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YALE UNIVERSITY
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THE ECONOMIC GROWTH CENTER
YALE UNIVERSITY

ADMINISTRATION


EXECUTIVE COMMITTEE*

Gustav Ranis, Chairman; Charles H. Taylor, Jr., Provost of Yale University, Ex Officio; Merton J. Peck, Chairman, Department of Economics, Ex Officio; Richard N. Cooper; Carlos Díaz Alejandro; John C. H. Fei; Raymond W. Goldsmith; Simon Kuznets; John M. Montias; Richard R. Nelson; Hugh T. Patrick; Lloyd G. Reynolds; Henry C. Wallich.

RESEARCH STAFF†


LIBRARY AND PUBLICATIONS

Billie I. Salter, Head Librarian and Publications Officer
Mary S. Magenau, Assistant Librarian and Head Cataloguer
Sally L. Chi, Acquisitions Librarian

*As of July 1, 1970
†During part or all of the period July 1, 1967–July 1, 1970.
The Economic Growth Center, established as an activity of the Department of Economics in 1961, is a research organization focusing on the problems of the developing world. Its research interests are defined in terms of both method of approach and subject matter. In terms of method, the Center sponsors studies which are designed to test general hypotheses concerning the problem of economic growth and which draw on quantitative information from national economic accounts and other sources. In terms of subject matter, the Center's research interests include: (1) theoretical analysis of economic structure and growth; (2) quantitative analysis of a national economy as an integral whole; (3) comparative cross-sectional studies using data from a number of countries; (4) efforts to improve the techniques of national economic measurement. The research program includes field investigation of recent economic growth in 25 developing countries and related analysis of the problems of technology transfer, unemployment and underemployment. The Center's research staff includes several members of the Yale Department of Economics as well as visiting scholars from abroad invited normally for a one-year period.

The Center administers, jointly with the Department of Economics, the Yale training program in International and Foreign Economic Administration. It also presents a series of seminar and workshop meetings throughout the year.

The Center Library endeavors to achieve a complete intake of significant economic and statistical publications from about eighty of the larger countries of the world. This collection is open on request to scholars from other institutions. Book-length studies by the Center staff are printed and distributed by Richard D. Irwin, Inc., and the Yale University Press. Reprints of journal articles by staff members are circulated as Center Papers.
I. REPORT OF ACTIVITIES: 1967-70

Center Approaches to Research

The Center’s approach to development can be said to be distinguished by four main characteristics. First, the research aims at analyzing problems within the context of an overall framework of analysis rather than attempting to give “intuitive” answers to a miscellaneous series of policy issues. Second, there is considerable stress on the measurable aspects of economic growth and structure, even though the importance of qualitative information is not denied. Third, the Center emphasizes international comparisons in order to enable us to move from case studies to generalizations. Finally, there has been further development of rigorous analytical models for various types of developing countries. It is our belief that the iterative interaction between the theoretical work and the empirical studies has provided a considerable payoff in the past and that the investment of that period will substantially enrich the payoff of proposed future research efforts.

The major research activity in the early years of the Growth Center was focussed on the country analysis program, including field research on the development process in 25 countries around the world, leading to the publication of a monograph on each. A statement concerning the analytic objectives and thrust of that program was included in earlier reports. It was felt that, without detailed statistical investigation of the crucial economic variables involved and without a framework of multi-sectoral analysis to trace the crucial interactions over time, no firm base would be available either for the interpretation of a country’s own development or for many of the cross-country studies needed to test more far-reaching hypotheses. As anticipated, the country analysis program has led fairly naturally into cross country historical studies of development and to more detailed studies of specific sectors, policies, or other aspects of development in the individual countries, with the country analyst usually pursuing these issues in the country of his own specialization. Meanwhile other members of the faculty, working on more general interpretations of the development process, have interacted with and benefitted from the substantial wealth of information built up on a country basis and have furthered the analysis of the labor surplus model and the elaboration of various typologies of countries undergoing development. One-
evolving typology relates to the major market imperfection in an economy, with the land surplus case and the labor surplus case being useful polar constructs. Many characteristics of a country and its growth problems can often be related to the type of colonial experience in its background. Also helpful has been a typology based on country size and the recognition of different phases in the growth process, e.g., import substitution, export promotion, etc.

As more information has become available on the economic structure and other characteristics of the less developed countries, some shifts in the major emphasis of research have occurred. Both previous research and current development in many less developed countries have led to increasing doubts as to whether rapid rates of growth would *per se* provide the solution to such problems as unequal distribution of income, unemployment, and other social problems. As a result, there has been, in the Center, a gradual increase in the direct research emphasis on these issues in conjunction, always, with the question of the growth of output itself and the extent of the trade-off, if any, between the objectives. Problems of population growth and its implications for growth, distribution, and employment are scheduled for increased emphasis. Moreover, partly because of their complex roles in the joint determination of output growth and income distribution, issues of foreign investment and technological transfer are coming in for more attention.

Following in the wake of the Country Analysis Program, the Center's second major organized multi-country research project complements it in emphasis on one of these dimensions, i.e., a study of the unemployment phenomenon via a selection of eight different countries representing different economic structure and regions of the world. A major focus in this project is to view the unemployment problem in the broad context of growth, distribution of income, and other structural characteristics of the countries in question.

Another aspect of the Center's gradual reappraisal of its research effort has involved decreasing the emphasis on international monetary problems and Europe, and focussing increasingly on the less developed countries while still including relevant comparative work on growth in developed countries. The issue is partly one of comparative advantage of the Growth Center and partly involves a recognition of the fact that the less developed countries, despite the considerable increase in research in recent years, are still much less understood than the more developed ones. An Ad Hoc Committee organized in 1968
by Yale University’s President, Kingman Brewster, Jr., to review the Center’s progress and future, shared the point of view that such a shift was wise and recommended continued University support of the Center—a support now formalized for ten more years.

Gradual completion of the data-intensive and country-extensive country analysis program and the evolution of emphasis on cross-sectional work as well as on some specific social and economic problems in a limited number of LDCs has been accompanied by some reduction in the overall size of the Center’s research staff.

The Country Analysis Program

A total of 11 country studies are either published or completed in draft manuscript, while a number of others are close to text stage. The gestation period has been longer than originally anticipated—but so was the magnitude of the job. Many of the countries have very spotty and sometimes chaotic statistics and the improvement of these to the point where they could support meaningful quantitative analysis has frequently required much additional input, including re-visits. However, the number of published studies and the range of countries involved is now such that the payoff is being increasingly felt at the Center itself, as well as by others interested in development.

The countries involved in the program, the men responsible for them, and the status of work as of mid-1970 were as follows:

Africa:

*East Africa: Kenya–Uganda–Tanzania
  (Brian Van Arkadie)
*Ghana (Stephen Hymer)
*Ivory Coast (Dirck Stryker)
***Nigeria (Gerald Helleiner)

Asia:

***Ceylon (Donald Snodgrass)
*Iran (Vahid Nowshirvani)
*Malaysia (Van Doorn Ooms)
*Pakistan (Ronald Soligo)
*Philippines (Stephen Resnick)
**South Korea (Paul Kuznets)
**Taiwan (Samuel Ho)
*Thailand (Ammar Siamwalla)
One important aspect of the country analysis program has been the creation of a data bank involving, for each of the countries included in the program, the standard information appearing in the statistical appendix of those studies as well as other relevant information. The objective of this bank is to facilitate cross country studies on the part of Center members and other interested users. An attempt has been made to present a complete description of the data introduced into the bank in order to avoid the typical problems of misinterpretation when one person uses the information for countries with whose data he is not intimately acquainted.

**Some Major Findings To Date**

Since Center research has been wide ranging and because there is no evidence that the development process is simple enough to be summarized in a few general principles, it is not possible to pick out “the” two or three major conclusions which might be said to “sum up” what has been learned to date as a consequence of Growth Center research activities. Rather, all the evidence indicates that the development process is indeed many-faceted, with some behavioral relationships holding in one type of economy but not in another, even though their economic structures may not be very different. Hence the product of Center research is probably better described as the sum of many
pieces of findings and new insights into mechanisms which contribute to the growth of an economy. The results and conclusions cited below should therefore be interpreted more as illustrations than as a definitive summing up of the Center's contributions to date.

A number of the country analyses and other pieces of research have been directed, at least in part, to an understanding of the seriousness of divergencies from the "perfect markets" model used in most neo-classical economics, with special attention given to the labor market imperfections which provide the basic distinguishing feature between the labor surplus models and the neo-classical models. While aggregate empirical testing for the existence of a serious labor market imperfection is difficult for conceptual reasons, a piecing together of both macro and micro information has led several researchers to conclude that the labor surplus model is a useful framework against which to describe at least some of the economies with which they are dealing. At the same time, empirical research has brought out the need for complications of the original models presented by Lewis, Fei-Ranis, and others, and this process of interaction seems to be leading gradually toward models of greater explanatory power and econometric implementability.

While one body of Center research thus confirms the danger of the exclusive use of neo-classical assumptions (perfect markets, etc.) in the analysis of a country's development, another body, consistent with like results in the profession in general, insists that much government intervention in developing economies, especially their industrial sectors, has tended to push them away from efficient allocation of resources and thereby to slow down their rates of growth. This issue arises especially in the industrialization policies of many countries which are characterized by the deliberate and non-deliberate use of policies which foster capital-intensive and import-intensive production. Both cross-country comparisons of the relationship between import substitution and growth performance, and sectoral level studies of the relative efficiency of resource utilization in capital-intensive and labor-intensive enterprises bear out this conclusion. The successful long-run development of the Japanese economy and the more recent successes of Taiwan and Korea give evidence of the value of avoiding distortions of factor-price ratios which tend to favor capital-intensive technologies and output mixes—just as the generally slow growth performance and, in particular, the worsening in income distribution, which appear to have affected many Latin American
countries, present correspondingly negative evidence on the same question. Micro and sectoral studies of Pakistani industry and Colombian agriculture, among others, further suggest that medium and small-scale labor-intensive enterprises are more efficient users of scarce resources than are large and capital-intensive ones.

A comparison of the conclusions of several country analyses and other pieces of research suggests that the dynamics of development are such that much depends on whether a rapid growth process can be initiated. If it can, its maintenance appears to be relatively simple (at least as compared to its fostering in the first place) while, at the other extreme, a country which is stagnant (and especially if it has a past history of growth or of rising expectations) is likely to suffer from serious conflicts, including vicious sectoral clashes which may militate against the achievement of a successful growth pattern. The historical Japanese case as well as some contemporary Southeast Asian growth records, when contrasted with the Argentinian and other Latin American experience of the last three decades, have proven very instructive in this respect.

Another of the Center’s tentative research conclusions is the notion that there seems to be little evidence in favor of the “trickle down” theory of economic development, according to which, if an adequate output growth can be successfully achieved, distribution or, more precisely, the welfare of the people on the bottom end of the distribution, will take care of itself via demand interactions in the system. While the historical record may be too short in many underdeveloped countries to come to an unqualified conclusion with respect to this hypothesis, those over time distribution studies which have been performed suggest that distribution is likely to worsen, especially if a “capital-intensive” path of development is chosen. It will at best result in intermediate rates of growth insufficient to lead to rapid decreases in the relative size of the traditional sector. At the same time there is little evidence that this form of development is self-correcting in the sense that market forces tend to pull the system away from that line of development. The completeness with which dualism within the non-agricultural sector can manifest itself in economies of this sort is demonstrated continually in the countries studied.

Related in a particularly complex way to the questions of growth, dualism, and distribution is the phenomenon of technological transfer. The technologies which most LDCs are inclined to import (and frequently can most easily import) from abroad are capital intensive
ones—not at all in line with the relative factor endowment of those countries. Yet introduction of such technologies sometimes, though by no means always, seems to meet the “test of the market.” Thus, it is clear that no facile prescription against the transfer of “modern” and almost inevitably capital-intensive technologies can be rendered. At the same time, the potential of such technology for leading to unemployment and unequal distributions of income is obvious. A tentative finding at present would be that the difference between successful and unsuccessful use of foreign technology has much to do with the country’s ability to decompose elements of a technological package in such a way as to retain as few capital-intensive components as possible and focus on the ones which are consistent with labor intensity; the other key is a system of policies which will encourage domestic adaptation in labor using directions.
II. MAJOR LINES OF CURRENT AND FUTURE RESEARCH

Some of the conclusions mentioned above, together with the results of other research here and elsewhere, point increasingly to certain variables as keys to the past growth process of many countries and as highly relevant in the future. Among these are foreign trade performance, income distribution, population growth, and unemployment. All of these areas are now receiving substantial attention from members of the Growth Center staff as are such other areas as capital markets, financial intermediaries and the multi-national corporation.

Unemployment and Income Distribution in the LDCs

While there is controversy on its precise definition and size, few people will dispute the fact that unemployment is a quantitatively significant phenomenon in most contemporary LDCs. Even in countries which have experienced respectable rates of growth of income over the recent past, employment has not kept up; unemployment, disguised or open, has been on the increase in much of the developing world. Turning to the future, we know that, regardless of the success we may or may not have in dampening the population explosion as a result of current efforts, there is going to be a major labor force explosion. Since there is little we can do at this stage to affect the size of the labor force before the mid 1980s, it behooves us to turn our attention more fully than in the past to the problem of employment generation. Unless historical employment trends are substantially reversed, the growing gap between labor force endowment and utilization could become critical, not only from the economic but also from the social and political point of view.

Employment creation, of course, can be and often is viewed as a separate objective, one which is given its own weight in planners' or policymakers' preference functions. Put in another way, certain maximum politically tolerable rates of unemployment may be viewed as a constraint on a government's freedom to address itself to the maximization of per capita income. Alternatively, the point is sometimes made that an "additional" one or two percent in the growth rate must somehow be financed to keep unemployment rates from rising. The basic issue before us is whether or not we must assume the existence
of an unhappy and unavoidable conflict between output and employment objectives. If capital poor/labor rich LDCs can, at least for some historical time, move simultaneously in the direction of maximum output and employment generation, the task of development, it will be generally agreed, will be considerably lightened.

The Growth Center effort to contribute to knowledge in this area is proceeding along two main lines: (1) empirical studies of a number of developing countries as a whole, including some cross-country comparisons, and (2) specific related sectoral and functional studies. The first approach calls for an effort to analyze in greater detail the behavior of a selected number of less developed countries with respect to output and employment generation over the past 20 years. Selections will include, insofar as possible, representatives of each of the major LDC "types" which, judging by the results of the Center's earlier country analysis work, can be identified in the real world: the large labor surplus economy, i.e., India; the small export oriented economy, i.e., Colombia; the natural resources rich/human resources poor type, i.e., East Africa; the natural resources poor/human resources rich type, i.e., Korea. Center members engaged in this work include Gustav Ranis (Korea), John Fei (Taiwan), and Albert Berry (Colombia). Center alumni engaged in the project are Werner Baer (Brazil), Markos Mamalakis (Chile), Howard Pack (East Africa), and Ronald Soligo (Pakistan).

The first order of business will be to obtain as clear a quantitative picture as is possible of the record of output and employment generation by sector in each of the countries under consideration. While employment elasticities of output must not be viewed as carrying analytical significance, marked differences among countries and especially for the same industries in different countries should raise the question as to the causes of such differences. Admittedly higher employment elasticities of output or greater labor intensities must be bought at the price of lower labor productivity in those industries or sectors. But at the heart of this problem lies the empirical question of whether the overall productivity of capital and of other scarce resources, and hence overall output, are enhanced more by high labor productivity in some sectors—with large numbers of other workers simultaneously completely idle or underemployed—or by the relatively low labor productivity resulting from spreading capital more thinly and evenly over large portions of the total labor force.
Both in the context of the individual country studies and in cross country or other methodological frameworks, a number of specific issues will be focussed upon. One is the international and intranational flow of technology (Richard Nelson) including the contrast between organizational and individual learning and the efficient maturing of infant industries. Another is the question of the range of choice of technology actually available to the typical contemporary LDC and the differential impact on the technology which is utilized by the varying types of enterprise ownership and managerial decision making. What is the difference between subsidiaries of multi-national corporations, private domestic firms, and public domestic firms in a given industry in terms of their access to and choice of technologies? Meanwhile Robert Evenson is looking at the relationship between technical change, output and employment in agriculture, where both the question of mechanization—proceeding rapidly in some countries —and the “Green Revolution” in Asia have raised the possibility of substantial conflicts between employment and income distribution on one hand and output growth on the other. Finally, the employment/growth performance of the industrial and service sectors in several countries will be analyzed on a comparative basis.

Historical and Cross Country Analyses of Development

Thomas Birnberg and Stephen Resnick have been testing the hypothesis that, for a substantial number of LDCs in the late 19th and early 20th centuries, the growth process was primarily determined by their trading relations with the more developed countries and by government expenditures related to the production of exports in the economy. Their cross-country study promises to throw considerable light on the extent to which the growth process is, at least in terms of certain macro relationships, a homogeneous one across countries. Other members of the Center are also finding the “historical approach” useful in isolating factors which “make the difference” for at least some aspects of development. Examples include a study of Burma, Thailand, and the Philippines in the late 19th and early 20th centuries and a comparative study of the agricultural development of the U.S., Japan, and Colombia.

Lloyd Reynolds is in the midst of a cross country analysis of patterns of government income and expenditures including comparisons of historical patterns in developed countries with current trends in
LDCs. This, along with several other studies, contributes to growing general perspective as to what is happening in the LDCs by historical standards.

**Problems of Foreign Trade Policy**

The relationship between trade and growth continues to hold many secrets; the work mentioned above will contribute to understanding the historical relationship for some countries, but many detailed questions remain largely unresolved. Research under way at present includes attempts to appraise, both by detailed one-country and by cross-country studies (Carlos Díaz Alejandro and Benjamin Cohen respectively), the results of devaluation, optimal techniques of devaluation and, more generally, the best way to manage the exchange rate. The implications of various types of foreign investment are being analyzed in a variety of contexts as is the *ex post* validity of the “infant industry” argument for tariff protection. Finally, both the potential and the limitations of import substitution versus export promotion strategies are receiving detailed attention conceptually and in the empirical context of a number of specific countries.

**Economic Aspects of Population**

While Center research on population growth has been limited in the past, the creation of a demographic chair to be filled in the near future will initiate greater efforts in this increasingly important area. As with respect to such questions as import substitution, foreign investment, and others, there has unfortunately been too much emotional discussion of the population question and too little dispassionate analysis of the interaction between economic and demographic variables. We anticipate that this will be one of the areas of important Center contributions in the future, with topics of major emphasis including the process of migration from rural areas and small towns to larger cities and a definition of the precise characteristics of the migrants; the typical sequence of occupations through which migrants pass after reaching the city and the implications of differential places of residence for demographic variables; the determination of labor force participation rates and, in particular, those demographic variables which bear on whether individuals enter forms of occupation which probably add little or nothing to total national output, as op-
posed to others which do; and the relationship between demographic characteristics of a family (in particular, family size) and the propensity to save.

*Capital Markets*

While much attention has been focussed in past research on labor market imperfections and the labor surplus model, there is increasing awareness of the fact that there also exist serious imperfections in the capital market whose implications, while perhaps not particularly symmetrical with those of the labor market, may nevertheless be very important. Expressed in a different way, the achievement of perfection in the capital market may be a very important stimulus to savings, to optimal allocation of resources and, in general, to growth. Hugh Patrick has carried on work in the past in this area as has Raymond Goldsmith; other faculty members are increasingly interested in the area and in its integration with the analysis of other market imperfections.

Carlos Díaz Alejandro plans to undertake analysis of the implications of exchange controls and overvalued exchange rates. This combination is frequently alleged to constitute one of the major market imperfections leading to biases in the factor proportions chosen by producers. Subsidized and negative interest rates on credit, frequently going to larger firms which are in a position to use capital intensive technologies, may be one of the main biasing features statistically as well as with respect to technological choice. Several Center members plan to look at various aspects of this issue.
III. OTHER CENTER FUNCTIONS AND CONTRIBUTIONS

Invited Scholars

In continuation of earlier policies, the Center has welcomed foreign and domestic visitors interested in pursuing research on some area of development and being in contact with the Center staff. Some of these visits have been financed in full by the Center while others have received support from a foundation or other source with the Center providing research, library, and clerical services. The visitors received during the three years covered by this report include:

1967–68
Noel Butlin Australian National University, Australia
Scott Eddie Williams College
Nurul Islam Institute of Development Economics, Pakistan
Arthur Wright Oberlin College

1968–69
Edgar Edwards Rice University
Jeffrey Nugent University of Southern California

1969–70
Peter Bell University of British Columbia, Canada
Ajit Bhalla International Labour Organization, Geneva
Herman Daly Louisiana State University
Norman Girvan University of the West Indies, Jamaica
Daniel Sisler Cornell University
Laurence Stifel Thammasat University, Bangkok, Thailand

During each of these years at least one of the visitors came to Yale under the Center’s program of inviting younger faculty members of American universities and colleges who might benefit from a year of research in proximity to the unique library facilities and the intellectual life of the Growth Center. Of the above, the scholars who participated in this program included Messrs. Eddie, Wright, Nugent, and Daly. The visitor program is being continued; the Center typically welcomes several self-financed domestic visitors each year. Over time, however, increasing attention has been given to bringing in
visitors from the developing world in recognition of the mutual ben­
fit which such visits may have and of the increasing value of ties be­
tween foreign scholars and groups and the Growth Center.

Library and Documentation

The Center has made a sustained effort to acquire statistical re­
ports and other government documents from all countries, number­
ing about 100, with more than two million population. Main em­
phasis is on population, industrial, and agricultural censuses; sta­
tistical year books; national accounts; government budgets; develop­
ment plans; trade, industrial, and agricultural production statistics; 
price, wage, and employment data; monetary and financial statistics; and central bank reports.

The number of serial publications of varying frequency presently 
being received is about 3,800, including official statistical reports 
regularly issued and also selected professional journals from the 
countries represented in the collection. An in-house binding pro­
gram enables this soft-cover material to be preserved and stored in the 
appropriate country section in the library shelves.

The comprehensiveness of the acquisitions program makes the 
acquisitions lists especially useful to other development libraries and 
economic research libraries. Acquisitions lists are printed every month 
and distributed to more than 100 interested institutions and indi­
viduals in the United States and abroad.

International Association for Research on Income and Wealth

The Association has for some years received partial financial 
support from the Growth Center as part of its plan for eventual self 
sufficiency. As other sources of funds, including income from sales of 
the Association's journal, The Review of Income and Wealth, have 
become available, Center support is being phased out.

Conferences

In April 1968, the Center sponsored its second conference on a 
given specific topic of development. The theme was “The Role of 
Government in Economic Development” and a series of interesting
discussions, based on papers presented by Center faculty,* took place. Subsequently Gustav Ranis has edited a revised version of this series of papers to be assembled in a volume entitled *Government and Economic Development,* and to be published by Yale University Press in 1971. Among the researchers invited to this conference were many of the Growth Center alumni as well as others particularly interested in the subject.

Advisory and Related Activities

Yale University has on occasion undertaken to provide supporting services to departments of economics and economic research institutes in the less developed countries, usually under some foundation sponsorship. While the University is the contracting party, administrative responsibility for these arrangements devolves mainly on the Center. The services provided include advice on research programs, recruitment of American and European economists to serve as visiting professors or research workers in the cooperating institutions, and placement of graduate students and postdoctoral fellows from the cooperating institutions in American universities. Yale has been responsible for providing these types of service to the Pakistan Institute of Development Economics.

The body of expertise built up on individual countries and on development problems in general at the Growth Center has led staff members to be much in demand in their personal capacities as consultants to foreign or U.S. government agencies, foundations and foreign universities as well as for shorter lecturing and consultation visits.

Continuing Research Support

The Center retains close contact in a variety of ways with its alumni. Many members of the country analysis program have moved to other institutions before completing their studies and continue to receive some support from the Center. In the ongoing study on unemployment, for example, a number of alumni previously active in the Country Analysis Program are also participating. And in a more general sense, they retain their informal research ties with the Center,

*See Appendix, Section V.
engage in joint research with members of the group, and frequently return during the summers to take advantage of the Center's facilities and ambience. In these ways, the Growth Center community continues to encompass the alumni, and the experience of having been at the Center helps to perpetuate a working group of people interested in tackling the problems of less developed countries with some similarity in approach.

Former Center staff members who had accepted other employment as of July 1970 are as follows:

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<thead>
<tr>
<th>Name</th>
<th>Institution</th>
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<tr>
<td>Werner Baer</td>
<td>Vanderbilt University</td>
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<td>Bela Balassa</td>
<td>Johns Hopkins University</td>
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<td>Charles Frank</td>
<td>Princeton University</td>
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<td>James Hanson</td>
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<td>Gerald Helleiner</td>
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<td>Princeton University</td>
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<td>Stephen Hymer</td>
<td>New School for Social Research</td>
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<td>Paul Kuznets</td>
<td>Indiana University</td>
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<td>James Land</td>
<td>Rice University and St. Thomas Col-</td>
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<td>Markos Mamalakis</td>
<td>University of Wisconsin</td>
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<td>Andrea Maneschi</td>
<td>University of São Paulo</td>
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<td>Donald Mead</td>
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<td>Van Doorn Ooms</td>
<td>Swarthmore College</td>
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<td>Howard Pack</td>
<td>Swarthmore College</td>
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<td>Edmund C. Phelps</td>
<td>University of Pennsylvania</td>
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<td>Frederic Pryor</td>
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<td>Clark Reynolds</td>
<td>Stanford University</td>
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<td>Peter Schran</td>
<td>University of Illinois</td>
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<td>Donald Snodgrass</td>
<td>Agency for International Develop-</td>
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<td>Ronald Soligo</td>
<td>Rice University</td>
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<td>Jan Tumlir</td>
<td>G.A.T.T., Geneva</td>
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<tr>
<td>Brian Van Arkadie</td>
<td>University of Sussex</td>
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We are proud of this distinguished group of alumni, many of whom will, we expect, continue to participate in the work of the Center in future years.
New Appointments

New appointments during the period 1967–70 included
 Thomas Birnberg, Ph.D., Berkeley
 Benjamin Cohen from Harvard via the Agency for International Development
 Carlos Díaz Alejandro from the University of Minnesota
 Robert Evenson from the University of Minnesota
 John Fei from Cornell University
 Marsha Geier Goldfarb from Northwestern University via the Agency for International Development
 Richard R. Nelson from the RAND Corporation
APPENDIX

I. Book Publications, 1967–70


II. Center Papers Distributed, 1967–70

108. Stephen Hymer, Direct Foreign Investment and the National Economic Interest (Nationalism in Canada, edited by Peter Russell, 1966)
111. Ronald Soligo, Monetary Problems of Pakistan (Journal of Political Economy, August 1967)
117. Scott Eddie, Agricultural Production and Output per Worker in Hungary: 1870–1913 (Journal of Economic History, June 1968)
118. Albert Berry and Ronald Soligo, Rural-Urban Migration, Agri-

119. John M. Montias, Socialist Industrialization and Trade in Machinery Products: An Analysis Based on the Experience of Bulgaria, Poland and Rumania (Trade and Planning, edited by Alan Brown)


122. Samuel Ho, Agricultural Transformation Under Colonialism: The Case of Taiwan (Journal of Economic History, September 1968)


125. Reginald Green, Stages in Economic Development: Changes in the Structure of Production, Demand, and International Trade (Bulletin of the Bank of Sudan)


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IV. Seminar and Workshop Speakers, 1967–70

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