleigh, N.C.)
(Consultant)

Kim:
- Pakistan crop production and tube well irrigation data for
Mr. Egbert (5 days); queue formula computations for
Mr. de Weille (4 days); Portugal agricultural sector study
for Mr. Egbert (1 day).

King:
- Selection of Bank projects for follow-up study (3½ days);
sick leave (1½ days).

Education

Carney:
- Kenya case study (part time, Stanford University, California).
(Consultant)

Thias:
- Kenya case study (full time).

Abudabbbeh:
- Kenya case study for Mr. Thias (5 days); U.A.R. mission
report for Mr. Karacan from Europe, Middle East and
North Africa Department (5 days).
<table>
<thead>
<tr>
<th>Name</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>de Weille</td>
<td>Berths in a port paper and preparation for Colombia transport mission (5 days); on Colombia transport mission (5 days).</td>
</tr>
<tr>
<td>Miller</td>
<td>Preparation for Colombia transport mission (5 days); on Colombia transport mission (5 days).</td>
</tr>
<tr>
<td>Gert</td>
<td>Regulation of road transport study (part time, Utrecht, Netherlands).</td>
</tr>
<tr>
<td>Ray</td>
<td>On home leave.</td>
</tr>
<tr>
<td>Isaac</td>
<td>On maternity leave.</td>
</tr>
<tr>
<td>Hijares</td>
<td>Transport Planning Models Study computer print-out and input analysis (3 days); IBM instruction course (6 days); material for Colombia transport mission (1 day), all for Mr. Miller.</td>
</tr>
</tbody>
</table>

**General**

<table>
<thead>
<tr>
<th>Name</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masse</td>
<td>Project benefits and costs criteria (5 days); country economic work in Europe, Middle East and North Africa Department (5 days).</td>
</tr>
<tr>
<td>Weckstein</td>
<td>Revising draft of study on problems in using shadow prices in project analysis (part time, Brandeis University, Mass.)</td>
</tr>
<tr>
<td>Snell</td>
<td>Writing risk analysis paper by Louis Poulquen (6 days); Kenya case study (3½ days); work for Mr. van der Tak (½ day).</td>
</tr>
<tr>
<td>van der Tak</td>
<td>Miscellaneous and supervision.</td>
</tr>
</tbody>
</table>

cc: Mr. Kamarch
    Mr. Bhatia
Mr. Andrew M. Kamarck

Nicholas G. Carter

Work Program for the Quantitative Techniques and Analysis Division, February 1-11, 1969

<table>
<thead>
<tr>
<th>Major Studies</th>
<th>Other Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.G. Carter</td>
<td>Ghana mission report (7 days); miscellaneous (1 day) Sick leave (1 day) QTA Division supervision (1 day)</td>
</tr>
<tr>
<td>A. Shourie</td>
<td>Kenya Model (4 days) Transport Models (3 days) Burundi Model (2 days) Sick leave (1 day)</td>
</tr>
</tbody>
</table>

Research Assistant

W. van der Valk - Assistance to Mr. Carter: Research work (10 days)
S. Kohlhagen - Assistance to Mr. Shourie: Research work (5 days)

NGC: 1cm

cc: Mr. Hawkins
    Mr. Bhatia
Mr. Alexander Stevenson

February 17, 1969

Stanley Please


Major Studies

Mr. Edlund - worked on revised draft of his study on "Earmarking of Public Revenues" (1 day).

Mr. Basoh - completed first draft of his study on "Administrative Expenditures in Selected LDC's" (9 days).

Country Mission Work

Mr. Schmitt - worked on completion of his report as head of the Economic Mission to Greece (10 days).

Mr. Beier - has been preparing his contribution to the report of the Economic Mission to Korea (5 days).

Mr. Christoffersen - has been in Pakistan as a member of the Economic Mission.

Mr. Edlund - prepared questionnaire for the Philippine mission (1½ days).

Mr. Sciotti - returned from U.A.R. on February 2 and has since been preparing his report on the Economic Mission (10 days).

Mr. Bascob - updating the Public Finance Section of the Malawi report (1 day).

Mr. Scherbeck (Young Professional) - has been preparing his contribution to the report of the Agricultural Credit Reconnaissance Mission to India (10 days).

Other Activities

Mr. Beier - miscellaneous (3 days).

Mr. Edlund - worked on: paper on administrative expenditure in developing countries (1 day); external aid and internal financing of agriculture in developing countries (5 days); government spending patterns in developing countries - draft paper by Lotz (½ day). Spanish class - (one hour each day).

Mr. Please - has been working on a paper Mr. Mchamara will deliver in Bellagio on "Capital Flows and Income Transfers Within and Between Nations to Sustain the Agriculture Revolution". Supervision of Division activities.
Research Assistants

Miss Moldau - full equilibrium model on Greece (5 days); assistance in preparation of paper for Mr. McMahon for the Ballagic Conference (3 days).

Miss Bacwos - Central American Road User Charges Study (5 days); miscellaneous (5 days).

Leaves

Mr. Beier - annual leave (2 days).

Miss Moldau - special leave (2 days).

Please,/to

cc: Mr. Kasarek
<table>
<thead>
<tr>
<th>Major Studies</th>
<th>Other Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>E.K. Hawkins</td>
<td>General work on population including supervision (3 days)</td>
</tr>
<tr>
<td>White Paper on Population (7 days)</td>
<td></td>
</tr>
<tr>
<td>G. Zaidan</td>
<td>Jamaica Mission Field Work (10 days)</td>
</tr>
<tr>
<td>D. Miller</td>
<td>General work on population (5 days)</td>
</tr>
<tr>
<td>White Paper on Population (5 days)</td>
<td></td>
</tr>
</tbody>
</table>

**Research Assistant**

Dawn Elvis    White Paper on Population (10 days)

cc: Messrs. Stevenson, Ehatia
Mr. Walter J. Armstrong

February 13, 1969

Thomas W. Berrie

Economics Department - Sector and Projects
Studies Division - Work Program

I attach a first draft of some suggestions for the above work program which you asked to study before our meeting with Mr. Van der Tak on Friday 14 February 1969.

In a discussion which Mr. Russell and I had with Mr. Knox on the above subject just before he left on Mission, Mr. Knox said he was keen that the two departments should collaborate and on the most useful items. He also would like to see some of the projects started completed. (He obviously had in mind Mr. George Beier's work of Pricing in Power Supply; this I believe does not come under Mr. Van der Tak's division but I think we still ought to mention it.) My list is meant to be in order of priority.

In the attached, although I have written the notes basically with a power supply reference, many of the studies apply also (and usually with less known data) to other public utilities.

cc: Mr. A.D. Knox, Mr. B. Russell, Mr. C. Willoughby
Operational Files
Department Files
WORK PROGRAM OF SECTOR AND PROJECTS STUDIES
DIVISION OF ECONOMICS DEPARTMENT
SUGGESTIONS FROM PUBLIC UTILITIES PROJECTS DEPARTMENT

ITEMS

1. Techniques of Load Forecasting Used by Borrowers
2. System Economic Models
3. Data and Appraisal Projects
4. Public Utility Pricing
5. Risk Analysis and Planning for Uncertainty

GENERAL COMMENTS

a. Throughout it is assumed that these projects would be handled with close cooperation with the Public Utilities Projects Department.
b. Items in the work program would need to some extent to be built around the personnel available in both the Economics and the Projects Departments.
c. Projects selected should be a mixture of some with a short pay-off period and some with a long.
d. Advantage should be taken to finish off some work already started e.g. pricing and demand.

1. Techniques of Load Forecasting Done by Borrowers
   a. A large number of techniques are in use throughout the world especially for power. They include:
      - Econometric Forecasts - often in connection with National Plans
      - Fuel Sector Forecasts - often with National Planning Fuel Policy
      - Electricity Sectors - perhaps the most common of all
      - Extrapolation and Trends - simplest to evaluate
Aggregation of Local Views - adding balance to the rest

Commercial Forecasts - usually pessimistic

b. What are the types of forecast in most common usage by our borrowers? Are there any correlations between types of forecasts used, type of country, geography, state of development, etc?

c. What has been the success of these techniques' ex post'? Test retrospectively predictions for 1 to 7 years ahead. Have any techniques been able to give warning of change.

Basic Reasons for Greater Inaccuracies.

Synthetic Testing by Variants.


Adding back known load shed - how to measure?

Allowance for voluntary shedding.

How to allow for loss of business under poor supply.

Effect of voltage and frequency reduction - how to measure?

Should allowances be added in and then load forecast or, should load be forecast from demand met and then allowance be made?

e. Where should the Forecast be Pitched?

Work to Mean Expectation (50/50 Estimate) always?

Work to a Range?

f. Revision of Forecasts

How often should be revised? How far ahead?

Should Plant Program be Adjusted on Revision?
Should other things then be revised e.g. Financial Targets?

2. System Economic Models
   
a. The most numerous models are in power. These should be examined for their suitability for use in the Bank. To be used for project work they must be readily workable, if possible by the project appraiser himself.

b. List the categories of basic types of system at present dealt with by the Bank in a manner directly connected with complexity of models. This requires some knowledge of model building. Important factors are also (i) to bear in mind future requirements of the early 1970's and (ii) the value of the loans made. Types of system depend on:
   
i. Number of nodes

ii. Degree of interconnection

iii. Network structure and geography

iv. Plant mix

v. Fuel Resources

vi. Shape of Load Curve

c. At the same time examine the models which have been developed in the world and the purpose for which they were developed from:

i. Published literature.

ii. International Conference e.g. UNIPDE, PSCC, etc.

iii. Direct contact through people at the Bank who have worked for Power Authorities.

iv. Computing Manufacturers e.g. SHARE and IBM.

v. Universities and Research Institutes.

vi. Consultants.
d. Examine suitability of existing models for Bank's needs present and future.

e. Discussions with computing and statistical services divisions of economics and practicability of modifying the suitable models for use on Bank's computer.

f. Determine the need for any new models to be developed. Evaluate economics and man-hour requirements.

g. Allocate a target program for above with
   i. Priorities
   ii. Man hours requirements from each department
   iii. Defined responsibilities between departments
   iv. Method of collaboration between departments
   v. Pilot schemes as a trial

3. Data and Appraisal Projects

   a. An examination of what data to measure, in what form it should be, how it should be measured and whether vital parameters should be controlled (e.g. demand by price and tariff policies has sometimes been suggested).

   b. What data is important at the appraisal stage? This will vary between situations and between projects.
      i. Examine a cross section of appraisals to study sensitivity of recommendations to data change.
      ii. Take part in a cross section of appraisal missions to examine data at first hand.

   c. List from the data point of view the types of project appraised by the Bank and those likely to be appraised in the next few years or so. These will depend on:
i. Whether project is single or part of a development.

ii. Whether "judgement" decisions play a leading part.

iii. Whether new loan or not.

iv. Whether loan is basically for a complete project or is diversified into portions of different projects.

d. Examine how many projects (as a proportion of total) fall into the types listed in c, by number of loans and amount ($).

e. Bearing in mind output requirements upon which decisions are made now (and those likely to be required in future), list important data for each type of project, then:

   i. What form should it be in?

   ii. How accurate should it be?

   iii. How should it be measured?

f. Pilot schemes for testing the conclusions and evaluating chance of controlling the important parameters in a given situation.

g. Arrangements for coordination of this work between departments.

4. Public Utility Pricing

   a. Examination of the practicability and desirability of closing the demand/price loop:

      i. Which cases would it be worthwhile for, if any?

      ii. In which circumstances would it affect the loan decision?

      iii. How practical is it to close the loop?

   b. Examine the proportion of electricity of total expenditure costs for different classes of consumer and:

      i. Any evidence of correlation of price change and demand?

      ii. Any evidence of gross distortion by "end-use" if there is cross subsidization?
iii. Rank industries in order of power intensity.

iv. Value added basis.

Use data from published sources plus the Bank's own data as collected from missions.

c. Examine the practicability and likely success, together with manpower requirements, of mounting a controlled experiment in one or two territories where the Bank is making loans and where the borrower is known to be sympathetic to such an approach (George Beier's original terms of reference for a study in West Pakistan):

i. What form would such an experiment take i.e. analytical only or inclusion of experimental metering/tariffs?

ii. How long would it need to run?

iii. How can distortion due to experimental conditions be kept to the minimum?

Any such experiment would probably be best handled outside the normal mission terms of reference i.e. to basically help the Bank's appraisal technique rather than to help the borrower.

d. What number of man-hours would be needed? Draw up a provisional program for any such experiment.

5. Risk Analysis and Planning for Uncertainty

a. The Bank must be satisfied that any loan will make its financial return plus doing the job that the loan is being made for. All planning involves uncertainty, the amount varying with conditions in particular countries, the type of the loan, the type of project etc. The process of being satisfied involves taking a calculated risk of the uncertainties involved, whether these can be evaluated more precisely or just on a judgement basis.
b. What tolerances should there be in the mean expectations of such things as:
   i. Financial rate of return?
   ii. Economic rate of return?
   iii. Chance of meeting the demand?

Does past experience, e.g. on load forecasting errors, help?
Or would an examination of construction costs compared with estimates help? What other parameters should be examined? Have some borrowers been better than others in meeting their targets financially and economically?

c. Can some simple rules be produced to help appraisal missions to judge whether unnecessary risks are being taken? For example concerning the allowances in a plant program for:

   Load Estimating Errors?
   Plant Lateness?
   Plant Breakdown?
   Transmission and Distribution Constraints?
   Pricing Effects?

Are realistic allowances being made by our borrowers?

d. Classify the different types of economy so far as risk analysis is concerned:
   i. State of development.
   ii. Accuracy of economic and other data.
   iii. Experience in satisfying borrowing conditions.
   iv. Coordination of sector planning.

TWBerries:ms.
February 13, 1969
Mr. Andrew M. Kamarock

Bela Balassa

Report on Activities - January 1969

Continuing Projects

Structure of Protection in Developing Countries
- Completed first draft of the theoretical chapter.
- Prepared report on the status of the project.
- Commented on Teresa Jeanmeret, The Structure of Protection in Chile.

Other Studies
- Final revision of "The Economic Reform in Hungary".

Other Activities
- Suggested material for book of Readings on Industrial Development.
- Delivered a series of lectures at the University of Tunis.

Notes on Bank Studies and Papers
- Commented on Schlomo Reutlinger's "Techniques for Project Appraisal under Uncertainty".
- Note on "Exchange Rate Adjustment in Argentina".

cc. Mr. Stevenson
Mr. Kalmanoff

Balassa:alj
Mr. Warren C. Baum

January 28, 1969

Walter J. Armstrong

Economics Department -
Sector and Projects Studies Division

Work Program

With respect to the above document dated December 5, 1968 I give
the following general comments:

1. Before starting out on so many new projects it would be comforting
to have finished to the point of application some of which we have asked help
on and which have been outstanding for some little time e.g. the papers on
peak load pricing for power, the elasticity of demand for water services.

2. Basically our problem is not what to measure but how to measure.
This probably will be discovered only by working on actual appraisal
problems. To do this the professional staff required might be better
located, at least initially, in the Projects Departments. The Projects
Departments will be required in any case to give full support to the
Economics Department if the work is to have any chance of success, for
which we will require additional staff. The finding of such a large number
of suitably qualified staff for both the Economics and Projects Departments
plus their absorption by the Bank will be a formidable problem even if
spread over two or three years.

3. The approaches implied for the solutions to some sectors,
especially water supply and health, are grossly over-simplified. In both
sectors a great deal has been attempted and written up by some capable
people. One of the basic problems is the lack of consistent and meaningful
data with which to work.

4. In order to be of assistance to the Economics Department in the
planning of their research program, we intend shortly to produce a list of
selected projects which we believe would be very useful to study, together
with a brief outline as to how we envisage they would be studied.

Detailed comments on the suggested Research Areas are as follows:

Follow-up of Projects

To organize the systematic reporting of data so that actual and
predicted costs and benefits can be compared needs a great deal of thought
on our part. This is especially true so far as the benefits are concerned
where I would suggest some start is made in a modest way e.g. incorporating
the benefits to the utility only.

Computer Simulation for Project Appraisal

Straight mechanization of existing appraisal procedures even for
the simpler projects is often not economic even if a number of alternatives
are considered. It is when full advantage can be taken of the digital
computer that the latter pays for itself so handsomely. Certainly a run on the computer with rough data can help a project appraiser to decide just what the crucial data is. Computerization of appraisal techniques should start from the user end i.e. from the Projects Departments.

Public Utility Pricing Problems

This is one of the Areas where there is a project on the peak load pricing for power which was started some time ago and has not been finalized. The problem here is whether we are ever likely to know the proper values to put to important parameters e.g. elasticity of demand.

General Problems of Project Analysis and Investment Criteria

Some work here also needs to be brought to the point of application e.g. risk analysis. It does not seem appropriate to leave this to "ad hoc" working as all the subjects mentioned are just as important as their predecessors in the paper and need a great deal of careful thinking by both the Economics and the Projects Departments.

Power Planning Models

There are a great many power planning models in the world, which would be useful to Bank staff besides the Harvard Model. These should be tracked down through the published literature and by contact with major power utilities. Again this probably can best be done with the work being carried out in the Projects Departments using actual appraisal cases.

Telecommunications Planning

All successful power planning models are heavily user oriented. By analogy I would suggest that, to be a practical success, the initiation of models to be used for telecommunications planning should be in the Public Utilities Projects Department.

Urban Water Projects

The data mentioned here apply to all public utilities where we usually know what should be measured but do not know at all how to measure it. The only way to proceed with any chance of success would be for the one professional allocated to this work to gain first hand experience by accompanying a wide cross section of appraisal missions.

Economic Aspects of Health Planning

Again the problem is how to measure; a great deal of material has been published but without meaningful results to date.

cc: Mr. Knox
Department & Operational Files
TW Berriesms.
IBRD
Mr. A. Stevenson

February 3, 1969

H. G. van der Tak

Activities of the Sector and Projects Studies Division; January 16-31

Agriculture:

Egbert: Pakistan mission report (9 days); program development (1 day); Spanish (1 day).

Husain: Returned from home leave January 27, 1969; re-orientation (1 day); working paper on use of risk analysis in livestock appraisal (3 days); sick leave (1 day).

Meros: Litani River Basin simulation study (10 days); French (1 day).

Reutlinger: Performance of ongoing irrigation projects (2 days); miscellaneous (7 days); Spanish (1 day); sick leave (1 day).

Seagraves: Agricultural supply research paper (part time, Raleigh, N.C.).

(Consultant)

Kim: Pakistan crop production and tubewell irrigation data for Mr. Egbert (7 days); queuing formula computations for Mr. de Weille (½ day); miscellaneous (1½ days); sick leave (2 days).

King: Irrigation projects performance study (2 days); review of livestock model (3 days), and irrigation projects follow-up study (6 days), all for Mr. Reutlinger.

Education

Carnoy: Kenya case study (part time, Stanford University, California).

(Consultant)

Thies: Kenya case study (full time).

Abudabbabeh: Kenya case study for Mr. Thies (½ day); Pakistan agriculture study for Mr. Christoffersen of Fiscal Policies Division (1½ days).

Transportation

de Weille: Transport planning models study (6 days); project benefits criteria (1 day); miscellaneous (½ days).

Miller: Transport planning models study (full time).
Transportation (cont'd)

Curt: (Consultant) Regulation of road transport study (part time, Utrecht, Netherlands).

Ray: On home leave.

Isaac: On maternity leave.

Mijares: Harvard Transport Planning Model computer print-out (8 days) for Mr. Miller; IBM instruction course (2 days); sick leave (1 day).

General

Masse: Project benefits and costs criteria (10 days); sick leave (1 day).

Weckstein: (Consultant) Delivered preliminary draft of study of problems in use of shadow prices in project analysis on January 31, 1969 (part time, Brandeis University, Mass.).

Shell: Editing Kenya case study for Mr. Thias (7 1/2 days); transport planning models study information gathering for Messrs. de Weille and Miller (1 1/2 days); work for Mr. van der Tak (1 1/2 days); special leave (1 day); sick leave (1 1/2 day).

van der Tak: Miscellaneous and supervision (full time).

cc: Mr. Kasarok
    Mr. Bhatia
January 22, 1969

BUDGET REVIEW NOTES

ECONOMICS DEPARTMENT

REGULAR OPERATIONS

POSITIONS

1. New positions required January - June 1969

We shall need ten new professional slots and 8 new research assistant slots, broken down by division as follows:

   a. Professionals

       Office of the Director            1 - Senior Adviser
       Sector and Projects Studies       7 - Economists
       Economics of Industrialisation   1 - Economist
       Statistical Services             1 - Statistical Analyst for External Debt Section

                       10

   b. Research Assistants

       Sector and Projects Studies       4
       Economics of Industrialisation   1
       Comparative Data Unit            3

                       8

Justification

   a. Professionals

      i) Senior Adviser

          When the recent reorganization took place, this Department lost 2 Senior Advisers. In the past, the Senior Advisers have played an extremely important role in providing flexibility in the

   1/ The additional slots requested here are for the remaining six months of this financial year, in order to meet our urgent needs. A complete presentation of our needs for the next financial year will appear in our forthcoming Budget.

   2/ Temporary.
work of the Department and of the Bank and have covered areas of economic work that the Bank needs to know about, but which do not fit easily into any of the existing Area or functional units.

We, therefore, have an urgent need for one of these positions.

We are, at present, seriously considering a candidate for this post, and Mr. Kamarek has already briefed the Administration Department (Mr. Ripman) and Mr. Friedman. A slot is needed, however, before any offer can be made.

ii) Seven Economists for the Sector and Projects Study Division

This Division has an advisory as well as a research function, i.e., (a) undertaking general and methodological studies of sector and project policy problems and developing better analytical techniques for arriving at resource allocation decisions; and (b) providing advice on specific problems arising out of the work of the Bank in a sector or project in a particular country.

In order to achieve these objectives, the Division has to reach a certain minimum size. It should be able to handle, as well as general problems of resource allocation, specific problems in the major fields in which the Bank is lending. An indication of the size of the effort required is perhaps given by the fact that the projects departments now have 259 authorized professional positions and this is going up steadily. We cannot give a group as large as this good service with a division substantially less than 25 people. Since the present organization and leadership of the Division I do not expect it to have problems of absorptive capacity in the near term at least. At present there are 14 authorized positions, of which 9 are filled and 3 will shortly be filled. Several other offers have been made and there are some 6 other attractive candidates who might be available. As you know, good candidates are scarce and in order to ensure that we hire them, we should have slots available. Though there will be some attrition and some offers may not be accepted, the Division's professional manpower could be quickly raised over the present number of positions authorized. A detailed research program for this Division, which is under discussion with the interested parties in the Bank, will shortly be presented to the newly constituted Research Committee and to you in our Annual Budget.

iii) An Economist for the Economics of Industrialization Division

The demand for industrial economists to participate in country economic missions has risen significantly. In the first six months of calendar year 1968, the Division spent about 80 percent of the
total time available in providing this service. As of January 1969, of the 7 professional staff members in this Division, 6 are committed to mission work. Consequently, research, a major function of this Division, suffers considerably while at the same time the Division is supposed to be available to provide advice to management on Bank policy with regard to financing industry. Although there is one vacant slot, which is expected to be filled shortly, there is a potential candidate who might well join this Division if another slot were available.

iv) A Statistical Analyst for the Statistical Services Division

Although it is normally hard to locate Statistical Analysts experienced in the field of external debt problems, an area which generally requires a training period of one year, there is a strong possibility that we may be able to acquire an experienced man, already working in this field at the OECD, who is aware of our requirements. However, since at present there is no vacancy for a Statistical Analyst in the Division, a slot is required. At the same time, as I have discussed with Mr. Adler, there is some question about the most suitable location in the Bank of the Adviser in this Division.

b. Research assistants

Of the 8 research assistants requested, 3, for the Comparative Data Unit, could now be employed on a temporary basis, for approximately six months, since this unit has been asked to undertake a heavy assignment on the Five Year Plan, which has to be completed in a short period and cannot be done without disrupting other work e.g. putting the data for the world tables on tape. If this latter job is not finished now we shall face the problem of processing next year's edition by hand again. This would be a great waste of effort.

Four are requested as support to meet the increased workload of the Divisions.

CONSULTANTS

The following consultants are at present engaged in the Department in undertaking projects, as described below:

<table>
<thead>
<tr>
<th>Consultant's Name</th>
<th>Home Country</th>
<th>Employment Dates or Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balassa</td>
<td>U.S.</td>
<td>July 1, 1968, 10 - 12 days each month</td>
</tr>
<tr>
<td>(Office of the Director)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Structure of Protection Project; Special Studies for the Department, and reviewing and commenting on papers prepared elsewhere in the Bank.

Undertakes special assignment for the Bank as a whole (Office of the Director)
<table>
<thead>
<tr>
<th>Project</th>
<th>Consultant's Name</th>
<th>Home Country</th>
<th>Employment Dates or Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Kenya Case Study</td>
<td>Carney (Sector and Projects Studies)</td>
<td>U.S.</td>
<td>January 1, 1969 20 days</td>
</tr>
<tr>
<td>To prepare a study on supply and production response research related to agricultural project and sector planning and appraisal.</td>
<td>Seagraves (Sector and Projects Studies)</td>
<td>U.S.</td>
<td>January 1, 1969 20 days</td>
</tr>
<tr>
<td>To prepare a paper on the general issues involved in using shadow prices in practice.</td>
<td>Weckstein (Sector and Projects Studies)</td>
<td>U.S.</td>
<td>October 21, 1968 through April 30, 1969</td>
</tr>
<tr>
<td>To prepare a study on Road Transport Regulation in Developing Countries.</td>
<td>Cort (Sector and Projects Studies)</td>
<td>Dutch</td>
<td>September 15, 1968 through September 30, 1969</td>
</tr>
<tr>
<td>Harvard Transport Model</td>
<td>To be engaged</td>
<td>U.S.</td>
<td>The terms of the contract are yet to be finalized.</td>
</tr>
<tr>
<td>Export Orientation Problems of India; and The Social Cost of Delays in Project Implementation.</td>
<td>Grossman and Associate (Economics of Industrialization)</td>
<td>U.S.</td>
<td></td>
</tr>
<tr>
<td>Work on Primary Commodities</td>
<td>Miss Lovassy (Trade Policies and Export Projections)</td>
<td>U.S.</td>
<td>February 1, 1968 (9 man months)</td>
</tr>
<tr>
<td>To prepare two annual reports; (1) reviewing the world aluminum economy; (2) reviewing the world bauxite and alumina industry.</td>
<td>Moment (Trade Policies and Export Projections)</td>
<td>U.S.</td>
<td>July 1, 1968 to the end of the current fiscal year.</td>
</tr>
<tr>
<td>To assist in editing Country Economic Reports for publication.</td>
<td>Miss Wescott (Editorial)</td>
<td>U.S.</td>
<td>July 1, 1968 50 days.</td>
</tr>
</tbody>
</table>
January 16, 1969

Mr. Alexander Stevenson

Stanley Please


Major Studies

Mr. Christoffersen - prepared division draft of "Value Linking of Financial Contracts" (2 days)

Mr. Eklund - has been working on comments received on the revised draft of his study on "The Earmarking of Public Revenues" (3 days)

Mr. Basoh - has been preparing draft of his study of "Administrative Expenditures in Selected LDC's" (9 days)

Country Mission Work

Mr. Christoffersen - has been preparing his contribution to the report of the Agricultural Credit Appraisal Mission to Pakistan (8 days)

Mr. Beier - has been preparing his contribution to the report of the Economic Mission to Korea (10 days)

Mr. Schmitt - has been preparing his report as head of the Economic Mission to Greece (10 days)

Mr. Sciolli - has been in the U.A.R. as a member of the Economic Mission since January 1.

Mr. Schaebeck (Young Professional) - has been preparing his contribution to the report of the Agricultural Credit Reconnaissance Mission to India (8 days)

Other Activities

Mr. Basoh - Reviewed IMF report on Tax Reform in Ghana (1 day)

Mr. Eklund - Lecture on transportation project at EBI (1 day). Preparation of memo on Swedish foreign aid for Mr. McNamara (1/2 day). Miscellaneous work (1/2 day)

Mr. Please - Supervision of Division activities

Research Assistants

Miss Meldau - worked on full equilibrium model on Greece (10 days)
Miss Dacumos - (on vacation/annual leave during reporting period)

Leaves

Mr. Eklund - Annual leave through January 7 (4 days)

Mr. Schebek - Annual leave through January 3 (2 days)

cc: Mr. Emarck

SPlase/ads
Mr. E. K. Hawkins

for

C. H. Thompson

January 15, 1969


As you may have been aware, Mr. Armstrong, an economist in our department, has consulted on a number of occasions with Mr. Willem van der Valk concerning the application of a two-gap model to a projection problem of relevance to his work on an economic report on Israel.

Specifically, he has been interested in applying a simple formal model to the analysis of the implications of selected parameter changes for the projected foreign exchange requirements of Israel. Mr. van der Valk has been very helpful in his efforts to adapt for this use a relevant model which originated in UNCTAD.

Recent exigent needs have interrupted the collaboration on this exercise, but I believe it will be worthwhile continuing, both in terms of the immediate analysis of Israel's economy as well as in terms of its potential applicability to the next round of five-year projections for other countries.

Hence, I would appreciate your facilitating Mr. van der Valk's availability for another day or so to continue working with Mr. Armstrong on this project.

Cleared with: Mr. R. H. Spriguel

RAArmstrong:hh
Mr. Alexander Stevenson  

A. J. Macne  

January 9, 1969  

Highlights of activities in Trade Policies and Export Projections Division for the two weeks ended December 27, 1968  

Miss Loysey:  

Off duty through December 25.  

Sugar: (a) Worked on background paper for Board Seminar. (b) Discussed sugar situation in Ecuador with Western Hemisphere Department.  

Mrs. Ryshman:  

Copper: (a) Continued work on final version of paper on copper for Commodity Stabilization Study. (b) Wrote back-to-office report on American Metal Market Copper Forum.  

Manganese: Revised draft of memo on Indian manganese ore prospects. General: Collaborated with rest of staff in preparing forecast of LDC export earnings in 1969.  

Mr. Else:  


Grains: Discussed world grain market with South Asia Department in connection with project in Pakistan. General: Reviewed and commented on report on agriculture in Ceylon.  

Mr. Geer:  

Rubber: (a) Discussed with Mr. Adams, Secretary General of International Rubber Study Group, London, his visit to the Bank on "World Rubber Study" and prepared back-to-office report on above discussion. (b) Prepared background paper for Mr. Friedman for meeting with Mr. Adams. (c) Reviewed and commented on draft Economic Report on Ceylon. (d) Reviewed and commented on Economic Report on Malaysia.  

Tin: (a) Attended meeting of Tin Council, London, and prepared back-to-office report. (b) Discussed outlook for tin in Malaysia with Mr. Niebuhr (Malaysian Mission). Commodity Stabilization Study: (a) Attended Board Seminar and staff meetings. (b) Briefed Mr. Baranson on structure of world tin and rubber industries. (c) Started drafting paper on rubber for Board Seminar presentation. General: Prepared estimate for 1969 trade outlook.  

Mr. Huang:  

Bauxite and Aluminum: (a) Discussed world aluminum situation with Mr. Kennedy of Kaiser Aluminum Co. (b) Finalized Economics Department Working Paper No. 32, "Prospects of World Import Demand for Bauxite", for circulation. (c) Prepared brief note on earnings from exports of petroleum and bauxite of LDC's.  

Fertilizer: (a) Discussed world price trends of potash fertilizers with Mr. Van Nimmen, of the Eastern Africa Department. (b) Discussed the situation in sulphur with Mr. Haiss of the Europe, Middle East and North Africa Department.
Mr. Alexander Stevan - 2 - January 9, 1969

Mr. Singh:
- **Cocoa**: Worked on revised price forecasts.
- **Coffee**: Discussed the International Coffee Agreement and prospects with Mr. Koffsky of Robert Nathan Associates.
- **Rice**: (a) Reviewed the Malaysian Report. (b) Discussed export prospects with the Mission to UAR. (c) Discussed the rice situation with Mr. von Oppenfeld in connection with a rice project in Niger.
- **Citrus**: Discussed the citrus situation with the Mission to UAR.
- **Onions**: Discussed the problems of marketing onions and their export prospects with the Mission to UAR.
- **Commodity Stabilization Study**: Worked on compilation of Bank’s price forecasts.
- **Trade Outlook**: Coordinated work on trade outlook for 1969 and prepared the projections.

Mr. Takeshi:
- **Lead and Zinc**: Completed a preliminary draft of demand and production sections of report on lead and zinc outlook.
- **Timber**: (a) Discussed timber resources in New Guinea and Papua with Mr. Hirano (IFC). (b) Reviewed and commented on the draft Economic Report on Malaysia.
- **General**: Discussed with Mr. Ojinuaka Japanese trade and industry data.

Mr. Taylor:
- **General**: Read reports and other staff papers of Economics Department concerned with commodity agreements, trade patterns and basic developments influencing demand and price outlook for broad commodity groups.
- **Supplementary Financial Measures**: Began review of 1964 study in preparation for updating historical analysis of export shortfalls.

Mr. Varon:
- **Cotton**: Briefed Mr. Karacsmangolu on the UAR situation and discussed the desirability and feasibility of my doing a paper reviewing the prospects for exports of extra-long staple cotton.
- **Jute**: (a) Continued revising the preliminary draft of report on "The World Jute Economy: Postwar Trends and Prospects". (b) Reviewed the papers prepared by the AID-study team in India and wrote comments to Prof. Barat, director of the study.
- **Commodity Stabilization Study**: (a) Began work on paper on the need for financing warehouse facilities. (b) Began work on miscellaneous assignments related to the forthcoming seminar on coffee. (c) Participated in various staff meetings.
- **Other**: Participated in formulating preliminary views on prospects for world trade in 1969 (for Mr. Friedman).

Mr. Hacoon:
- **Rubber**: Discussed outlook for rubber with Mr. Hablutsel in connection with Malaysia Report and participated in meeting on the report.
- **Commodity Stabilization Study**: (a) Attended meetings with Mr. Avramovic. (b) Discussed problems of establishing processing plants based on subsidised raw materials with Mr. Baranson.
- **General**: (a) Discussed work of the Division with Mr. Koffsky of Robert Nathan Associates. (b) General supervision of work in progress in the Division.
Research Assistants:

Miss Ryan: (a) Completed research on coffee producer prices and coffee taxes in various countries and prepared final table for Mr. Avramovic. (b) Revised GNP figures for OECD for Mr. Macone. (c) Updated palm oil trade and production figures for Mr. Els. (d) Consulted with Mr. Takeuchi on the methodology behind the timber and metal trade figures in Working Paper No. 3 - Exports of Major Commodities from the Developing Countries, 1953-65.

Mr. Marsili: (a) Collected various statistics on cotton for Mr. Varon. (b) Prepared tables on aluminum and fertilizers for Mr. Huang. (c) On annual leave December 20-27.

Mr. Shahi: (a) Prepared material for Board Seminar on rubber, for world review of rubber and for briefing paper on rubber for Mr. Geer. (b) Assisted Mr. Takeuchi in connection with his review of trends and outlook for lead and zinc.

cc: Mr. Kamarck
Mr. Andrew H. Kamorek  

N.G. Carter

January 6, 1969

Work Program of the Quantitative Techniques and Analysis Division for the Two-Week Period Ending December 31, 1968

<table>
<thead>
<tr>
<th>Major Studies</th>
<th>Other Activities</th>
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<tbody>
<tr>
<td>N.G. Carter</td>
<td>Ghana Mission report</td>
</tr>
<tr>
<td></td>
<td>(5 days)</td>
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<tr>
<td></td>
<td>Jamaica models (1 day)</td>
</tr>
<tr>
<td>A. Shourie</td>
<td>General supervision (1 day)</td>
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<tr>
<td></td>
<td>Sick leave (3 days)</td>
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<tr>
<td></td>
<td>Home leave (10 days)</td>
</tr>
</tbody>
</table>

**Research Assistant**

W.L. van der Valk  

Assistance to Mr. Carter: Exploration of methodology of small projection models (10 days)

NOCarter/v

cc: Messrs. Stevenson, Hawkins, Bhatsa and Shourie
Mr. Andrew M. Kamarck

Bela Balassa

Report on Activities - December 1968

Continuing Projects

Structure of Protection in Developing Countries
- Started work on comparative chapter.

Other Studies
- Revised paper on "Development Strategies in Semi-Industrial Countries", circulated as Economics Department Working Paper No. 34.
- Final version of "Country Size and Trade Patterns: A Note", for publication in a forthcoming issue of the American Economic Review.
- Discussions on classification of developing countries according to the degree of industrialisation.

Other Activities
- Recruiting trips with Louis Coreux to universities of Berkeley and Stanford (December 2 and 3) and M.I.T. and Harvard (December 16 and 17).
- Participated in the A.I.D. Conference on "Trade-led Growth Strategies", (December 10).
- Made proposal on work program for the Industrialization Division.
- Prepared research proposal on "Development Strategies in Semi-Industrial Countries".
- Participated in the meetings of the American Economic Association in Chicago on December 30 with a contribution on the topic "Centralization and Decentralization in Economic Systems".
- Reviewed Carl S. Shoup, "Fiscal Harmonisation in Common Markets" at the request of the Political Science Quarterly.

cc, Mr. Stevenson
Mr. Kalmannoff

BBalassa:alj
Mr. Andrew M. Kamarek

E.K. Hawkins

Work Program of the Population Studies Division for the Two-Week Period Ending December 31, 1968

Major Studies

E.K. Hawkins

G. Zaidan

D. Miller

Other Activities

Visits to New York for discussions with Population Council, United Nations and the Ford Foundation (2 days)

Review of draft Economic Report on British Solomon Islands (2 days)

General supervision and administration on Population Studies Division (5 days)

General supervision on Quantitative Techniques and Analysis Division in collaboration with Mr. Carter (1 day)

General work on population (2 days)

Work on Jamaica Family Planning Mission (3 days)

Preparing information for Pakistan economic mission (1 day)

Annual leave (4 days)

Reviewing data on models relating population growth to development (4 days)

Reading and organising operational files on population (2 days)

Preparing country files of population data (3 days)

Preparing information for Pakistan economic mission.

Research Assistant

Dean Elvis - Assistance to Mr. Miller:
Assessment of the Treatment of Population in Bank Economic Reports (4 days)

E.K. Hawkins/v - Assistance to Mr. Zaidan:
Classification of material on Population (4 days)

cc: Messrs. Stevenson, Edward, Daniel and Miller
Mr. A. Stevenson

Herman G. van der Tak

Activities of the Sector and Projects Studies Division - December 16-31

Agriculture

Egbert: Pakistan mission report (7 days); general program development (3 days).

Husain: On home leave.

Meros: Simulation study of the Litani River Basin (6 days); French (½ day); sick leave (3½ days).

Otten: On home leave; transferred to Agricultural Projects Division effective December 8, 1968.

Reutlinger: EDI (1 day); study on performance of ongoing irrigation projects (3 days); miscellaneous (6 days).

Seagraves: Agricultural supply research paper (part-time, Raleigh, N.C.).

Kim: Calculations of alternative rate of return for Mr. Ray (3 days); tabulation of Pakistan crop production data for Mr. Egbert (5 days); rewriting of Salandi irrigation project appraisal for Mr. Otten (2 days).

King: Irrigation project analysis for Mr. Otten (3 days); editing of irrigation projects study summary (5 days); annual leave (2 days).

Education

Carnoy: Kenya case study (part-time).

Daniere: Revising draft on research priorities in education (part-time, Boston, Mass.).

Thias: Kenya case study (6½ days); special leave (1½ days).

Abudabbeh: Kenya case study for Mr. Thias (8 days); sick leave (1 day); special leave (1 day).
Transportation

- de Weille:
  Returned from annual leave December 16; Harvard transport planning models study (5 days); miscellaneous (4 days); annual leave (1 day).

- Miller:
  Harvard transport planning models study (5 days); annual leave (5 days).

- Oort:
  Regulation of road transport study (part-time, Utrecht, Netherlands).

- Ray:
  Ceylon water supply report (9 days); sick leave (1 day).

- Isaac:
  On maternity leave.

- Mijares:
  Familiarization with Bank transport literature (4 days); reading Fortran programming (3 days); data work and dictionary of terms for Harvard transport planning models study for Mr. Miller (3 days).

General

- Masse:
  Project benefit criteria (4 days); annual leave (6 days).

- Weckstein:
  Study of problems in use of shadow prices in project analysis (part-time, Brandeis University, Mass.).

- Snell:
  Editing of working paper on income elasticities for food in developing countries for Mr. Oury (3 days); letter for Mr. van der Tak (1 day); familiarization with Bank papers and reports (6 days).

- van der Tak:
  Miscellaneous and general supervision.

cc. Mr. A. M. Kamarck