

ATTACHMENT 1

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THE  
ECONOMIC  
GROWTH  
CENTER  
AT  
YALE  
UNIVERSITY





The Economic Growth Center at Yale University 52 Hillhouse Avenue, New Haven, Connecticut

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UNIVERSITY

52 HILLHOUSE AVENUE  
NEW HAVEN, CONNECTICUT

MAY, 1962

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ECONOMIC GROWTH CENTER  
AT YALE UNIVERSITY



## INTRODUCTION

The Center was established at Yale University in 1961. It is located at 52 Hillhouse Avenue, New Haven, Connecticut, and its mail address is Box 1987, Yale Station, New Haven, Connecticut. Its principal officers are Professor Lloyd G. Reynolds, Director; Professor Gustav Ranis, Associate Director; Dr. Mariam Chamberlain, Research Associate and Executive Secretary. The Ford Foundation provided funds to initiate the Center and to finance its core activities for a ten-year period. Yale University provides office facilities and administrative services, plus the general support inherent in a university setting. Additional funds for operating programs of the Center are received from Foundations, Government agencies, corporations, and individuals.

The Center's interests and activities are worldwide. It endeavors to provide a focal point for research in its area of interest and to serve scholars and policy makers throughout the United States and abroad. Its policies are guided by an Advisory Council representing leading universities and research centers in the United States. It maintains close contact with similar research organizations in other countries. It serves as headquarters for the International Association for Research in Income and Wealth.

In the area of economic growth, the Center's program has several characteristics: emphasis on *economic* factors in economic growth; concentration on *measurable* aspects of economic growth and structure; emphasis on *generalization* for many economies rather than on isolated case studies; and development of a research program on a *comprehensive and continuing* basis. No one of these features is unique. Taken together, they give a distinctive cast to the Center's outlook and activity.

The Center also supports comparative, quantitative analysis of important aspects of economic structure. It fosters conceptual work on techniques of economic measurement and improvement of national statistical systems. It provides training facilities for government economists and statisticians from other countries with a view to strengthening economic measurement and policy making over the long run.

## THE RESEARCH PROGRAM

The Center's research interests are defined in terms of both *method of approach* and *subject matter*. In terms of method, the Center sponsors studies which (a) are designed to develop and test significant general hypotheses, and (b) rely heavily on quantitative information from national economic accounts and other sources.

In terms of subject matter, the Center's research interests include:

- (1) *Improved methods of national economic measurement.*

*Examples:* Valuation of nonmarket production; the deflation problem in intertemporal comparisons; the translation problem in inter-country comparisons; improved concepts and measures of investment; recasting government budget accounts to facilitate economic analysis and policy formulation; development of integrated systems of national economic accounts.

- (2) *Theoretical analysis of national economies.*

*Examples:* Models of economic growth; the role of price mechanisms under central economic planning; analytical formulation of the economic characteristics of "underdeveloped" countries.

- (3) *Quantitative analysis of a national economy as an integral whole.*

*Examples:* Analysis of the pattern of long-term growth, and structural changes accompanying growth, in a particular country; study of the development of several closely related trading nations; study of the interplay of market mechanisms and administrative direction in economies of the Soviet type.

The Center does not undertake work on the American economy because of the large amount of work already underway at the National Bureau of Economic Research, the Brookings Institution, and other centers

throughout the country. With this exception, there is no geographical restriction on the Center's program. It is not simply a "development center." Relevant work on Western industrial countries and on countries of the Soviet bloc is equally eligible for support.

(4) *Comparative, quantitative studies using data from a number of countries.*

*Examples:* Study of changes in the composition of output in growing economies; efforts to account for observed variation in national growth rates; study of the levels, forms, and sources of capital formation; inter-country comparisons of personal income distribution; analysis of the size and composition of the public sector.

(5) *Synthesizing and integrative studies* based on the above types of work, efforts to explore how far "the pieces add up" in terms of the cumulative growth of knowledge. The fragmentation of economic research in recent decades, the emphasis on refined treatment of detailed problems, has led to an undersupply of integrative work. The Center hopes to make a distinctive contribution by maintaining a broad overview of the areas of knowledge included in its program.

#### *Research Staff*

The Center's professional staff consists mainly of members of the Yale Department of Economics, but there is provision also for visiting research scholars. Economists at other institutions who are working on problems within the Center's area of interest, and who would like to be considered for a visiting appointment, are invited to communicate with the Director. Appointments are normally for one year and related to a piece of work which can be substantially completed during the year. Particular consideration is given to promising younger scholars who have not yet reached



the stage at which they can command independent research support. Work supported by the Center is normally carried on in New Haven, but this is not an invariable rule.

Yale faculty members who are working on studies of interest to the Center are eligible for appointment as members of the research staff for the duration of their study. About twenty faculty members are currently in this status. The research problems on which they are engaged are described on pp. 23-25.

### *Country Analysis Program*

While the Center relies heavily on the initiative and interest of individual scholars, this does not preclude an organized attack on particular problems. The largest organized program presently underway is field study of recent economic growth in selected countries of the Mediterranean region, Africa, Asia, and Latin America. It is not feasible to work on these economies from published sources alone. Statistical information is fragmentary, and its coverage and reliability cannot be determined from a distance. Field study is essential to fill gaps and check reliability of information, to get the "feel" of a very different kind of economy, and to draw on the knowledge of scholars and public officials in the country.

Countries are being selected for study on the basis of size and importance, availability of statistical information, and availability of a research center in the country with which Center staff members can cooperate. Countries on which work is presently underway include: Greece, Egypt, Ghana, Nigeria, Pakistan, Ceylon, Argentina, Brazil, Mexico, Chile, and Colombia. It is expected that the program will be extended eventually to some twenty-five countries.

The first effort in each country is to assemble a basic

minimum of quantitative information. For the period since 1945, this will consist of an integrated set of national economic accounts covering major sectors of the economy. For earlier periods, it will be necessary to draw more heavily on time series and census data. The minimum data framework is identical for all countries, so that each of the country monographs will have a statistical appendix cast in similar form. This will gradually lay a firmer basis for comparative, cross-section studies designed to test hypotheses about economic growth.

On the basis of this material each analyst will explore the structural characteristics of the economy in question, the rate and pattern of economic growth over the recent past, and the factors underlying the observed performance of the economy. The studies should also shed light on problems of development policy and long-term economic planning in these countries.

Each man selected for field work spends six to nine months in New Haven, working on his country from sources available there, perfecting necessary analytical and language skills, and participating in a workshop seminar. He then goes abroad for one to two years, depending on circumstances. During this period he is attached to a university, research institute, or government agency in the country of his study. On his return to New Haven, he combines teaching with working up his material into book form. The "production cycle" for each study thus totals three to four years.

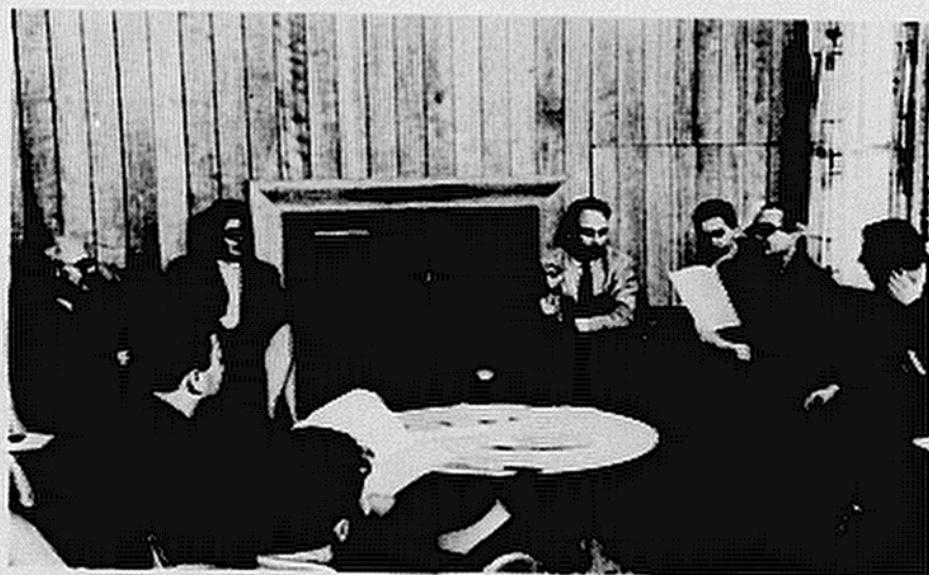
One man working on an *economy* for only a few years cannot do everything; but an able man can do a good deal. The advantage of the program is that it offers rapid coverage of a substantial number of countries, thus laying the groundwork for comparison and generalization.

***Research  
Publications***

The research output of the Center is published in two forms:

- (1) Book-length studies are published as numbered volumes in the series, **STUDIES IN ECONOMIC GROWTH**.
- (2) Reprints of journal articles and other research papers by staff members are circulated as **CENTER PAPERS**. Copies are distributed without charge to a list of institutions and individuals known to be interested in this area. Additional copies are available on request within the limits of available supply.





The workshop seminar of the Country Analysis Program holds frequent informal meetings.

*From left: Professor Lloyd G. Reynolds, Director; Mrs. Nancy Ruggles, Professors Peter Schran, Donald Mead, Raymond Goldsmith and Gerald Helleiner. With backs to camera: Professor Werner Baer and Visiting Professor Dudley Seers.*

Professor Peter Schran examines a recent issue of *Ta Kung Pao* ("Impartial Daily").

*Dr. Warren M. Tsunetsuki, Curator of Far Eastern Collections in the Yale University Library, has arranged an exchange of publications with the National Library of Peking.*





The Center Library collects statistical abstracts, budgets, national accounts, and central bank reports from all major countries. Mr. Amos Odelola, Administrative Officer in the Government of Western Nigeria, and a student in the I.F.E.A. Program, examines a document.

The Yale Computer Laboratory, in an adjoining building, is available for use by the Center Staff. From left: Dr. Mariam Chamberlain, Executive Secretary; Mrs. Wilma Heston, research assistant; Mr. James Friedman, graduate student.

## THE TRAINING PROGRAM

The Center administers the program in International and Foreign Economic Administration, established at Yale in 1951, but now revised to incorporate the Center's interests in economic measurement. Inquiries concerning this program should be directed to the Executive Secretary, Dr. Mariam Chamberlain.

The IFEA program provides one year of advanced training for able young economists and economic statisticians employed by national governments outside the United States. An announcement of the program is sent each year to a large number of central banks, finance ministries, planning boards, development agencies, and central statistical organizations, with an invitation to nominate candidates from their staffs.

Candidates must have a B.A. degree or its equivalent and have had training equivalent at least to a major in economics. They should preferably have had several years of work experience in government. Candidates must be nominated by the employing agency or institution and are usually financed wholly or partly by their employer during their study leave. The Center has limited fellowship funds for cases in which full financing by the home government is impossible. A maximum of twenty-five students can be accommodated each year.

The program emphasizes integration of theory and policy, particularly in the area of money and finance and in economic development. Special attention is given to modern developments in national economic accounting and statistical method and their bearing on economic analysis and policy formation. Courses are normally chosen from the following group:

Economic analysis and its application (2 terms)

Statistical methods

Survey of national economic accounting

Advanced problems in national economic accounting

Money and banking (2 terms)

Monetary accounting and policy

Foreign central banking

Fiscal policy (2 terms)

International economics (2 terms)

Postwar international monetary policies (2 terms)

Economic development: theory and policy (2 terms)

Quantitative methods in development programming

Each student also does individual tutorial work with a member of the faculty.

Students who complete eight term courses, including two terms of economic analysis, with satisfactory credit are eligible for the degree of Master of Arts in Economics.

There are already about 150 graduates of this program, and it has become well known throughout the world. The number of candidates nominated each year is several times the number which can be admitted.



## SERVICES AND FACILITIES

### *Library Facilities*

There is a large annual output of statistical and economic publications by the governments of the world. Regular (serial) publications are estimated to total more than six thousand. No library has anything like a complete collection of this material. The most substantial collections in the United States are at the Economic Library of the United Nations, the Library of Congress, the IBRD-IMF Library, and the Library of the Department of State.

The library staff at the Center is working to achieve a complete intake of significant statistical and economic publications from about 80 of the larger countries of the world. One feature of this work is a system of correspondents in each country, who are asked to advise on availability of material and occasionally to aid in ordering and shipment. The object is to make the Center a superior research location for work on individual countries as well as for comparative, cross-section studies.

The Center's acquisition lists are available on request and may be useful to similar libraries at other places. Plans are also underway to microfilm a large proportion of the material received, in which event duplicate film could be made available at cost to other libraries.

### *Visiting Scholars*

In addition to visiting research scholars on the Center staff, the Center welcomes scholars on leave from other institutions who have their own financing but who wish a convenient research location for work on techniques of economic measurement, quantitative transnational comparisons, or problems of economic growth and development. The number of visitors who can be accommodated each year is unfortunately limited by space considerations. Anyone wishing to spend an ex-



tended period at the Center should communicate with the Director as far in advance as possible.

The Center's library and facilities are open also to graduate students at other universities who are working on dissertations within its area of interest. The number who can be accommodated at one time is again limited, and advance arrangements should be made for proposed visits.

*International  
Association  
for Research in  
Income and Wealth*

This Association was established in 1949 to stimulate quantitative work on national income and wealth throughout the world. Members of the Association are selected by invitation on the basis of interest demonstrated by research performance. The Association is governed by an international Executive Council.

The activities of the Association include: (1) a biennial conference, held usually in Western Europe, at which prepared papers are read and discussed. These papers are subsequently printed as volumes in the series INCOME AND WEALTH, published by Bowes and Bowes, London, England. (2) In recent years regional conferences have been held in Rio de Janeiro, Hong Kong, Addis Ababa, and Istanbul, with a view to securing broader participation by economists outside the Atlantic orbit and to stimulating quantitative study in the less developed countries. (3) The Association prepares a quarterly bibliography of recent publications in its area of interest, using for this purpose a network of correspondents in individual countries.

Because the interests and activities of the Association parallel so closely those of the Center, and because the Association has thus far had no continuing administrative center or base of financial support, it seemed efficient to merge the two endeavors. The Center there-

fore invited the Association to establish permanent headquarters in New Haven and offered to provide the necessary office facilities and administrative services. This proposal was approved by the Executive Council of the Association in 1961, and Association headquarters were established in New Haven early in 1962. Dr. Nancy Ruggles serves as Secretary of the Association.

# ORGANIZATION OF THE CENTER

## *Executive Committee*

The operations of the Center are guided by an Executive Committee composed as follows: Frank Altschul, E. Wight Bakke, William J. Fellner, Raymond W. Goldsmith, Tjalling C. Koopmans, Simon Kuznets, Gustav Ranis, Richard Ruggles, Robert Triffin, Lloyd G. Reynolds (Chairman), and Mariam Chamberlain (Secretary).

## *The Advisory Council: U.S. Members*

- |                                       |                     |
|---------------------------------------|---------------------|
| Brookings Institution                 | Walter S. Salant    |
| California (Berkeley)                 | Robert A. Gordon    |
| Chicago                               | Theodore W. Schultz |
| Columbia                              | Albert O. Hirschman |
| Harvard                               | Edward S. Mason     |
| IBRD Development Institute            | John W. Adler       |
| Massachusetts Institute of Technology | Max F. Millikan     |
| National Bureau of Economic Research  | Hal B. Lary         |
| Stanford                              | Emile Despres       |
| United Nations                        | Henry Bloch         |
| Vanderbilt                            | William H. Nicholls |
| Yale                                  | Lloyd G. Reynolds   |

## *The Advisory Council: Corresponding Members*

Numerous research institutes in other countries are engaged in studies of economic growth and development. We welcome their interest and cooperation in our endeavors equally with that of American institutions. At the same time it is scarcely feasible to bring people from all parts of the world together at one spot for Council meetings. As a partial answer to this difficulty, the Center has invited the directors of selected institutions abroad to serve as "Corresponding Members" of the Advisory Council. They will be kept continuously informed of



the Center's work and will receive copies of its publications. Their comments and suggestions on any aspect of the program will be very welcome. They have a standing invitation to visit the Center whenever they may be in the United States and to attend meetings of the Advisory Council whenever possible.

The present Corresponding Members of the Advisory Council are:

- |                    |   |
|--------------------|---|
| J. H. Abdel-Rahman | Institute of National Planning,<br>Cairo  |
| Guillermo Edelberg | Instituto Torcuato di Tella,<br>Buenos Aires  |
| D. R. Gadgil       | Gokhale Institute of Politics and<br>Economics, Poona   |
| Joseph Grunwald    | Instituto de Economía, Univer-<br>sidad de Chile, Santiago  |
| Alexander Kafka    | Fundação Getúlio Vargas, Insti-<br>tuto Brasileiro de Economia,<br>Rio de Janeiro                     |
| W. Arthur Lewis    | Institute of Social and Economic<br>Research, University College of<br>the West Indies, Mona, Jamaica |
| Gunnar Myrdal      | Institute of International Eco-<br>nomics, Stockholm  |
| Kazushi Okhawa     | Hitotsubashi Research Institute,<br>Hitotsubashi University, Tokyo                                    |
| François Perroux   | L'Institut de Science Écono-<br>mique Appliquée, Paris  |
| Raul Prebisch      | Instituto Latinoamericano de<br>Planificación, Santiago   |
| V. K. V. R. Rao    | Institute of Economic Growth,<br>New Delhi  |
| C. T. Saunders     | The National Institute of Eco-<br>nomic and Social Research, Lon-<br>don                              |



Erich Schneider	Institut für Weltwirtschaft an der Universität Kiel, Kiel
Jan Tinbergen	Netherlands Economic Institute, The Hague
Seiichi Tobata	Institute of Asian Economic Af- fairs, Tokyo
Radivoj Uvalić	Institute of Social Sciences, Belgrade

This list may be extended from time to time as circumstances warrant.

*The Research  
Advisory Committee*

The Advisory Council cannot meet frequently enough or long enough to give detailed attention to the Center's research program. Hence a smaller Research Advisory Committee has been appointed for this purpose. This group includes Moses Abramovitz, Hollis Chenery, Charles Kindleberger, Jacob Mosak, and Simon Kuznets (Chairman). It is hoped that the Committee will both review research plans emanating from the Center staff and originate new research proposals.

## CENTER STAFF

### *Yale Faculty Members*

Professors Raymond Goldsmith, Lloyd G. Reynolds, Richard Ruggles, and Robert Triffin; Associate Professors Bela Balassa, John C. H. Fei,\* Raymond P. Powell, and Gustav Ranis; Assistant Professors Werner Baer, Albert Berry,\* Carlos Diaz, Edgar Feige, Reginald H. Green, Gerald K. Helleiner, Shane Hunt,\* Stephen Hymer,\* Lawrence B. Krause, Donald C. Mead, John M. Montias, Hugh Patrick, Edmund S. Phelps,\*\* Clark W. Reynolds,\* Peter Schran, Donald Snodgrass, Ronald Soligo,\* Jan V. Tumlin, Brian Van Arkadie;\* Research Associates Mariam K. Chamberlain, Mary T. Reynolds, and Nancy D. Ruggles.

### *Visiting Research Scholars, 1961-62*

Joseph Grunwald	Institute of Economic Research, University of Chile
Alexander Lamfalussy	Bank of Brussels, Belgium
Dudley Seers	United Nations Economic Commission for Latin America
Janusz Zielinski	Central School of Planning and Statistics, Warsaw

### *Other Staff Members*

Judith Ann Alker, Elizabeth Atkinson, Annemarie Bestor, Joyce E. Blakeslee, Karen H. Hilstad, Joan W. Hollister, Margaret M. Johnston, Diane W. Merritt, Jean W. Mulligan, Charlotte D. Phelps, Susan Smith, Helen Stone, Catherine M. van Aubel, Margaret B. Williams.

\*As of July 1, 1962

\*\*Joint Appointment with the Cowles Foundation for Research in Economics at Yale University.

## RESEARCH IN PROGRESS

The work now underway at the Center may be indicated briefly, using the major categories described in the earlier statement of research program.

### 1. Improved Methods of National Economic Measurement

*Richard and Nancy Ruggles* are continuing their work on development of an improved system of national economic accounts, and are testing this system against data from a variety of countries. They are currently taking a particular interest in developing improved public sector accounts. *Raymond Goldsmith* is developing estimates of capital stock by the perpetual inventory method for a number of countries, and checking these against estimates obtained by other methods.

### 2. Theoretical Analyses of National Economies

*Gustav Ranis* has been engaged in constructing and elaborating a simple two-sector model for viewing growth, particularly in the labor surplus areas, and in testing the model with Japanese and other country data. Together with *John C. H. Fei*, he is also exploring the application of national income and assets accounting to problems of planning, monetary policy, and the balance of payments in the less developed economies.

*John M. Montias* is examining the logic of economic planning in countries of the Soviet bloc. He is concerned particularly with the role of prices in planning, and with the actual and potential use of mathematical techniques in solving planning problems. *Janusz Zielinski* is comparing the choice of optimum technology in the less developed countries with that in the centrally planned economies of Eastern Europe.

### 3. Quantitative Analysis of National Economies

The largest enterprise underway on this front is the Country Analysis Program already described. Twelve members of the Center staff are presently engaged in this program. In addition:

*Reginald H. Green* is continuing his work on the econ-



omy of Ghana, with particular emphasis on the impact of the cocoa industry between 1880 and 1960, and its implications for public policy and economic growth in the future. *Hugh Patrick* is working on selected aspects of Japanese economic growth, particularly the nature of Japanese government investment and the role of government in financing private investment during the very rapid growth since 1945.

*Raymond P. Powell*, in collaboration with *Richard M. Moorsteen* of the Rand Corporation, is completing a monograph on the role of capital in Soviet economic growth. *Peter Schran* is analyzing the structure of income in Communist China, and the changes in income distribution which occurred during the process of "socialist transformation" of the Chinese economy.

*4. Comparative,  
Quantitative  
Studies  
Covering a  
Number of  
Countries*

*Bela Balassa* is examining long term tendencies in trade relations between the industrial countries and the primary producing countries, and is attempting certain projections to the year 1975. *Joseph Grunwald* is studying connections between income distribution and economic growth, with particular reference to Latin American experience. *Lawrence B. Krause* is trying to determine whether there are regularities in the reactions of the foreign sector of an economy to growth stimulated from a domestic source, using data from selected Latin American countries since 1945.

*Edmund S. Phelps* and *Charlotte Phelps* are doing a comparative study of the postwar growth of selected Western industrial nations (U.S., Canada, U.K., Germany, and others). This study is sponsored jointly by the Center and the Cowles Foundation for Research in Economics. *Alexander Lamfalussy* is studying West European economic growth, 1950-1960, with particular reference to the comparative performance of the



lagging group (e.g., U.K., Belgium) and the faster growing areas (e.g., West Germany, The Netherlands). *Robert Triffin* is primarily concerned with examining the interrelationships between national and international monetary developments and policies. He is currently engaged in an empirical analysis of the mechanism of adjustment to differential rates of monetary expansion in different countries under conditions of convertibility.

*5. Synthesizing and Integrative Studies*

*Dudley Seers* is examining the extent to which the body of economic theory taught in the developed industrial countries is applicable in primary producing countries with a large export sector.

*The Carl Purington Rollins Printing-Office of the Yale University Press*

ATTACHMENT 2

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Table 1. Expenditure on Gross National Product  
(Prices of \_\_\_\_)

1. Private consumption expenditure
  - a. Food
    - Of which subsistence
  - b. Housing
    - Of which subsistence
  - c. Other
    - Of which subsistence
2. General government consumption expenditures
  - a. Civil
    - (1) Education
    - (2) Health
    - (3) Administrative
    - (4) Other
  - b. Defense
3. Gross domestic fixed capital formation
  - a. Construction
    - (1) Residential
      - Of which subsistence
    - (2) Other
  - b. Equipment and machinery
4. Increase in stocks
5. Exports of goods and services
6. Less: Imports of goods and services

Expenditure on gross domestic product  
Of which subsistence

7. Net factor income from abroad

Expenditure on gross national product

NOTE: Tables 1-6 are yearly; Tables 7-10 are for census years



Table 2. Distribution of Gross National Income  
(Current prices)

1. Payments by producing units to individuals
    - a. Compensation of employees
      - (1) Wages and salaries
      - (2) Employer contributions for social security
      - (3) Income in kind
    - b. Interest
    - c. Dividends
    - d. Rental income of persons
      - (1) Owner-occupied
      - (2) Other
    - e. Entrepreneurial income
      - (1) Farm
        - Of which subsistence
      - (2) Nonfarm
        - Of which subsistence
    - f. Business transfer payments
  2. Income retained by producing units
    - a. Capital consumption allowances
      - (1) Private enterprises
      - (2) Public corporations
      - (3) Government enterprises
      - (4) General government
    - b. Retained earnings of corporations
      - (1) Private corporations
      - (2) Public corporations
  3. Payments by producing units to government
    - a. Direct taxes on corporations
    - b. Indirect taxes
    - c. Government income from property and entrepreneurship
  4. Statistical discrepancy
  5. Less: Subsidies
  6. Less: Interest on the public debt
  7. Less: Interest on consumer debt
- Gross national income at market prices
8. Less: Indirect taxes net of subsidies
  9. Less: Capital consumption allowances
  10. Less: Statistical discrepancy
- National income at factor cost

Table 3. Receipts and Expenditures of Households and Private Non  
(Current Prices)

1. Payments by producing units to individuals
  - a. Compensation of employees
    - (1) Wages and salaries
    - (2) Employer contributions for social security
    - (3) Income in kind
  - b. Interest
  - c. Dividends
  - d. Rental income of persons
    - (1) Owner-occupied
    - (2) Other
  - e. Entrepreneurial income
    - (1) Farm
      - Of which subsistence
    - (2) Nonfarm
      - Of which subsistence
  - f. Business transfer payments
2. Less: Interest on consumer debt
3. Current transfers from general government
  - a. Social security benefits
  - b. Other
4. Current transfers from the rest of the world
  - Personal income
5. Consumption expenditure
  - a. Food
    - Of which subsistence
  - b. Housing
    - Of which subsistence
  - c. Other
    - Of which subsistence
6. Direct taxes
  - a. Social security contributions
  - b. Personal taxes
  - c. Other (including carves)
7. Current transfers to the rest of the world
  - Total expenditures
8. Saving
  - Personal expenditure and saving

Table 4. General Government Revenue and Current Expenditure  
(Current prices)

1. Payments by producing units to government
  - a. Direct taxes on corporations
  - b. Indirect taxes
  - c. Government income from property and entrepreneurship
2. Less: Interest on the public debt
3. Direct taxes on households and private non-profit institutions
  - a. Social security contributions
  - b. Personal taxes
4. Other current transfers from households and private non-profit institutions
5. Current transfers from the rest of the world

Current Revenue

6. Consumption expenditure
    - a. Civil
      - (1) Education
      - (2) Health
      - (3) Administration
      - (4) Other
    - b. Defense
  7. Subsidies
  8. Current transfers to households and private non-profit institutions
    - a. Social security benefits
    - b. Other
  9. Current transfers to the rest of the world
- Total Current Expenditure
10. Government Saving



Table 5. External Transactions  
(Current Prices)

1. Exports of goods and services
  - a. Merchandise
  - b. Other
2. Factor income from abroad
3. Current transfers from the rest of the world
  - a. To households and private non-profit institutions
  - b. To general government

Current Receipts from the Rest of the World

4. Imports of goods and services
  - a. Merchandise
  - b. Other
5. Factor income paid abroad
6. Current transfers to the rest of the world
  - a. By households and private non-profit institutions
  - b. By general government

Current Payments to the Rest of the World

7. Surplus of the nation on current account

Current Payments and Surplus

Table 6. Gross Domestic Capital Formation and Saving  
(Current Prices)

1. Construction
  - a. Private enterprises
    - Of which subsistence
  - b. Public corporations
  - c. Government enterprises
  - d. General government
2. Producers' durable equipment
  - a. Private enterprises
  - b. Public corporations
  - c. Government enterprises
  - d. General government
3. Increase in stocks

Gross Domestic Capital Formation

4. Income retained by producing units
  - a. Capital consumption allowances
    - (1) Private enterprises
    - (2) Public corporations
    - (3) Government enterprises
    - (4) General government
  - b. Retained earnings
    - (1) Private enterprises
    - (2) Public corporations
    - (3) Government enterprises
5. Saving of households and private non-profit institutions
6. Saving of general government
7. Deficit of the nation on current account
8. Statistical discrepancy

Gross Domestic Saving

Table 7. Gross and Net Capital Formation by Industrial Sector for the year

	Gross Capital Formation		Net Capital Formation				
	Capital Formation	Consumption	Total	Total	Construction	Equipment	Stocks
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Enterprises							
a. Agriculture, forestry, hunting, and fishing							
Of which subsistence							
b. Mining and quarrying							
c. Construction							
Of which subsistence							
d. Manufacturing							
e. Wholesale and retail trade, restaurants							
f. Transport, storage, and communications							
g. Electricity, gas, and water							
h. Business services							
i. Personal services							
j. Rental property							
k. Medical and health services							
l. Education							
m. Financial institutions							
2. General government							
a. Collective services							
(1) Education							
(2) Health							
(3) Other							
b. Administration and defense							
3. Private non-profit institutions, n.e.c.							
4. Population							
a. Domestic services							
b. Ownership of dwellings							
Total							



Table 8. Industrial Origin of Net and Gross National Product, Total Value of Product, Exports, Imports, and Employment for the year \_\_\_\_\_

	Net Product Origin- time	Gross Product Origin- time	Value of Product	Exports Total	Imports Total	Employ- ment
		or Gross Value Added	Value of Total Output			
1. Enterprises						
a. Agriculture, forestry, hunting, and fishing						
Of which subsistence						
b. Mining and quarrying						
c. Construction						
Of which subsistence						
d. Manufacturing						
e. Wholesale and retail trade, restaurants						
f. Transport, storage, and communications						
g. Electricity, gas, and water						
h. Business services						
i. Personal services						
j. Rental property						
k. Medical and health services						
l. Education						
n. Financial institutions						
2. General government						
a. Collective services						
(1) Education						
(2) Health						
(3) Other						
b. Administration						
c. Defense						
3. Private non profit institutions, n.e.c.						
4. Population						
a. Domestic services						
b. Ownership of dwellings						
5. Rest of world						
Total						

(in local currency where possible)

United States of America
United Kingdom Ireland
Canada
Continental Western Europe
Other Europe
United Kingdom Dependencies
Other European Dependencies
Latin America
Japan

1. Exports of goods and services

a. Merchandise

- 0 Food
- 1 Beverages and tobacco
- 2 Crude materials, inedible
- 3 Mineral fuels
- 4 Oils and fats
- 5 Chemicals
- 6 Manufactured goods
- 7 Machinery and transport equipment
- 8 Miscellaneous manufactured articles
- 9 Miscellaneous n.e.s.

b. Other

2. Factor income received
3. Transfer payments from the rest of the world
  - a. To households and non-profit institutions
  - b. To general government

Current Receipts

4. Imports of goods and services

a. Merchandise

- 0 Food
- 1 Beverages and tobacco
- 2 Crude materials, inedible
- 3 Mineral fuels
- 4 Oils and fats
- 5 Chemicals
- 6 Manufactured goods
- 7 Machinery and transport equipment
- 8 Miscellaneous manufactured articles
- 9 Miscellaneous n.e.s.

b. Other

5. Factor income paid abroad
6. Transfer payments to the rest of the world
  - a. From households and non-profit institutions
  - b. From government

Current Payments

7. Surplus of the nation on current account

Current Payments plus Surplus

Tables 10. & 11. Balance Sheet (Table 10) and Related Flow Items (Table 11) for the year \_\_\_\_\_,

II. Liabilities

1. Gold
2. Foreign assets
3. Currency
4. Demand deposits
5. Time deposits (individual postal savings)
6. Receivables
7. Mortgages
8. Other loans
9. Life insurance reserves and pension funds
  - a. Private
  - b. Public
10. Bonds and notes
  - a. Private
  - b. Public
11. Unclassified

Total Liabilities

III. Equities

1. Corporate stock
2. Other equity
3. Capital gains

Total Equities

Total Liabilities and Equities



PROGRAM IN INTERNATIONAL AND FOREIGN ECONOMIC ADMINISTRATION  
Progress Report, 1961-62

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slides

General

During the academic year 1961-62 the Program in International and Foreign Economic Administration was administered by the Economic Growth Center and was conducted on an expanded scale. The research program of the Center made possible further integration of theory and policy in the training of IFEA students. Growing emphasis was placed on the development of concepts and methods of measurement of economic growth with particular attention to money and finance, national income and assets accounting, planning and balance of payments problems. The expansion of the scope of the IFEA Program is reflected in all phases of activity including fellowships, curriculum, faculty, library facilities and general services.

Trainees

There were twenty-one fellows in International and Foreign Economic Administration during 1961-62. They came predominantly from the underdeveloped countries of Asia, Africa and Latin America. They were:

John W. Anderson, U. S. Foreign Service Institute  
 Wando Pereira Borges, Brazilian Institute of Economics  
 Fatch Mohammad Chaudhri, Institute of Development Economics, Pakistan  
 Teresita L. De Guzman, The Philippines  
 Kuhachiro Furuya, Bank of Japan  
 Goran B. Giertz, United Nations  
 Kalu Mba Kalu, Nigeria  
 Tadashi Kano, The Bank of Tokyo  
 Walter F. Keville, II, U.S. Foreign Service Institute  
 Abdel R. A. Mahdi, Bank of Sudan  
 Ana Maria Martirena de Mantel, National Council for Scientific Research,  
 Argentina  
 Rolf R. Mantel, National Council for Scientific Research, Argentina  
 Amos O. Odelola, Government of Western Nigeria  
 Jean-Pierre Poullier, Belgium  
 Elias Salama, Central Bank of the Argentine Republic  
 Gabriel N.O. Sefia, Federal Government of Nigeria  
 Jesus Silva-Herzog, Bank of Mexico  
 Eduardo L. Suarez, University of Nuevo Leon, Mexico  
 Koen Suryatmodjo, Bank of Indonesia  
 Yoshiaki Toda, Bank of Japan  
 Guilherme U. von Calmbach, Brazilian Institute of Economics

### Curriculum

The core program for IFEA students consists of courses in economic analysis, statistics, national economic accounting and international economics. Special courses in each of these areas have been designed for IFEA students. For the academic year 1961-62, they were as follows:

- |                |  |
|----------------|--|
| Economics 110  | Economic Analysis and Its Applications<br>Mr. Green          |
| Economics 125b | Statistical Analysis and Its Applications<br>Mr. Van Moeseke |
| Economics 126a | Principles of National Economic Accounting<br>Mr. Goldsmith  |
| Economics 130  | International Economics<br>Mr. Diaz-Alejandro and Mr. Paauw  |

In addition to these, the regular graduate course offerings of the Department of Economics are available.

Economics 203a, Seminar on Economic Problems of Latin America, is of particular interest to students from that area. The course was conducted during the spring term by Mr. Joseph Grunwald of the Institute of Economic Research, University of Chile and Mr. Dudley Seers of the United Nations Economic Commission for Latin America, visiting research scholars to the Growth Center. The seminar was focused on problems of growth. A number of Latin American economists were drawn as guest speakers from international agencies in Washington and New York and from among experts on missions in the United States.

### Tutorial Guidance

In addition to the instructional staff, there is a tutorial staff available to IFEA students for consultation and advice. In 1961-62, Assistant Professor Reginald H. Green was appointed as adviser and Mr. Fred Levy and Mr. Harvey Galper acted in the capacity of tutors.

### Summer Training Programs

Nine IFEA students attended orientation programs in the summer of 1961 preceding the academic year. Of these, five attended the Economics Institute at the University of Colorado and four attended the special orientation program at Yale.

During the succeeding summer of 1962, internship programs were arranged for nine trainees. These programs varied in length from two weeks to over two months and included internships at the United Nations, the Board of Governors of the Federal Reserve System, the Federal Reserve Banks of New York and San Francisco, the International Monetary Fund and the International Bank for Reconstruction and Development.

### Visitors and Guest Lecturers

During the academic year 1961-62 there were two visiting scholars in residence under the Program in International and Foreign Economic Administration. They were Alexander Lamfalussy, Economic Adviser to the Bank of Brussels and Janusz Zielinski, Associate Professor at the Central School of Planning and Statistics, Warsaw.

The short term visiting scholars and guest speakers during the same period were the following:

Ozorio de Almeida, Economic Counselor, Brazilian Embassy  
Jose Cardenas, Director, Economics Division, Inter-American  
Bank for Development  
Sidney Dell, United Nations  
Aldo Ferrer, First Secretary, Argentine Embassy  
Edmundo Flores, University of Mexico  
Benjamin Hopenhayn, Pan American Union  
Peter B. Kenen, Associate Professor of Economics, Columbia University  
Jose A. Mayobre, Ambassador of Venezuela  
Dr. Angel Monti, United Nations Expert on Economic Planning, Latin America  
J. Royer, Chief Statistician, Economic Commission for Africa  
Kalman Silbert, Department of Government, Dartmouth University  
Vu Van Thai, Planning Board, South Viet Nam  
Victor L. Urquidi, Economic Consultant, Central Bank of Mexico

### Budget and Finances

Total expenditures under the Program in International and Foreign Economic Administration during the fiscal year July 1, 1961-June 30, 1962 were \$77,360. A breakdown



by category of expenditures is given in Attachment A. The level of expenditures is substantially higher than normal due to the expanded activities described above. Nevertheless, the IFEA account was essentially in balance at the end of the period due to the fact that expenditures in previous years were below the estimated level of \$50,000 a year. As of June 30, 1962 there was a deficit balance of only \$17.

The budget for the fiscal year 1962-63 is presented with this report. The expenditures indicated are based on the grant funds available and therefore scaled down to a total of \$50,000 for the year. It is anticipated, however, that the Program will continue to operate at the present expanded level with the aid of supplementary support from the Economic Growth Center.

Attachment A

Program in International and Foreign Economic Administration

Expenditures, 1961-62

1. Training	
Fellowships	\$21,400
Orientation	550
Internships	2,884
Emergency Aid	1,200
2. Visiting Lecturers in Residence	21,521
3. Short-term Visitors	1,121
4. Travel Expenses	442
5. Research Expenses	
Library	
a. Staff	6,267
b. Acquisitions	4,393
Research Equipment	1,250
6. Administrative Expenses	
Office Materials	6,539
Secretarial & Clerical	9,768
7. Tutorial Guidance	<u>25</u>
	\$77,360

## FELLOWS IN INTERNATIONAL AND FOREIGN ECONOMIC ADMINISTRATION, 1952-63

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outArgentina

- Mantel, Ana M. (1961-62)  
National Council for Scientific Research
- Mantel, Rolf R. (1961-62)  
National Council for Scientific Research
- Salama, Elias (1961-62)  
Central Bank of the Argentine Republic
- Sanjurjo, Maria Ester (1962-63)  
Center of Economic Research, Torcuato di Tella Institute

Belgium

- Camu, Alain R. (1962-63)  
National Bank of Belgium
- De Maeyer, Jaak F. R. (1955-56)  
Belgium
- Lambert, Marie-Henriette (1960-61)  
National Bank of Belgium
- Meulepas, Ernest (1955-56)  
Belgium
- Poullier, Jean-Pierre (1961-62)  
Belgium
- Springuel, René (1952-53)  
Belgium
- Van de Kerchove, Jean (1959-60)  
Belgium
- Van Ypersele de Strihou, Jacques (1962-63)  
Belgium
- Vuerings, Paymond Jr. (1956-57)  
Belgium
- Wauters, Edward (1956-57)  
Belgium

Brazil

- Benchimol, Saul (1959-60)  
Amazon Economic Development Economic Program, Brazil



Brazil (continued)

Borges, Wando Pereira (1961-62)  
Brazilian Institute of Economics, Getulio Vargas Foundation

de Souza, Angelo J. (1962-63)  
Getulio Vargas Foundation

Galveas, Ernane (1958-59)  
Superintendency of Money and Credit

Gomes, Eduardo da S. Jr. (1959-60)  
Superintendency of Money and Credit

Moutinho dos Reis, Alfredo (1960-61)  
Superintendency of Money and Credit

Pamplona, Tanisly de Magalhaes (1962-63)  
Brazilian Institute of Economics, Getulio Vargas Foundation

dos Reis Velloso, Joao Paulo (1962-63)  
Bank of Brazil

Von Calmbach, Guilherme V. (1961-62)  
Brazilian Institute of Economics, Getulio Vargas Foundation

Ceylon

Kirthisingha, Palitha N. (1958-59)  
Central Bank of Ceylon

Wignaraja, Ponnambalam (1955-56)  
Central Bank of Ceylon

Chile

Bianchi, Andres (1959-60)  
School of Laws, Chile

Cortés, Mario (1960-61)  
Institute of Economics, University of Chile

Munoz, Oscar E. (1962-63)  
Institute of Economics, University of Chile

China

Meng, Ching-En (1952-53)  
Ministry of Finance

China (continued)

Yang, Cheng-hou (1952-53)  
Central Bank of China

Colombia

Gaitán, Alberto (1958-59)  
Central Bank of Colombia

Cuba

Camps, Mario A. (1954-55)  
Cuba

Chao, José S. (1959-60)  
National Bank of Cuba

Freyre, Jorge F. (1954-55)  
Cuba

Giral Boscá, Juan (1956-57)  
Central Bank of Cuba

Solaún, Mauricio (1958-59)  
National Bank of Cuba

Ecuador

Baez, Gonzalo (1957-58)  
Central Bank of Ecuador

Baquerizo, Francisco (1955-56)  
Central Bank of Ecuador

Benacazar, René (1955-56)  
Central Bank of Ecuador

Campos, Rodolfo (1959-60)  
Central Bank of Ecuador

Gonzalez, Joaquin (1956-57)  
Central Bank of Ecuador

Serrano, Angel (1955-56)  
Central Bank of Ecuador

France

Baneth, J. V. (1957-58)  
France

France

Bataillard, Jean (1956-57)  
France

Bourdeau de Fontenay, Patrick (1956-57)  
France

Brequet, Pierre-Etienne (1960-61)  
First National City Bank of New York (trainee)

Consigny, Pierre, (1952-53)  
France

Gouzerh, Yves (1962-63)  
Bank of France

Heller, Robert H. (1955-56)  
Government of France

Hubert, Claude M. F. (1960-61)  
Bank of France

Levy, Jean R. (1953-54)  
France

Lieuze, Michel (1957-58)  
Central Bank of France

Mancera, Miguel (1959-60)  
Bank of France

Prache, Gérard (1954-55)  
France

Saillard, Jean-Pierre (1956-57)  
France

Verroust, Claude L. (1953-54)  
France

Germany

Goertz, Herbert (1955-56)  
Germany

Moedkel, Peter W. (1955-56)  
German Central Bank

Schmitz, Hans G. (1960-61)  
German Central Bank



Greece

Eleftheriades, Rennos (1958-59)  
Bank of Greece

Koubis, Nicos (1959-60)  
Bank of Greece

Papadopoulos, Spyros (1959-60)  
Bank of Greece

Vlachopapadopoulos, George (1957-58)  
Central Bank of Greece

Voloudakis, Evangelos A. (1960-61)  
Bank of Greece

Guatemala

González del Valle, Jorge (1958-59)  
National Council for Economic Planning

Lorenzo-Alvarez, Julio (1953-54)  
Guatemala

Secaira, Gilberto (1962-63)  
Bank of Guatemala

Solórzano, Victor M. (1960-61)  
Bank of Guatemala

Honduras

Cruz, José René (1953-54)  
Central Bank of Honduras

Martel, María (1954-55)  
Central Bank of Honduras

Hungary

Jonas, Paul (1957-58) (1st term)  
Hungary

Szabó-Pelsoczi, Miklós (1953-54)  
Hungary

Indonesia

Suryatmodjo, Koen (1961-62)  
Bank of Indonesia

Iran

Sheybani, Abdol-Hamid (1960-61)  
Iran

Israel

Kounine, Akiva (1953-54)  
Israel

Italy

Bellone, Giovanni (1959-60)  
Italy

Colombi, Enrico A. (1958-59)  
Bank for International Settlement

Russo, Massimo (1962-63)  
Italy

Segré, Claudio (1955-56)  
Italy

Japan

Furuya, Kuhachiro (1961-62)  
Bank of Japan

Hattori, Ichiro (1956-57)  
Japan

Ichinokawa, Kazuo (1957-58)  
Japanese Arbitration Commission

Ishikawa, Michisato (1959-60)  
Bank of Japan

Miyakawa, Tatsuo (1956-57)  
Japan

Kanno, Akira (1962-63)  
Bank of Japan

Kano, Tadashi  
Bank of Japan

Ochi, Shoji (1958-59)  
Bank of Japan

Shoda, Iwao (1960-61)  
Bank of Japan

Japan (continued)

Toda, Yoshiaki (1961-62)  
Bank of Japan

Jordan

Khutat, Jalal (1957-58)  
Ministry of Finance

Kenya

Ghai, Dharam Pal (1959-60)  
Kenya

Korea

Hong, Sung You (1955-56)  
Korea

Lebanon

Naja, Yussuf-Walid Rafic (1962-63)  
Lebanon

Mexico

Bermúdez-Limón, Carlos (1960-61)  
Ministry of Finance

Bueno y Zirion, Gerardo (1957-58)  
Economic Commission for Latin America

Ghigliazza-Garcia, Sergio A. (1959-60)  
Nacional Financiera, Mexico

Gleason-Galicia, Ruben (1959-60)  
Nacional Financiera, Mexico

Gonzalez-Ruiz, Rogoberto (1955-56)  
Bank of Mexico

Navarro, Ignacio (1954-55)  
Bank of Mexico

Petriciolo, Gustava (1955-56)  
Central Bank of Mexico

Ramirez, Ernesto (1958-59)  
Bank of Mexico



Mexico (continued)

Silva-Herzog, Jesús (1960-61)  
Bank of Mexico

Solis, Leopoldo (1957-58)  
Central Bank of Mexico

Suárez, Eduardo L. S. (1961-62)  
University of Nuevo León, Mexico

Villareal, Rudolfo (1956-57)  
Central Bank of Mexico

Netherlands

Manneke, Leendert F. (1955-56)  
Netherlands

Nicaragua

Incer, Roberto (1959-60)  
National Bank of Nicaragua

Mayorga, Roberto (1958-59)  
Central Bank of Nicaragua

Nigeria

Anyanwu, Enoch A. (1962-63)  
Government of Eastern Nigeria

Ibuje, John O. (1960-61)  
The Treasury, Western Region, Nigeria

Kalu, Kalu Mba (1961-62)  
Nigeria

Odelola, Amos O. (1961-62)  
Government of Western Nigeria

Sefia, G. N. O. (1961-62)  
Federal Government of Nigeria

Norway

Skandland, Hermod (1955-56)  
Ministry of Finance

Pakistan

Chaudhri, Fateh Mohammed (1961-62)  
Institute of Development Economics, Pakistan

Hasan, Mohammed Parvez (1958-59)  
State Bank of Pakistan

Haq, Mahbub ul (1955-56)  
Pakistan

Karamali, B. A. (1957-58)  
Central Bank of Pakistan

Kham, Mansur Hasan (1958-59)  
Planning Board, Pakistan

Naqvi, Syed N. H. (1960-61)  
Planning Commission, Pakistan

Rahman, Abdur (1962-63)  
Institute of Development Economics

Philippines

Arreza, Vicente (1952-53)  
Mutual Security Agency

Benavides, Leonor V. (1955-56)  
Central Bank of the Philippines

Blas, Teodulo (1955-56)  
Government of the Philippines

Cortes-Garcia, Fanny (1952-53)  
Central Bank of the Philippines

De Guzman, Teresita (1961-62)  
The Philippines

Dinosa, Feliciano (1957-58)  
Reconstruction Finance Corporation, the Philippines

Itchon, Gabriel Y (1958-59)  
Central Bank of the Philippines

Mijares, Milagros M. (1959-60)  
Central Bank of the Philippines

Sanchez, Conrado E. (1954-55)  
The Philippines

Philippines (continued)

Vasquez, Nilda (1962-63)  
Joint Legislative-Executive Tax Commission

Vicente, Leticia F. (1960-61)  
Central Bank of the Philippines

Poland

Czartoryski, Pawel (1957-58)  
Polish Economic Society

Polaczek, Stanislaw M. (1959-60)  
Planning Commission, Poland

Zielinski, Janusz (1957-58)  
Polish Economic Society

Puerto Rico

Cadilla-Iguina, Carlos G. (1955-56)  
Government Development Bank of Puerto Rico

Guzmán-Soto, Vicente (1960-61)  
Government Development Bank for Puerto Rico

Northern Rhodesia

Soko, Skeva A. (1960-61)  
Northern Rhodesia

Sudan

Mahdi, Abdel R. A. (1961-62)  
Bank of Sudan

Sweden

Giertz, Goran B. (1961-62)  
U. N. Bureau of Economic Affairs

Switzerland

Grell, Maximilian (1952-53)  
Switzerland

Tanganyika

Ahmed, Sadrudin (1962-63)  
Tanganyika



Thailand

Bhanavavat, Sombis (1957-58)  
Central Bank of Thailand

Vongsathorn, Xan (1960-61)  
Bank of Thailand

Turkey

Kucuk, Yalcin (1962-63)  
State Planning Organization

Ozol, Ertugrul Ihsan (1962-63)  
Ministry of Finance, Turkey

Union of South Africa

Van Vuuren, A. J. J. (1957-58)  
Reserve Bank of South Africa

United Arab Republic

El-Nahal, Ahmed T.S. (1958-59)  
Ministry of Finance and Economy

United States of America

Anderson, John W. (1961-62)  
U. S. Foreign Service Institute

Beal, William (1955-56)  
U. S. Foreign Service Institute

Button, Jack B. (1957-58)  
U. S. Foreign Service Institute

Dozier, William B. (1958-59)  
U. S. Foreign Service Institute

Elsbernd, Lawrence B. (1958-59)  
U. S. Foreign Service Institute

Jones, Dallas L. (1955-56)  
U. S. Foreign Service Institute

Keville, Walter F., II (1961-62)  
U. S. Foreign Service Institute

Krizay, John (1959-60)  
U. S. Foreign Service Institute

United States of America (continued)

Lanius, Paul B., Jr. (1960-61)  
U. S. Department of State

Mueller, Charles G. (1959-60)  
U. S. Foreign Service Institute

O'Mahony, Joseph E. (1960-61)  
U. S. Department of State

Styles, Michael H. (1960-61)  
U. S. Department of State

Vine, Richard D. (1959-60)  
U. S. Foreign Service Institute

Wehrle, Leroy S. (1955-56)  
U. S. Foreign Service Institute

Weintraub, Sidney (1957-58)  
U. S. Foreign Service Institute

Williams, John Edgar (1962-63)  
U. S. Foreign Service Institute

West Indies

Abbott, George C. (1958-59)  
Government of St. Kitts

Chang, Edgar Roy (1956-57)  
Institute of Social and Economic Research, Jamaica

Yugoslavia

Marinovic, Baldo C. (1952-53)  
Yugoslavia

61-42  
A

**YALE UNIVERSITY**  
DEPARTMENT OF ECONOMICS  
CENTER FOR QUANTITATIVE STUDY OF ECONOMIC STRUCTURE AND GROWTH  
BOX 1987, YALE STATION  
NEW HAVEN, CONNECTICUT

October 31, 1961

Dr. Oscar Harkavy, Associate Director  
Program in Economic Development and Administration  
The Ford Foundation  
477 Madison Avenue  
New York 22, New York

Dear Bud:

For your information I am enclosing a copy of the present program activities of the Center. Also enclosed is a copy of the schedule for the Center's workshop in economic development. We hope you will be able to visit our operation and thought you might like to sit in on one of these sessions.

Reports to the Foundation on various EDA grants are in progress, and the request for the balance of the comparative economics grant will be sent shortly.

Regards to all.

Sincerely yours,

*Marion*

Marion K. Chamberlain  
Executive Secretary

MKC:mbw  
Enclosures

FIRST  
REPORT

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CENTER FOR QUANTITATIVE STUDY OF ECONOMIC STRUCTURE AND GROWTH

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Workshop Schedule, 1961-62

<u>Date</u>	<u>Subject</u>	<u>Leader</u>	<u>Rapporteur</u>
Oct. 13	Population and Aggregate Output	S. Kuznets	Tumlir
Oct. 27	Changes in the Structural Composition of Output	Dudley Seers	Mead
Nov. 3	A Proposed Minimum Set of Standard Country Information	R. Ruggles	-----
Nov. 10	National Wealth and Capital Formation	R. Goldsmith	Snodgrass
. 17	Post Mortem on the Goldsmith Sessions		
Dec. 1	Capital-Labor-Output Ratio and Innovation	W. Fellner	Baer
Dec. 8	Post Mortem on the Fellner Sessions		
Dec. 15	The Agricultural Sector	W. Nicholls	Helleiner

Tentatively scheduled for the remainder of the year:

Jan. 5 or 12	The Industrial Sector	H. Chenery	Tumlir
	The Phenomenon of Dualism	G. Ranis	Diaz
	Market Structures, Prices, and Resource Allocation	L.G.Reynolds	Feige
	Monetary Institutions and Policies	H. Wallich	Diaz
	Taxation and Fiscal Policies	R. Ruggles	Baer
	The International Sector	R. Triffin	Helleiner
	Systematic Development Activities, "Planning", "Programming", etc.	J. Grunwald	Snodgrass

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A

The Center for Quantitative Study  
of Economic Structure and Growth

Preliminary Statement of Purpose and Program

Introduction

Several years ago Professor Simon Kuznets proposed the establishment of a permanent research center for quantitative, comparative analysis of the long-term growth of national economies. Such a center, it was believed, could serve a variety of purposes: development of improved concepts of economic measurement; establishment of higher standards of workmanship in government statistical agencies and in research organizations; refinement and standardization of key measurements for many economies over extended periods of time; and use of this material to test hypotheses about economic growth.

These suggestions were discussed in two conferences during the summer of 1958, organized by the National Bureau of Economic Research and attended by leading authorities on economic growth from this country and abroad. The report of these discussions (The Comparative Study of Economic Growth and Structure, National Bureau of Economic Research, 1959) gave strong support to the central idea. Subsequently a working party composed of Professors Goldsmith, Kuznets, Reynolds, Ruggles, and Triffin drafted a concrete proposal for submission to the Ford Foundation. In December, 1960, the Foundation granted funds to establish the Center and to finance its core activities for a ten-year period.

Studies of economic growth are already underway in numerous research centers throughout the world. One may well ask what contribution a new organization can make to this world-wide effort. First, it may be noted that the Center's work will run considerably beyond the study of economic growth. It will support comparative, quantitative analysis of important aspects of economic structure. It will foster conceptual work on techniques of economic measurement and improvement of national statistical systems. It will assemble refined and standardized

economic measurements for a large number of countries. It will provide training facilities for foreign government statisticians and economists, with a view to strengthening national statistical programs over the long run.

In the area of economic growth, the Center's program will have several characteristics: emphasis on economic factors in economic growth; concentration on measurable aspects of economic growth and structure; emphasis on generalization for many economies rather than on case studies; and development of a research program on a comprehensive and continuing basis. The Center's interest in economic growth is comprehensive in both space and time. It is not limited to the recent past or to the low-income nations of the world.

No one of these features is unique. Taken together, they give a distinctive cast to this new enterprise.



The Research Program

Areas of Interest

The Center's inclusive title might be construed as warranting statistical study of any aspect of any economy. But this would admit nine-tenths of all economic research, and would lead to hopeless diffusion of purpose and resources. One must draw a narrower circle which provides a central focus while retaining reasonable breadth and flexibility.

As a first approximation, the Center's research interests may be defined to include:

(1) Improving the techniques of economic measurement. Examples: valuation of non-market production; the deflation problem in inter-temporal comparisons; the translation problem in inter-country comparisons; improved concepts and measures of investment; measurement of disguised unemployment; re-casting government budget accounts to serve the purposes of economic analysis; development of integrated systems of national economic accounts.

(2) Theoretical analysis of economic structure and growth. Examples: models of economic growth; the role of price mechanisms under central economic planning; analytical formulation of the economic characteristics of "under-developed" economies.

(3) Quantitative study of a national economy as an integral whole. Examples: the pattern of long-term growth, and structural changes accompanying growth, in a particular country; the interplay of a nation's economic growth and its international economic relations; combined study of the development of several closely-related trading nations; study of the interplay of market mechanisms and administrative direction ("economic planning") in a particular economy.

(4) Comparative, quantitative studies using data from a number of countries.

Examples: size and composition of the public sector; distribution of household incomes; level, forms, and sources of capital formation; changes over time in the composition of national output. Such studies will often have a "growth dimension" in the sense of testing hypotheses about the relation between the level of per capita income and capital formation rates, or income distribution, or the composition of output. For some problems it will be feasible to make complementary use of time-series analysis and cross-section analysis.

(5) Synthesizing and integrative studies based on the above types of work -- efforts to explore how far "the pieces add up" in terms of significant generalizations.

These examples are illustrative, not definitive. There are doubtless many other significant problems which could be listed under each heading.

#### Types of research support

How can these objectives be pursued most effectively? One could draft a detailed plan of research and try to recruit people to undertake particular pieces of work. But no research director or executive committee can be wise enough to visualize all significant possibilities. And it is doubtful that creative scholars will work effectively on studies which they have not had a large hand in devising.

Part of the answer may lie in publicizing the Center's area of interest and inviting economists at other places to submit research proposals for consideration. Able men who come up with significant projects might then be invited to the Center as visiting research fellows. Such appointments would normally be for one or at most two years, and would be related to a piece of work which could be substantially completed during that period. The number of appointments which could be made in a particular year would obviously be limited by budgetary



constraints. This part of the Center's activity should perhaps be oriented toward promising younger scholars who have not yet achieved sufficient recognition to command independent research support.

In addition, it is expected that numerous research proposals will emerge from the Yale Department of Economics. Many members of the Department have interests falling within the general area outlined above. On presentation of a specific proposal, and on approval of the Executive Committee, the Center will undertake to provide research and clerical assistance, summer research support, and research leaves of absence where required.

While work supported by the Center would normally be carried on in New Haven, this need not be an invariable rule. It might be efficient in some cases to support work by a member of another university faculty at his home location.

#### Programmed research

Substantial reliance on individual enterprise need not preclude an organized attack on particular problems. One project contemplated in the immediate future is a series of field studies of economic structure and growth in selected low-income countries. Countries would be selected for study partly on the basis of size and importance, partly according to the quality of their statistical data. Preliminary explorations suggest that there are twenty to twenty-five countries in which field work could usefully be undertaken over the next several years.

The plan is to select for this work high-quality young economists who have completed their doctorates. Each man would spend an initial year in New Haven working on his country from sources available here, perfecting necessary analytical and language skills, and participating in a workshop seminar. He would then go abroad for a minimum period of about fifteen months, which could be extended if necessary. During this period he would be attached to a research institute or



other local organization in the country of his study. On his return, he would spend another year or so working up his material into book form. The "production cycle" for each country study would thus total three to four years. During this period these men would be members of the Yale Department of Economics, and some might well continue as faculty members after completion of their initial assignment.

There are obvious difficulties in defining the scope and content of these country studies. Comprehensiveness with its accompanying danger of superficiality must be weighed against deeper investigation of particular sectors. The advantages of a standard study plan, making for comparability and additiveness of individual country studies, must be weighed against the need for flexibility to pursue unusual characteristics and problems of each country. These matters will require additional thought and discussion.

### Training Activities

Many countries are starting almost at the beginning in developing national statistical systems. They face a long-range problem of training young people for statistical careers in government, and a shorter-range problem of reinforcing the training of older people already in responsible positions.

The UN, U. S. Government agencies, and private foundations have funds to bring experienced statistical officers to the United States for further training. But these organizations cannot undertake the full training function themselves. Trainees are usually farmed out to universities and often end up in general economics programs. The statistics courses available to them are typically not assigned to meet the problems of countries where even the simplest economic measurements may not exist.

The Center intends, in cooperation with the Department of Economics, to develop a training program oriented toward the needs of statistical officers from the less developed countries. It is expected that the program can accommodate fifteen to twenty persons each year. Admission will be limited to people already employed in a government agency, and who have been nominated by their agency, the UN, or some other official body. The program will begin in September, 1962. Meanwhile a variety of operating problems will have to be solved: the content of the courses to be offered; the level of experience and seniority toward which the program should be directed; selection methods and admission standards; and the relation of this program to statistical training programs now being conducted by national governments and international organizations.

This is a long-range activity directed toward improvement of quality standards and greater comparability of techniques and results in statistical organizations throughout the world.



Statistical and Documentation Services

Considerable effort, particularly in the early years, will go into accumulating basic research material. It is expected that much of this material will be reproduced and made available to other research centers.

Standard country information

It is planned to assemble key economic measurements for a large number of countries in as standardized and comparable a form as possible, and over as long a period of time as possible. This will be more than a re-copying of data from national and international publications. The material will be subjected to some critical scrutiny, adjustments and new estimates will be made in some cases, and there may be some elementary processing such as calculation of per capita ratios, percentage distributions, index numbers, and annual rates of change.

The most difficult problem is the selection of types of data to be included in the system. These should presumably be items needed for growth studies or for important types of structural analysis. Even with this restriction the potential range is very wide. A preliminary listing suggests that something like one hundred and fifty separate series deserve consideration. It will take much additional work to arrive at a final list.

There must also be selection among countries. There are about two hundred countries or independently administered areas in the world. If one excludes countries with less than two million population there remain about seventy-five countries, which include more than 98 per cent of the world's population and output. While all these countries will eventually be included in the system, it is necessary to set up a priority order for the actual work. The tentative decision is to give first priority to some twenty of the more important under-developed nations. This has the advantage of tying in well with the program of country field studies.



During the summer of 1961 experimental work will be carried on for three or four countries, representing different levels of quantity and quality of statistical information. This will test the feasibility of work methods and permit firmer estimates of time and cost requirements. Work can then be undertaken on a larger scale. It is expected that the initial job of data accumulation will taper off and begin to decline after two or three years. But revision and improvement of the country information will obviously be a continuing task in the future. National governments are continuously engaged in revising old series and adding new ones, and the Center will have to keep pace with this activity. The country field studies will turn up a good deal of new material. And old data may need to be reworked in terms of new conceptual systems.

Library of statistical and economic documents

There is a large annual output of statistical and economic publications by the governments of the world. There is also a considerable flow of mimeographed and other unpublished documents. The Economics Library of the United Nations is the largest repository of such materials; but it retains only current publications up to about two years in age.

The Center intends to work intensively on accumulating this material through direct contact with statistical and economic agencies of national governments, and in cooperation with the U. N. library staff. We plan to develop a system of correspondents in individual countries, who can advise on what is available and aid in ordering and shipment. The first effort will be to "get on top of" the current flow of material. Once this is in hand we shall want to work backward as far as may be feasible in each country.

The volume of this material makes it impracticable to shelve it in the ordinary way. The plan is to microfilm all documents for convenient storage. A subject index will be programmed on computer tape so that a cumulative listing

of all items in the collection can be printed at appropriate intervals. Machines are now available which will reproduce copies of any document needed for research use. Cost aspects of the proposed system are still being explored with the help of expert technologists.

It is expected that duplicate sets of the microfilm library can be made available at reasonable cost to other research organizations in the United States and abroad. This will be true also of the standard country information, which will be transferred and coded on electronic tape.

The Center will also maintain a substantial "conventional" library of country materials -- monographs, periodicals, key documents, and standard reference sources. Acquisition of material for the library and for microfilming will be carried on as an integrated operation. As the library develops, its catalog and acquisition lists may be useful to similar libraries at other places.

Organization

The Advisory Council

The Center has been planned as a research resource for scholars anywhere in the world who are working on problems within its area of interest. In order to draw on the experience of colleagues in other places, and to ensure appropriate liaison with other research organizations, it has been decided to create an Advisory Council to the Center. The initial members of the Council are:

Brookings Institution	Walter Galant
California (Berkeley)	Robert A. Gordon
Chicago	Theodore W. Schultz
Columbia	Albert O. Hirschman
Harvard	Edward S. Mason
Massachusetts Institute of Technology	Max F. Millikan
National Bureau of Economic Research	Hal Lary
Stanford	Emile Despres
Vanderbilt	William H. Nicholls
United Nations	Henry Bloch
Yale	Lloyd G. Reynolds (Chairman)

Members of the Center's Executive Committee will also be invited to attend meetings of the Advisory Council.

Numerous research institutes in other countries are engaged in studies of economic growth and development. It is planned to invite the directors of selected institutions abroad to serve as "corresponding members" of the Advisory Council. They will be kept continuously informed of the Center's work and will receive copies of its publications. They will also have a standing invitation to visit the Center and to attend meetings of the Advisory Council if they are in the United States at the appropriate time.



The Research Advisory Committee

The Advisory Council cannot meet frequently enough or long enough to give detailed attention to the Center's research program. For this purpose it has been decided to appoint a smaller Research Advisory Committee. The following have agreed to serve as members of this group: Moses Abramovitz, Hollis Chenery, Charles Kindleberger, Jacob Mosak, and Simon Kuznets (Chairman). It is hoped that the Committee will both review research plans emanating from the Center staff and originate new research proposals.

The Executive Committee

The operations of the Center are guided by an Executive Committee composed as follows: Frank W. Altschul, E. Wight Bakke, William J. Fellner, Raymond W. Goldsmith, Tjalling C. Koopmans, Simon Kuznets, Gustav Ranis (Secretary), Lloyd G. Reynolds (Chairman), Richard Ruggles, and Robert Triffin.

The following administrative appointments have been made to this time:

Director:	Lloyd G. Reynolds
Associate Director:	Gustav Ranis
Executive Secretary:	Mariam K. Chamberlain

Research Staff

1. Yale faculty members

As explained above, members of the Yale Department of Economics with appropriate experience and interests are eligible to submit research proposals for Center consideration. Present and prospective faculty members who may be involved in Center activities include:

Raymond W. Goldsmith, Professor of Economics  
Lloyd G. Reynolds, Professor of Economics  
Richard Ruggles, Professor of Economics  
Robert Triffin, Professor of Economics  
Raymond P. Powell, Associate Professor of Economics  
Beia Balassa, Assistant Professor of Economics  
Werner Baer, Assistant Professor of Economics  
Reginald H. Green, Assistant Professor of Economics  
John M. Kentias, Assistant Professor of Economics  
Hugh Patrick, Assistant Professor of Economics  
Gustav Ranis, Assistant Professor of Economics  
Peter Schran, Assistant Professor of Economics  
Carlos Diaz, Instructor in Economics  
Edgar Feige, Instructor in Economics  
Gerald K. Helleiner, Instructor in Economics  
Donald C. Mead, Instructor in Economics  
Donald R. Snodgrass, Instructor in Economics  
Jan V. Tumlir, Instructor in Economics

2. Visiting research scholars

The Center expects to have in residence each year a number of visiting scholars from other institutions. Visitors during the academic year 1961-62 will include:

Joseph Grunwald, Director, Institute of Economic Research,  
University of Chile

Dudley Seers, Chief Economist, U. N. Commission for Africa  
(formerly of U.N.E.C.L.A.)

Janusz Zielinski, <sup>Associate</sup> Assistant Professor, Central School of Planning and  
Statistics, Warsaw

3. Full-time research staff

Nancy D. Ruggles has been appointed Research Associate in Economics, and will serve also as Secretary of the International Association for Research in Income and Wealth, which has been invited to locate its headquarters at the Center.

Additional research appointments will be mainly at junior levels, and primarily to handle the work of library acquisitions and development of standard country information. Under Yale University policy, appointment of senior professional people as full-time researchers without teaching duties is permissible only in unusual circumstances.