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ABSTRACTS OF DISSERTATIONS
ON
AGRICULTURAL CREDIT AND RELATED SUBJECTS
IN DEVELOPING COUNTRIES
1954-1964

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FOREWORD

Abstracts of 69 doctoral dissertations on agricultural credit in developing countries of the world are assembled herein. These include the majority of dissertations on the subject for which abstracts were submitted and published by Dissertations Abstracts over the period 1954-1964. In addition to those dealing exclusively with problems of agricultural credit, a considerable number of dissertations on closely related subjects are included. Land tenure, capital formation, and general economic development along with numerous other subjects are represented. All of these either include sections on agricultural credit or deal with problems relevant to agricultural credit in developing countries.

Two indexes, the first by country, the second by subject, are provided on pages i-iii.

Copies of abstracts or complete dissertations may be ordered by number (shown under each title) from University Microfilms, Inc., Ann Arbor, Michigan.

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**Title: THE NATIONAL DEVELOPMENT PROGRAMS OF THE INTERNATIONAL
BANK FOR RECONSTRUCTION AND DEVELOPMENT WITH
SPECIAL REFERENCE TO THE ROLES OF GOVERNMENT
AND PRIVATE ENTERPRISE**

(Publication No. 19,628)

**Author: Sonia Steinman Gold, Ph.D.
University of Pittsburgh, 1956**

This is a detailed study of the economic development programs which have been prepared for 13 countries by Survey Missions of the International Bank for Reconstruction and Development. Major attention is given to probing for the strategic concepts and basic policies which underlie these concrete proposals for promoting agricultural and industrial development under a wide range of environmental and institutional circumstances. But an even more fundamental objective is to appraise the bearing of these proposals on the relationship between the private and governmental sectors of the economy during the course of development.

After an introductory review of the objectives, scope, and nature of these IBRD development programs, the analysis begins with a consideration of their quantitative aspects. How large are the proposed investment programs in absolute terms, relative to population size and in relation to national income levels? Proposed investment levels are also compared with the actual investment level in recent years in each country. Finally, the programs are compared with one another in respect to the pattern of proposed allocations among the major sectors of the economy.

In order to trace the relationship of guiding principles to detailed recommendations, attention is then concentrated on the two sectors of production, agriculture and industry.

The objectives of agricultural development are found to center around increased self-sufficiency, greater diversification, and a variety of institutional reforms concerned with tenure conditions, size of farms, and the settlement of new areas. In addition, price policy poses questions concerning the relationship of long-term development objectives to short-term objectives of inflation control and exchange stability. In turn, analysis of the proposed allocation of agricultural expenditures reveals the extent to which such objectives are to be advanced through the development of public irrigation and drainage, improved farming practices, research and experimentation, education and extension services, cooperatives, and credit arrangements.

Before reviewing the nonagricultural sector of development programs, there is a detailed examination of the roles of private and of governmental undertakings in transportation and other public utilities, in mining and in manufactures--along with a summary of Mission evaluations of past performance in government operations. The analysis turns next to the obstacles which have served to restrain private entrepreneurship in industry, including the limited size of markets as well as the absence of needed psychological assurances and material resources. Finally, consideration is given to the means whereby the IBRD Mission programs hope both to reduce such obstacles to private entrepreneurship and to provide the supplementary developmental impetus of a species of governmental entrepreneurship.

The study concludes that the IBRD development programs represent a serious effort to design a development program which limits the role of government in economic affairs to the minimum consistent with the realization of growth objectives. Even this minimum role represents a significant increase in government participation in the economic process in the 13 countries studied. However, the careful delimitation of the public sector, the reservation of directly productive activity for the private sector, and the recommended aids to private enterprise indicate the extent of the IBRD Missions' efforts to render their development programs consistent with the institutional requirements of a market economy.

The world-wide range of IBRD influence makes its views and recommendations with respect to the role of government in the development process a potent force in the restructuring of national economies. Moreover, the development efforts undertaken on the basis of IBRD strategic guidance represent a rich store of contemporaneous experience which is of major significance to the formulation of a general theory of growth.

Source: Dissertation Abstracts, Vol. XVII, No. 1, University Microfilms, Ann Arbor, Michigan, 1957, 370 pages.

Title: THE PATTERN OF LAND TENURE REFORM IN
EAST ASIA AFTER WORLD WAR II

(Publication No. 20,584)

Author: Sidney Klein, Ph.D.
Columbia University, 1957

Large populations and limited amounts of arable land have created great population pressures in China, Japan, Korea, and Taiwan. These population pressures are reflected best in the agricultural areas of these nations. There, prior to the land tenure reform programs of the post-World War II period, land ownership was concentrated, tenancy was widespread, and abuse of the tenants by landlords was common. At the completion of the reforms, landownership was more widely distributed, the area cultivated by tenant farmers had been sharply reduced, and many but far from all of the abuses commonly practiced on their tenants by landlords had been made illegal and no longer prevailed. However, newer abuses, principally in the form of inordinately high taxes cropped up to replace them in some countries.

In Japan, tenancy, formerly a characteristic of nearly half of the cultivated land, was reduced to approximately one-tenth of the cultivated land, tenant-landlord relations were put under the close scrutiny of impartial local Land Commissions, lease contracts were required to be put in writing, and rental payments were lowered significantly. These drastic changes took place with relatively little disturbance to the existing farm management pattern and farm operations.

The results of Taiwan's land tenure reform program were substantially the same. The area under tenancy was reduced to 16% of the total cultivated

area, rents were lowered sharply, and leases were required to be in written form. Still other abuses of the tenancy system were made illegal and prosecuted out of existence. As in Japan, this basic change took place without serious disruption of the economic lives of the farm population.

Less was accomplished in South Korea than in Japan and Taiwan. While the number of half-tenants and full-tenants in South Korea was reduced by about 77% and the number of tenants tilling land, 50% or more of the area of which was their own property, had increased by about 171%, other serious deficiencies remained. These deficiencies included: oral land leases for indefinite periods of time, eviction of tenants and over-renting of the land to other tenants, and "gifts" to landlords and their agents. The only major change effected in South Korea was a wider distribution of land ownership.

A similar change was effected in North Korea where the land of absentee, large, and other landlords and land belonging to the Japanese government and its nationals was confiscated. This land was distributed to the landless and the land-poor, who received, on the average, about three and one-quarter acres per family. However, these lands by themselves were not sufficient to yield a livelihood to the recipients. Further, title did not pass to them, only "use rights" which could be, and, on one occasion, actually were withdrawn from those incurring the disfavor of the Labor (i.e. Communist) Party. The lands were then redistributed to Party members and sympathizers. Because taxes drained off much of the peasants' real incomes, many of them felt that they were better off during the Japanese regime, 1905 to 1945, than under the Communists, 1945 to 1955.

In Communist China, the reform took the same course. The landlords' land was confiscated and redistributed and rent and interest rates were lowered, but the peasants did not benefit from these actions. As in North Korea, a high level of taxation channelled the peasants' incomes into the war and industrialization programs of the Chinese Communist Party. The peasants in 1955 at the very least were no better off economically than in 1945 and there is considerable evidence to indicate that they were worse off.

Source: Dissertation Abstracts, Vol. XVII, No. 5, University Microfilms, Ann Arbor, Michigan, 1957, 412 pages.

Title: AN APPRIASAL OF AGRICULTURAL PROBLEMS
AND POLICIES IN THE PHILIPPINES

(Publication No. 19,437)

Author: Nathaniel Bautista Tablante, Ph.D.
Purdue University, 1956

This report is divided into two main parts. Part I describes the existing situation and points out the major socio-economic problems associated with the Philippine agriculture, with the use of background information gathered from secondary sources. Part II comprises an evaluation of agricultural policies, the setting up of general objectives of policy, a consideration of long-range alternative program-measures designed to attain the ultimate

goal, and the presentation of suggested lines of action which may be carried out in the immediate future to start with.

Agriculture is a fundamental segment of the national economy of the Philippines, considering the large proportion of the total population dependent upon the industry for their livelihood and its contribution to the national income and to the country's foreign trade. While this is so, many problems continue to remain unsolved, thereby retarding the economic development of the country and providing little opportunity for the people to enjoy a high standard of living.

The rapid growth of population continues to bear heavily on the existing resources of the Philippines and production has hardly kept pace with the levels of consumption of an increasing number of people. Agricultural productivity is still at a relatively low level, being the result of the play of numerous closely inter-related forces. The most important of these factors which tend to bring about low agricultural output per person are the use of unscientific farming practices and methods of production, low yields of crops and rates of livestock production, small size of farms, high labor requirements in many farm operations, low available capital per farmer and difficulty of securing productive credit at reasonable terms, unfair tenure arrangements and tenancy practices, and lack of economic opportunities outside of agriculture.

In addition to problems of agricultural production, there also are those problems relating to land use and development, agricultural finance, marketing and foreign trade, and the development of human resources and the improvement of rural living, to mention a few broad categories. The classification, survey and subdivision of lands, the issuance of valid titles to land, and the proper enforcement of laws relating to tenancy have not been effectively carried out, thereby slowing down considerably the program of land settlement and land tenure reform of the government. Credit from established lending institutions is often beyond the reach of small farmers, so that a large proportion of agricultural credit transactions are handled by landlords, merchants and private moneylenders who frequently indulge in unscrupulous practices to the great disadvantage of the farmer-borrowers. There is a lack of an orderly and efficient marketing system; marketing facilities are not adequate and essential marketing services are lacking or are performed inefficiently. As a result many producers do not possess much control over the marketing of their products. With respect to foreign trade, the problems include unfavorable balance of trade, lack of diversification in terms of both products and markets, and changes in commercial and economic relations between the Philippines and other nations. Community facilities and essential services for improved rural living, such as health, education, recreation, public utilities, and means of transportation and communication, are very inadequate in rural areas.

All of these conditions tend to bring about the present low economic status of the farm population of the Philippines. The problems are so closely inter-related to each other that priorities are difficult to assign. This implies that the problems should be approached simultaneously with measures that would be consistent with the general objectives of agricultural policy for the Philippines. These objectives include stability of agricultural incomes and comparability with other groups in society of similar ability, conservation and development of resources, economic progress and efficiency, adequate supplies of food and fiber for the nation's population,

maintenance of the family farm, and consistency with the overall policy of the nation and administrative feasibility--all of which move toward the attainment of the master goals of maximizing the social product over time, optimizing the distribution of income, and maintaining responsible freedom of individual action, in a democratic society.

The core of the problem, therefore, revolves around the question of what basic steps the Philippine Government should take during the next two or three decades for promoting the best economic interests of the nation and ultimately improving the standard of living of the people. The basic agricultural policies proposed to be carried out to accomplish this objective focus on the long-range adjustments considered necessary and desirable to increase efficiency in agricultural production, to develop an efficient and orderly marketing system for farm products, to improve rural living and to expand nonfarm economic opportunities.

Recognizing that the proper implementation of these policies would require huge appropriations and that the budget of the country has only a limited program-carrying capacity, it is recommended that a starting budget of from 50 million pesos to 60 million pesos in addition to the regular amounts in the national budget be made available. This initial amount would be distributed over a five-year period to start the implementation of the recommended measures. As many of the proposed projects as these funds would allow should be undertaken. Since the recommended courses of action will result in increasing the overall productivity of the nation, more funds would then be available and more projects could be undertaken without necessarily taking a bigger cut of the national budget.

Specifically, the recommendations made concern the improvement and expansion of agricultural research and extension, the improvement of land tenure and settlement, the improvement of agricultural credit, the improvement of marketing and trade, the improvement of general and vocational education, the expansion of nonfarm employment opportunities and the provision of rural community facilities and services. While all the problems cannot be solved within a short period of time, it would be a wise investment for the Philippine Government to initiate as many of the proposed measures as the limited funds would allow. This will move eventually toward the accomplishment of the objective of securing greater productivity and higher standards of living for the Philippines.

Source: Dissertation Abstracts, Vol. XVII, No. 7, University Microfilms, Ann Arbor, Michigan: 1957, 356 pages.

Title: LAND TENURE AND RURAL ORGANIZATION
IN TURKEY SINCE 1923

(Publication No. 21,406)

Author: Evan Fotos, Ph.D.
The American University, 1957

As its legacy from the Ottoman Empire, the Turkish Republic received a very imbalanced land tenure system. The great majority of the Turkish peasants were either without any land or else did not own landholdings of sufficient

size for practicing much more than subsistence agriculture. However, because Turkey was a country of fairly adequate arable land and low population density, the situation was far from desperate.

During the 1920's and 1930's the Government made various modest attempts, mainly through land distribution legislation, to improve the land pattern. Though advocated by certain members of the Turkish Government during this period, no comprehensive land reform was enacted into law until 1945. That Republican Turkey meanwhile had instituted a succession of reform measures of rather startling proportions in a multitude of spheres is well-known. Under the almost miraculous driving impetus of Kemal Atatürk, aided by a body of lieutenants, drawn mainly from the educated, westernized urban element, colossal reforms necessitating vast reorientations were undertaken. But serious land reform was deferred because it would have struck a crucial body-blow against a significant number among the parliamentary element supporting the Atatürk regime.

The long-discussed and long-anticipated land reform measure, ultimately overcame the opposition of this small but influential body of large absentee landholders among the Assembly members and reached the floor of the Grand National Assembly in early 1945. The reform law which resulted, besides possessing qualities which transcended the economic, envisaged far-reaching social and political changes. The law proposed to create a mass of independent peasant families in Turkey which could, in turn, create a free society, thus making possible a truly functioning and viable democracy. Private landholdings were to be limited to 1250 acres. One would have to work his land personally. If one did not cultivate his land for three successive years, he could have it taken from him. As for the widespread sharecropping institution, there were bold provisions for alleviating their plight.

Because of political considerations, dictated largely by powerful interest in the Assembly, the 1945 Law was only partially implemented. The successive governments saw to it that practically no privately-held land was expropriated, though it should be noted that a very appreciable amount of land--almost two and four-fifths million acres of state-held land--was distributed through 1955. Because insufficient tracts of land were generally made available to the landless peasantry, though, these acquisitions permitted one to practice little more than subsistence farming. Also, whenever land was given in too small pieces, fragmentation of land, already a serious problem in Turkey, was accentuated still further. The Government did pay some, but not sufficient, attention to the problem of making credit available to the peasant. Along with the granting of land, the equally necessary credit instruments for establishing a viable peasant holding should have been further developed. Implementation of certain other provisions of the 1945 Law has resulted in the sharp reduction of absenteeism among landowners. Also, previously idle arable land has been brought into cultivation.

Since World War II, particularly since the Marshall aid program, the effect of rapid and widespread mechanization upon a portion of Turkish agriculture has made varying impacts upon the land tenure pattern of the entire country. Farm sizes have increased appreciably as has agricultural production. The sharecroppers, no longer necessary in farm operations, have been displaced in significant numbers. These people have flocked to the urban areas where they now pose a serious social and economic problem, which could well lead to a factor of political instability.

If democratic practices are permitted to take root in Turkey, the pattern of land tenure should assume a more healthy direction. As Turkey's peasantry, who constitute some 80% of the total population, become increasingly aware of the decisive influence they could bring to bear through the exercise of their franchise at election time, the rival political parties will be forced to go beyond the mere professing of noble land reform aims in their party platforms in order to gain and retain the favor of the awakening rural majority.

Source: Dissertation Abstracts, Vol. XVII, No. 7, University Microfilms, Ann Arbor, Michigan, July 1957, 225 pages.

Title: SOURCES FOR CAPITAL FORMATION FOR
ECONOMIC DEVELOPMENT IN NIGERIA

(Publication No. 21,841)

Author: Abai Njoku Abai, Ph.D.
The University of Wisconsin, 1957

This thesis is concerned with the problem of the low level of per capita income in Nigeria. Materials for the study were drawn from historical and contemporary sources. Available statistical data were used to illustrate how administrative policies have affected the pattern of economic activities and the process of capital formation.

Evidence from the investigation indicates that economic development has its administrative base and is affected by it in public activities as well as in private business practices. The process of capital formation is one in which political, social and economic policies, each with its particular objectives, seem to determine the allocation of resources and the conditions under which the respective activities are carried out. The method of evolving policy-objectives for the various activities is administration which in turn reflects the interplay of those activities, their strength and weaknesses, their skill and ability to organize, combine and improve productive resources, and then the state of their final output such as the quantities of economic variables, their qualitative changes over time or even their relationships with one another.

The political and economic dependence of Nigeria on Great Britain greatly affected administrative policy-objectives and the course of economic activities. Difficulties of administration which have limited the rate of capital formation consist in three main factors. The first is the human factor in terms of shortage of trained and experienced technical and managerial staff, a situation which has hindered economic planning and distorted proper execution of policy-objectives. This difficulty is intensified by the wrong type of educational facilities in Nigeria and by the failure of foreign authorities to allow Nigerians responsible positions in private and public services.

The second administrative difficulty is the uncertainty of financial resources which led to discriminatory policies and unproductive investments. Funds have been derived primarily from indirect taxes and largely invested abroad for revenue and security reasons. The revenue reason, that of

securing more funds, was shown to be faulty. Returns from investments abroad were shown to be far less attractive and much smaller than the returns on investments within Nigeria. Investments abroad reduce funds that would be available for domestic investment and increase the burden and capital needs of the economy. The problem of insufficient capital accumulation is one of improper administration of available funds rather than of inadequate funds. Both the revenue and the security reasons are tantamount to the inability of administrative authorities to encourage, develop or provide local and alternative investment opportunities.

Finally, both the shortage of staff and the financial problems limited the range of government activities. As a result, important public services of the social overhead type have suffered considerable neglect. This means underutilization of resources, limitation in the capacity of private enterprises, difficulties of undertaking new ventures and of maintaining the existing public services.

Of the two groups of problems---shortage of trained and experienced personnel, financial problems and inadequate accumulation of real capital---only the financial position has shown a remarkable improvement in the recent years. Factors responsible for this change are external and unstable and not the result of substantial improvements in the organization of economic activities. This being the case, special attention was given in this study to certain fiscal and reorganizational measures, such as taxation, deficit finance and improvements in agriculture, which will ensure more dependable sources of funds and encourage increased productivity.

In general, insufficient real capital accumulation and the dearth of skilled personnel continue to plague the Nigerian economy. Since the future progress in capital formation depends upon efficient use of resources, this calls for vigorous efforts by Nigerian authorities and leaders to improve general administration, a process not easily attainable, at least in the next few years. Until such is the case the course of capital formation and economic development will continue to be distorted and retarded. Political and economic independence may be necessary, but it is not a sufficient condition for economic progress. It offers no easy path to rapid development.

Source: Dissertation Abstracts, Vol. XVII, No. 8, University Microfilms, Ann Arbor, Michigan, August 1957, 249 pages.

Title: CAPITAL FORMATION IN A DEVELOPING ECONOMY

(Publication No. 19,581)

Author: Pius Nwabufo Okigbo, Ph.D.
Northwestern University, 1956

This dissertation uses Nigeria as a case study to develop certain hypotheses about capital formation in a developing economy. The empirical data on Nigeria are organized around three propositions. First, since a large proportion of the private saving in a developing economy occurs in "atomized" and isolated cells, the choice of investment possibilities is frequently restricted to only those in which the minimum scale of the initial outlay is relatively small. Investment opportunities which require lumpy and indivisible initial outlay become irrelevant alternatives. Consequently, the productivity of the investment that occurs is restricted because opportunities which may be more productive than the ones currently selected are overlooked. Second, very little saving is to be expected from wage incomes. Third, the growth of investment is largely dependent on the import of capital goods.

The most important of the factors that govern private investment in fixed capital are represented in a structural equation as follows:

$$I_t = F(Y_{t-e}^i, S_t, K_{jt}, U_t)$$

such that $F_{y^i} > 0$, $F_S \geq 0$, $F_K \geq 0$, and $F_U \geq 0$ where I_t = investment in domestic fixed capital at time t ; Y_{t-e}^i = change in domestic output; S_t = private saving at time t ; K_{jt} = the level of existing capital stock in industry j at time t as $j = 1$ to N ; and U_t = expectations held at time t about changes in the future levels of output, and about the movement of the ratio of the level of prices to the level of raw material and labour costs.

The study emphasizes the influence of the volume of private saving and the level of capital stock on investment in domestic fixed capital. An increase in the level of existing capital stock may stimulate further investment by generating external economies to firms undertaking new investment, and by creating an atmosphere congenial for additional capital expenditures. However, if an increase in private saving leaks into inventory accumulation, export surpluses, addition to cash holdings, or government deficit, private investment in fixed capital may be less than the rate appropriate to the rate of turnover.

The study points to the following conclusions. First, the development of savings intermediaries is essential for stimulating and "bulking" private personal saving for investment in domestic fixed capital. Second, a developing economy may prefer to sustain an import surplus provided it is incurred through an import of capital goods. Third, it may be desirable to channel investment less into foreign assets and more into domestic fixed capital: with capital accumulation at home, the "technical frontier" of the domestic economy is moved forward accompanied by an increase in know-how. Fourth, the concentration of domestic investment in "traditional lines" may reflect imperfections in the capital market; if a change in the distribution of domestic investment is desired, it may be necessary to interfere with the market mechanism with a view to removing some of the imperfections. Finally, the extension of the social overhead capital stock--roads, power, water, information, etc.--would lead to an expansion of output by stimulating investment in some of those opportunities that are currently overlooked.

Source: Dissertation Abstracts, Vol. XVII, No. 2, University Microfilms, Ann Arbor, Michigan, 1957, 232 pages.

Title: ELEMENTS OF A THEORY OF ECONOMIC DEVELOPMENT OF UNDERDEVELOPED COUNTRIES: A GENERALIZATION OF PROJECTED PATTERNS OF ECONOMIC DEVELOPMENT IN COUNTRIES SURVEYED BY THE INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

(Publication No. 11,888)

**Author: Ch'ung-tai Lu, Ph.D.
University of Maryland, 1954**

The hypothesis of the present dissertation is that from studies of underdeveloped economies that have been made in recent years, it may be possible to discover some common elements which may constitute part of a general theory of economic development of underdeveloped areas. The data are the reports submitted by the missions of experts of the International Bank for Reconstruction and Development to the governments of underdeveloped countries to serve as basis of deliberate action for economic progress.

The mission programs are characterized by an experimental attitude, by gradualism, and by cost consciousness. They are realistic and flexible and are made to meet the postwar needs of the governing bodies of poor areas. The programs focus on public investment in social overhead capital to build a sound foundation for sustained overall growth. Agriculture is to be diversified and is given primary importance, while industry is to play a secondary role. Government action in social overhead and agriculture is more interventionist than in industry. Failure to assign to industry an important role is unique for studies of this type and cannot always be justified. The immediate rates of growth are not high, but possibilities exist for higher rates of progress in the future.

Elements for a theory of economic development of underdeveloped areas implicit in the program reports of the Bank missions are: (1) cultural factors as an integral part of the analysis; (2) the concept of social overhead capital, which has fundamental implications for the concept of capital in general; (3) a special concept of investment; (4) the tendency toward increasing return; (5) enhanced significance of the capital-output ratio; (6) the role of collective action; and (7) the significance of short-run conflict of interests.

Economic development of underdeveloped countries is a comprehensive process. The several elements mentioned above are interrelated. One element may be just another aspect of some other, or may give rise to some further common components. The number of elements and their classification is flexible. The significant conclusion, however, is that despite variation in detail among countries, there appears to exist an essential unity in the process of development and therefore a body of concepts and propositions (theory) generally applicable to underdeveloped countries is possible. The pivotal concept in a theory of economic development of underdeveloped areas is social overhead capital from which other common elements originate and by which the latter are given unity and coherence. The basic issue in the development of underdeveloped areas concerns the cultural institutions. To make such institutions conducive to progress, the social and intangible nature of capital and investment dominates the private and material aspect. Since investments in social overhead

capital are lumpy, their productivity indirect, and their range of utilization wide, later investments will be more productive than initial investments. For the same reasons and because of the wide-spread and penetrating effects of social overhead capital, collective action is necessary. Furthermore, the service of a public body is needed to reconcile short-run conflict among group interests in both pre-developed and advanced countries.

Source: Dissertation Abstracts, Vol. XV, No. 6, University Microfilms, Ann Arbor, Michigan, June 1955, 375 pages.

Title: AN APPRAISAL OF THE AGRICULTURAL PROGRAM
IN THE FIRST FIVE YEAR PLAN OF
PATIALA AND EAST PUNJAB
STATES UNION, INDIA

(Publication No. 10,755)

Author: Bhagat Singh, Ph.D.
Cornell University, 1955

This study deals with the formulation and the working of the State Five Year Plan as it applies to Agriculture in Patiala and East Punjab States Union (PEPSU).

PEPSU is a newly formed State situated in the northwestern part of the Indian Union. The State has a land area of about 10,000 square miles and a population of 3.5 million. Agriculture alone employs more than two-thirds of the total population in the State. Agricultural productivity both per acre and per person is low due to a combination of (a) surplus agrarian population, (b) low crop yields, (c) inadequate irrigation facilities, (d) inadequacy of farm finance, (e) unsatisfactory land tenure arrangements and (f) unorganized marketing of agricultural produce.

The PEPSU Plan to increase agricultural production was a part of the country-wide effort to meet the problem of food shortage in India. The Plan was prepared under the direction and control of the National Planning Commission. Agriculture was allotted more than one-half of the total expenditure of Rs. 814 lakhs. The important agricultural schemes are the reclamation of waste lands, consolidation of holdings, introduction of better seed, implements and fertilizers, irrigation works and the formation of cooperative societies. Another noteworthy feature of the Plan is the initiation of community development and extension service program.

The implementation of the development schemes which began in April 1951 worked according to the schedules and targets set in certain cases, while the progress was slower in some others. The Dhuri Community Development Project came into operation in October 1952, while the Bhadson Pilot Extension Project was already working since April of the same year. The start in case of reclamation of waste lands was long delayed as the work was not begun until January 1954.

Since the Plan is still to complete one-third of its course, an assessment can only be made on the basis of its achievements in the first three years. By the middle of 1954 it was fairly evident that agricultural production in the State has risen considerably. How much of this increase was due to the prevailing favorable weather was difficult to say. Land consolidation work was making rapid progress and the results achieved in the field of irrigation were satisfactory. The success of a development scheme was more or less assured whenever Government provided finance to the cultivators. As a result of legislation the interests of tenants-at-will were protected and occupancy tenants acquired proprietary rights over their lands.

Even if the various schemes achieve their goals by 1956, the Plan is not expected to bring radical changes in the structure of agricultural economy. In view of the limited resources, the Plan is rather modest in its scope. The total public expenditure on agricultural projects in PEPSU, if distributed on the agricultural population comes to less than Rs. 25 per head in the entire five-year period.

Greater capital investments are, undoubtedly, necessary to speed up the development work in agriculture. But equally pressing is the need for better and more judicious use of available resources of men, money, and materials. For instance one-fourth of the expenditure on agriculture is earmarked for cultivation of waste lands. But the merit of using this money on new lands rather than on intensive cultivation of the existing lands can be seriously challenged in the interests of maximization of economic utilities. It is more so when more than 75 per cent of the total land in PEPSU is already under cultivation.

The chronic underemployment of the peasant caused by the surplus agrarian population will only go by creating more rural non-farm activity in PEPSU. However rural industrialization remained more or less neglected. The total budgetary allocations under the Plan made for village industries were less than one per cent of the total expenditure.

Source: Dissertation Abstracts, Vol. XV, No. 2, University Microfilms, Ann Arbor, Michigan, February 1955, 249 pages.

Title: A STUDY OF AGRICULTURAL CO-OPERATIVES IN WESTERN UTTAR
PRADESH (INDIA) WITH SPECIAL REFERENCE TO AGRICULTURAL
CREDIT
(L. C. CARD NO. MIC 58-1503)

Author: Babu Lal Agrawal, Ph.D.
Cornell University, 1958

The study concerns co-operatives in the districts of Saharanpur, Muzaffarnagar, Meerut, Bulandshahr, and Aligarh. It deals with agricultural co-operatives in general and with agricultural credit societies (also known as multi-purpose co-operative societies) in particular. The main purposes of this study were: (1) to provide information on the general progress of the agricultural co-operatives, especially the agricultural credit societies; (2) to appraise the credit and non-credit activities of these societies and to indicate the relationship between the different strata of members and their participation in the activities of the agricultural credit societies; (3) to determine the relative importance of the co-operative organizations as compared to other agencies in the field; (4) to point out the weaknesses of these co-operatives; and (5) to suggest a plan for reorganization.

The whole region has been dealt with very broadly, but to enhance the scientific utility of this dissertation, the operations of ten agricultural credit societies were studied intensively for the ten-year period from 1944 to 1954.

During 1953-54, there were about 3,780 co-operative societies of all types in Western U.P., out of which 94 per cent were agricultural. Agricultural credit societies constituted as much as about 76 and 81 percent of the total and agricultural societies, respectively.

Since 1939, two types of agricultural credit societies have been in operation: (1) Agricultural Credit Societies, limited (or multi-purpose co-operative societies); and (2) Agricultural Credit Societies, unlimited. During 1953-54, the societies of the latter order formed only about 2 per cent of all the agricultural credit societies in Western U.P.

The results of the study of the secondary data and the first hand investigations in Western U. P. appear to indicate that:

1. Agricultural credit societies embraced only a fraction of the rural population in Western U.P.
2. Their volume of credit business was too small to be of any effective service. They supplied less than 2 per cent of the total borrowings of the cultivating families. The services had been inadequate even to those who were members of these societies.
3. There was no significant relationship between the different strata of membership and their participation in the activities of the agricultural credit societies. However, the members having larger holdings seemed to exercise greater degree of control in the affairs of these societies.
4. These societies failed to provide any effective competition to the private moneylenders either in terms of the volume of credit or in that of service; and hence, moneylenders enjoyed almost absolute monopoly in the field of credit.

5. It had not been possible for these co-operatives, in general, to undertake non-credit activities to any appreciable extent.
6. Small unit of operation, lack of funds, inflexibility of lending operations, and lack of understanding of the problems of the rural people on the part of the management were the greatest hurdles.

A reorganization plan suggested in the main body of this thesis emphasizes the formation of large-sized agricultural credit societies, mainly with the purpose of attracting savings; advancing loans; arranging for the sale of agricultural and cottage products; and procuring and supplying the agricultural, cottage, and family requirements. Employment of a trained and full-time paid secretary; coordination of the functions with village panchayats, and the development and extension service; and continuous research by the Departments of Agricultural Economics of the Regional Agricultural Colleges on the activities of the large-sized societies form some other features of the reorganization plan.

Source: Dissertation Abstracts, Vol. XVIII, No. 5, University Microfilms, Ann Arbor, Michigan, May 1958, 288 pages.

Title: AGRARIAN REFORM AND ECONOMIC
PROGRESS IN LATIN AMERICA
(L.C. Card No. Mic 59-5057)

Author: Richard George Milk, Ph.D.
Iowa State University of Science and Technology, 1959

Inequalities between national per capita incomes have accelerated the study by economists and national leaders in economic development. Since over sixty per cent of the world's population is engaged in agriculture, the agrarian structure appears important to economic development.

According to present rates of population and economic growth, the most rapidly developing countries in the Latin American region could attain the 1954 per capita income level of Denmark within 45 to 55 years, while the slower growing countries could not attain this level for nearly three centuries.

In most of the Latin American nations the basic social, economic, and political structures have been greatly influenced by feudalism, mercantilism, and monopoly elements. This influence is often markedly revealed in the agrarian structure.

A primary hypothesis of this study is that nations which have proceeded furthest toward the goals of agrarian reform have also proceeded furthest in economic development.

This hypothesis is evaluated by a Spearman rank correlation between per capita incomes of 19 Latin American nations and an agrarian reform index. The calculated correlation is .7. It is inconclusive because data for equality of incomes to rural and non-rural persons are not available.

A high rank correlation, .825, exists between the index of manpower efficiency in agriculture and national per capita incomes.

The following Spearman rank correlations were discovered between per capita incomes and: per capita agricultural land area, .695; literacy in the population, .79; and democratic tendencies, .745.

Conceptually, the Belshaw Cobb-Douglas function of economic growth permits the use of regression equations. Considering per capita incomes as a dependent variable, we obtain the following product - moment correlations: with per capita agricultural land, .829; with literacy, .639; with per capita capital formation, .868.

The graphic method provides a third type of correlation analysis which verifies the importance of land area and of literacy. Furthermore, correlations of residuals after literacy and land area effects are removed, suggest the importance of high crop yields.

The study presumes that recognizable variables affect economic growth and that agrarian reform measures affect economic development through these economic growth variables. Economic models aid in the identification of sixteen economic growth variables and twenty-four agrarian defects.

Agrarian reform measures appear to affect economic development: (a) by changes in the total economic and social structure; (b) by greater efficiency of the agricultural firm; (c) by improving the welfare of rural people; (d) by increasing the mobility of labor, capital, technology, and management; (e) by the quantity, composition, and efficiency of the aggregate national investment; (f) by agricultural production for the non-rural sector; (g) by increasing economic stability.

A condensed summary is given of examples of the twenty-four agrarian defects and a later chapter presents examples of measures enacted to remedy these defects.

A model of a stagnating economy and how it may break out of its quasi-equilibrium low income level state, implies the need for remedial measures that will: (a) increase the annual investment rate in the economy and (b) lower the population pressure on resources.

These implications correspond to the implications both of our basic growth model and of our statistical analysis. It would appear that the most important "investments" to improve rural income levels are: expansion of agricultural land area; investments in the human agent in general literacy and technological skills; application of low capital technological innovations within agriculture; improvements in rural social overhead facilities of schools, roads, water, and electrical installations; and improvement of housing for rural people.

Source: Dissertation Abstracts, Vol. XX, No. 6, University Microfilms, Inc., Ann Arbor, Michigan, December 1959, 324 pages.

Title: TOWARD A PROGRAM FOR AGRICULTURAL
DEVELOPMENT IN ECUADOR

(L.C. Card No. Mic 59-5746)

Author: Rene Benalcazar-Ruales, Ph.D.
The University of Wisconsin, 1959

This thesis is an attempt to set up the bases and framework for a balanced program of agricultural development in Ecuador.

Ecuador, an underdeveloped country, has not been fortunate in her economic growth. The geographical location, her topography, the poor endowment of resources, her institutions, a mixture of Spanish and Indian cultures not well adapted to the new environment, combined to determine a slow and unharmonious economic growth.

In 1939 Ecuador entered a period of expansion due to increase in foreign demand for export crops. Favorable terms of trade constituted a stimulus for rapid growth until 1954. From then on the terms of trade deteriorated, the rate of economic growth declined. Meanwhile the rate of population growth rose as well as the levels of consumption. Agriculture for domestic consumption remained relatively stagnant.

The problems consists in, given the actual conditions of Ecuador, trying to increase the supply of agricultural products in the proportion dictated by the domestic demand for foodstuff and the demand for foreign exchange required to import necessary consumer goods and capital goods for maintaining a reasonable steady constant rate of development, avoiding the pressure in the terms of trade for agriculture in the domestic market and in the balance of payments.

The price system can not be used to allocate resources due to lack of an organized domestic market. A balanced program ought to be worked out. There is lack of basic research in agriculture, reliable production series, cost studies, employment figures, investment data, etc., which do not permit too elaborate a comprehensive and detailed agricultural development program. This thesis is limited to set up the bases and the framework for such a program.

For that purpose, it is analyzed the economic development during the last twenty years using national income accounts. Emphasis is given to the role of agriculture as provider of foodstuff and foreign exchange. A cross section analysis of the economic structure is presented, factors of production, level of technique and the institutional framework. An attempt is made to estimate the domestic and foreign demand for agricultural products to establish the goals and targets of a program until 1965. A guide line for action for technological and institutional changes is presented.

Ecuador accelerated the rate of growth mainly due to shifts in the foreign demand for export crops, which found an adequate response in her flexible exporting agricultural sector. Foreign trade and production for domestic consumption increased at pari-passu during the last twenty years. Industry developed faster than exporting agriculture. Agriculture for domestic consumption remained stagnant, relative to other sectors.

There is a malallocation of resources among local economies. Transportation is a high priority investment.

Ecuador can absorb more population, but the actual rate of growth is too

high in relation to her perspective economic development. Action should be taken to decrease the birth rate.

Land tenure systems is the main problem Ecuador is facing for her economic growth. A land reform aimed to parcel out latifundia, the consolidation of small farms as well as a colonization program are necessary.

According to the projection of imports and the possibilities to increase export crops, there would be a disequilibrium in the balance of payments in 1965 unless great effort is made to substitute domestic production for imports.

There would be a pressure in the terms of trade for agricultural products, unless the low level of productivity be increased by means of technical improvements. Education, research, experimentation and extension constitute high priority investment for agriculture in Ecuador.

Source: Dissertation Abstracts, Vol. XX, No. 6, University Microfilms, Inc., Ann Arbor, Michigan, December 1959, 233 pages.

Title: CAPITAL FORMATION AND AGRICULTURE
IN SOME LEBANESE VILLAGES

(L.C. Card No. Mic 59-2957)

Author: Robert Dale Stevens, Ph.D.
Cornell University, 1959

The purpose of this dissertation was to investigate capital formation in the agricultural sector of an economically less-developed area. The following were the four major foci of the study:

1. Estimates of the kinds and amount of capital used for agricultural production in some villages in the Bekaa Valley of Lebanon through the use of a sample survey.
2. An investigation of various factors which are thought to influence capital formation on farms in such an area.

To reach the two goals set out above, major emphasis was also required on the following:

3. Careful consideration and analysis of the methodology used to obtain the estimates.
4. The obtaining and presentation of considerable information about agricultural production, and the social and economic conditions in the farming area studied.

It is suggested that the Bekaa Valley is a more favored part of the large Iraqi-Syrian plain. The plain has a somewhat mild continental climate that provides conditions in which wheat and barley are the overwhelmingly predominant crops.

The data, including the fact that only 63 per cent of the village households carried on major farming activities, indicate that the agricultural villages studied have begun the transition from a strictly agricultural economy to a more varied rural economy, and therefore that they can not be considered fully representative of the solely agricultural areas of much of the Iraqi-Syrian plain.

Information about the major agricultural inputs and discussion of some of the institutional conditions, such as marketing and credit facilities suggest the conditions of farming in the Bekaa Valley. Agricultural output is measured in physical terms and converted to gross income through the use of farm prices. The type of farming was indicated by the fact that 52 per cent of the gross crop income came from wheat. A high proportion of the farming households carried on subsistence agriculture.

The average small farmer had a capital stock of about 15,000 Lebanese Pounds (\$4,700) invested in farming. If the value of the land and a proportionate share of the custom machinery which the average farmer rented is included, he used about 25,000 Lebanese Pounds (\$7,800) worth of assets. Most of the capital stock owned and used was in the form of land. Comparisons are made between the Bekaa and other farming areas for the value of tools and equipment used per unit of land, and tools and equipment used per unit of output. The capital-output ratio for farms in the Bekaa was 14 compared to

4.3 and 1.8 for farms in Dryden, New York in 1907 and 1947, respectively.

To test factors thought to affect the supply and demand for funds for productive use in agriculture, the stock of capital was assumed to be the dependent variable. Nineteen relationships were investigated using a chi square test. A strong relationship was indicated between security of tenure and the intensity of capital investment. This and other data suggest that a low demand for capital may be a major reason for the low accumulation of capital on farms in the area studied. The consideration of the supply of capital from family sources showed that wealthy families and families with available cash had more capital while debt appeared to reduce the availability of cash in a household. Credit-worthy farmers who had a high flow of credit from sources outside the family as measured by debt or the stated ease of obtaining credit did not have more capital.

Source: Dissertation Abstracts, Vol. II, No. 6, University Microfilms, Inc., Ann Arbor, Michigan, December 1959, 453 pages.

Title: THE ROLE OF AGRICULTURE IN THE ECONOMIC
DEVELOPMENT OF NIGERIA

(L.C. Card No. Mic 58-3539)

Author: Ganiyu Alade Jawando, Ph.D.
University of Minnesota, 1958

Although Nigeria is poor and underdeveloped, the people desire rapid economic growth. Therefore, the goals of this study are a) to show the methods for peaceful economic development, and b) to indicate the contribution of the agricultural sector in the process of capital formation.

The approach is theoretical and historical; the basic principles of economics are combined with the actual experiences of the advanced countries to suggest approaches to the solution of the economic problems of Nigeria.

The first and second chapters provide the social, political and economic settings in Nigeria. The third outlines the basic requirements of economic growth and the fourth discusses six alternative methods of financing economic development. The fifth chapter shows the role of agriculture in the economy, and the sixth gives suggestions for agricultural development.

Like most underdeveloped countries, the economy of Nigeria has the following characteristics: a) It is predominantly agricultural, b) domestic trade is undeveloped, hence there is a foreign orientation to commerce, c) there is an acute shortage of capital; diet is poor, health programs are inefficient, and the percentage of literacy is low, d) traditions and cultures often hinder economic progress.

Social and economic changes are essential to economic growth. First, a balanced economic growth should be maintained; light industry should be complementary to primary production. Second, entrepreneurship should be encouraged in order to develop local markets. Third, all cultural lags should be adjusted. Fourth, the basic social overhead capital should be provided.

There are many alternative methods for financing economic development. Capital formation dictates increased savings out of current production. This could be accomplished through voluntary savings or through taxation. It is the agricultural sector of the Nigerian economy which does most of the capital formation now.

Foreign investors prefer investments that serve the export trade to investment in domestic economic development, hence Nigeria should not rely too much on this source. Inflationary financing is inadvisable until Nigeria has an efficient administration capable of regulating the economy. The contributions of community works are limited to local projects, they are not ideal for big programs. Agricultural collectivization should not be used as an alternative for agricultural taxation. The experience of Russia shows that collectivization could cause peasant revolution.

In addition to its contribution to capital formation, agriculture will provide food, raw materials and labor for industries. If agriculture is to contribute its maximum quota, it must be developed. Hence the need for investing in agricultural research extension work and irrigation. The cooperative movement should be encouraged, and the farmers should make use of their organizations.

The communal tenure practiced in Nigeria is incompatible with economic growth, hence some suggest freehold tenure instead. In actuality, communalism has social benefits but no economic advantage; freehold system has economic advantages but it could create land speculation or create a strong landlord group. Hence the recommendation for a cooperative agriculture which combines the benefits of the two systems.

The findings of the study are useful to the countries of Asia and Africa which share the same economic problems with Nigeria.

Source: Dissertation Abstracts, Vol. XIX, No. 4, University Microfilms, Ann Arbor, Michigan; October 1958, 208 pages.

Title: THE LAND TENURE STRUCTURE OF MALABAR AND ITS INFLUENCE UPON
CAPITAL FORMATION IN AGRICULTURE

(L. C. Card No. Mic 59-2273)
Author: Thomas William Shea, Jr., Ph.D.
University of Pennsylvania, 1959

This thesis is intended to enhance our understanding of the role played by land tenure in the agricultural economy of emergent countries. The term "land tenure" is applied to economic institutions and legal forms relating to rights to occupancy of and/or income from land. It includes size of holdings, the contractual relation between landlords and tenants, and the distribution of the proceeds from agricultural operations among the various claimants. Land tenure patterns help to determine the volume and character of capital investment through their incentive and distributive effects.

Although there are several theoretical barriers to a rigorous separation of the determinants of economic development into those which are attributable to one or more components of the land tenure structure and those which are traceable to causes other than land tenure, the greatest difficulties are practical. These include the prevalence, in many densely populated areas, of subinfeudation and fragmentation of holdings, the presence among most agricultural families of multiple income sources, grave defects in the state of public and private land records, and the absence of reliable information on yields and cost of cultivation. The generally defective nature of information on agricultural costs and yields in most underdeveloped countries inhibits effective evaluation of the economic role played by the land tenure structure.

Chapter I is devoted to the construction of a theoretical model showing the relationship between land tenure and its determinants on the one hand, and land tenure and its role in determining input patterns in agriculture on the other. Chapter II presents suggested solutions to certain practical problems of land tenure research. The remainder of the thesis is an attempt to apply the theoretical framework and analytical techniques outlined in the first two chapters to a study of land tenures in an area characterized by dense population and a highly complex tenancy structure. The area chosen is Malabar District of Kerala State in India.

The land tenure structure in Malabar appears to act as a serious deterrent to economic development. Its major defects are found to be: 1) insecurity of tenure; 2) the exactions of high rents by passive rent receivers; 3) the uneconomic size of cultivators' holdings; 4) excessive concentration of income in the hands of non-investing classes; 5) widespread subinfeudation. The existence of these defects may be traced partly to erroneous court interpretation concerning the nature of customary land rights in the district, which undermined the economic position of cultivators and investors, partly to the structure of incentive patterns in Malabar society, which assigned a low prestige value to agricultural operations, but a high value to the holding of agricultural land, and partly to a complex set of inheritance laws which brought about the existence of large, poorly-administered estates owned by non-cultivating joint families, and of cultivated family holdings of uneconomic size. Recent land tenure legislation has reduced rents and granted security of tenure to most cultivators, but has done nothing to

remedy the remaining defects. Although it is too early to determine whether or not the effect of tenancy legislation on cultivation will ultimately be favorable, it is unlikely that any change will take place so long as nothing is done to improve the organization of agriculture. Future reforms, if they are to raise productivity, will necessarily involve displacing a large proportion of the population currently dependent upon agriculture, and must therefore be part of a comprehensive development program for the economy as a whole.

Source: Dissertation Abstracts, Vol. XX, No. 1, University Microfilms, Inc., Ann Arbor, Michigan; July 1959, 357 pages.

Title: **MONEYLENDERS AND THE ECONOMIC DEVELOPMENT OF
LOWER BURMA---AN EXPLORATORY HISTORICAL STUDY
OF THE ROLE OF THE INDIAN CHETTYARS**

(L. C. Card No. Mic 59-3440)

Author: **Chester L. Cooper, Ph.D.
The American University, 1959**

An exploratory historical study of the extent and nature of the influence of the Indian moneylenders on the development of Lower Burma. It covers the century from the British annexation of Lower Burma in the 1850's to the present.

The dissertation traces the growth of Chettyar moneylending activities and compares the significance of these activities in the field of agricultural credit with those of the Burmese moneylenders, the cooperative credit societies, the large commercial banks and the government financing and credit arrangements. Comparative analyses of interest rates and other aspects of credit are presented.

Trends in prices for paddy, land values, cost of living, standard of living, land alienation and rural indebtedness are analyzed. British policy is examined with respect to the various economic problems of Lower Burma, particularly the problems of agricultural finance and absentee land ownership. The developments under Japanese occupation and in the post-war period are dealt with. Particular attention is paid to the post-war plans, policies and progress of the government of Burma in connection with land redistribution and compensation for Chettyar-owned property which had been nationalized under the redistribution program.

Principal reliance in the research on those aspects of this subject that deal with the period prior to the invasion of Japan was placed on the reports submitted by government Settlement Officers in the period 1880-1939. In addition, the material available in various official surveys and inquiries was useful. For the post-war period, the official publications of the government of Burma provided the principal source material.

The results of this study indicate that the Chettyars had an important, possibly a definitive influence on the development of Lower Burma in the course of a few decades from sparsely settled swamp and jungle to one of the food reservoirs of the world. The extensive mortgage foreclosures of the mid-1930's resulted in more than a third of the occupied area of Lower Burma being placed in the hands of the Chettyars by 1937. Despite the widescale indebtedness and alienation of land that resulted from this, the study concludes that, by and large, the Chettyars' activity was beneficial to Lower Burma.

Source: Dissertation Abstracts, Vol. XX, No. 7, University Microfilms
Ann Arbor, Michigan, January 1960, 136 pages.

**Title: AN EVALUATION OF THE RURAL DEVELOPMENT
PROGRAMS OF IRAQ**

(L. C. Card No. Mic 60-606)

**Author: Hassan Kadhun Al-Bassam, Ph.D.
Cornell University, 1959**

The central concern of this study has been the rural people of Iraq and the various programs of rural development established in the last decade by the government and foreign technical assistance agencies to help improve their living conditions. The study was also designed to determine the reasons for the failure of the various programs of rural development to help the rural people overcome the problems of poverty, disease and ignorance.

An intensive examination of all the available documentary evidence, supplemented by interviews with experts who have been closely connected with the rural development programs of Iraq, is the foundation of the research method used in this study. The writer also drew upon his own experience in the field and had recourse to materials collected while working for three years in the rural development program.

The thesis has been divided into two parts. In part I, the social and economic systems of rural Iraq are discussed and analyzed. The study reveals that the rural society of Iraq is largely traditional and tribal in character. It is a highly integrated society in which there is a close interplay between agriculture, religion and social relationships. Consequently, it is not a society oriented to change, but is, in fact, highly resistant to it. The rural economic system is based entirely upon agriculture. The majority of the farmers do not own land. They work as sharecroppers and pay from 25 to 70 per cent of the produce to the landlords. Agricultural productivity is low. Scanty and irregular rainfall in the north, primitive and crude methods of farming, as well as the nature of the social and economic system are among the major reasons for the low crop yields.

In part II, four rural development programs have been studied. These were the agricultural extension program, the village development program, the fundamental education program at Dujailah, and the rural improvement project at Shaglawah. The first two were nationwide programs; the last two were pilot projects limited to specific areas. Special attention was paid to the course of events which led to the establishment of these programs, the methods used in their implementation, and an evaluation of each program's approach to the development of rural Iraq.

All these programs have had one objective in common which was to further rural development. This was attempted either by increasing agricultural production and efficiency, by improving the level of living through the provision of adequate health and educational services, by fighting illiteracy, or by creating self-reliance and initiative for effective local action.

This study has revealed that:

1. There was too much dependence upon foreign technical assistance.
2. None of the programs had a full coverage of the country.

3. All suffered from inadequate trained personnel and from lack of essential facilities.
4. The basic purpose of the programs had either been rejected or modified to suit the superior attitude of the elite toward the rural masses.
5. Involvement of and participation by the people was extremely limited.
6. The programs were not anchored in the cultural base of the people and so lacked stability and effectiveness.
7. Lack of coordination and cooperation between the departments working with the rural people was a common problem to all four programs.
8. The land-tenure system was a major obstacle to the achievement of the objectives of the programs.
9. There was a lack of genuine interest and support on the part of the government.
10. None of these programs were able to attain the desired objectives. All that was accomplished was the provision of limited services to not more than thirty per cent of the rural population.

In the light of what is known about rural development in such countries as Iraq the above finding would seem to be ample evidence to explain the failures described in the thesis. Therefore, recommendations were made to improve and strengthen such programs.

Source: Dissertation Abstracts, Vol. XX, No. 9, University Microfilms, Ann Arbor, Michigan, March 1960, 405 pages.

Title: AN ESSAY ON RURAL SAVINGS IN INDIA

(L. C. Card No. Mic 60-1391)

Author: P. G. Kesava Panikar, Ph.D.
Vanderbilt University, 1960

There is a common belief, not based on evidence, that the rural sector in India generates little or no savings. The present study has brought together almost all factual information available on the subject and concludes that rural households in India have considerable savings relative to income in normal times.

We have used the data from a few regional surveys and find some similarity in the general direction of the results. The family budget studies by the Board of Economic Inquiry, Punjab, showed that the sample households among peasant proprietors of the region saved 13 per cent of their income during 1936-42 and 11 per cent in 1945-50. The jute farm families in East India on the average were seen to have positive savings over the period 1949-55 amounting to 13 per cent of income. The rural families in Hyderabad State emerged with an average saving-income ratio of 8 per cent in 1949-51.

The National Sample Survey reported on investments and disinvestments by rural households in 1950-51. From these data we calculated the change in net worth of rural families via the balance sheet method. Abstracting from loan transactions, which we assume to be intra-sectional, we estimated average savings per rural family to be Rs 157 during 1950-51. This sum was comprised of cash expenditures in land improvements; new construction; other real estate improvements; and net purchase of land, buildings, farm implements, bullion, shares, and increase in cash holding. We estimated the average income per rural family at Rs 1309. Thus we get an average gross saving-income ratio of 12 per cent for rural families. The survey report excluded many items which ought to be included in savings, resulting in a very low estimate of savings, namely Rs 23.5 per family. We derived the approximate degree of monetization in the rural sector ranging from 0.5 to 0.6, and we infer that non-cash savings in rural households going into capital formation may be in the vicinity of 40 per cent of total savings. If we make due allowance for the increase in inventories and direct investment, the ratio of savings to income will be even higher. It was also found that the bulk of rural savings was accounted for by cultivating families, for whom gross savings consisting of cash expenditures in the aforementioned investments amounted to 16 per cent of average income. After some adjustments towards repairs and replacement, we obtained a net saving-income ratio of 13 per cent for cultivating families.

Next we examined the findings of the All India Rural Credit Survey, 1951-52. The Report contains an estimate of savings which is admittedly high compared to the reported receipts per family. We estimated savings from the data on investments by rural families during 1951. In this period gross savings was seen to be Rs 129 per family, which included net purchase of land, other capital investments in agriculture, capital expenditure in non-farm business, financial investment, and construction and repairs of residential and other buildings. This sum excluded savings in kind, purchase of jewelry, and increase in cash holding on which the Survey did not elicit information. We derived an approximate measure of average income per rural family for this period to be Rs 1,000. This gives a gross saving-income ratio of nearly 13 per cent in 1951. After making due allowance for savings

in kind, maintenance and depreciation, we get a net saving-income ratio of 12 per cent for rural households. Here again, we found that rural saving was concentrated among cultivating families, and among the, the upper strata accounts for the lion's share.

Available data seem to indicate that a good proportion of rural savings goes into luxurious buildings, hoarding of cash and acquisition of jewelry. Our findings suggest that the main obstacle to economic development in India is not so much the lack of savings as the unproductive disposition of available savings.

Source: Dissertation Abstracts, Vol. XX, No. 12, University Microfilms, Ann Arbor, Michigan, June 1960, 203 pages.

Title: THE ECONOMIC GROWTH OF PAKISTAN (1947-57):
A CRITICAL STUDY IN RETROSPECT

(L. C. Card No. Mic 60-2476)

Author: Haneef Ahmed Naseem, Ph.D.
The American University, 1960

The problem of the newly independent countries of Asia, including Pakistan, is not only to raise their per capita income but also to promote their continued rise at a rate which can compare favorably with that of the developed countries. The problem has become formidable indeed, particularly as a result of the "revolution of rising expectations," being experienced by the people of the underdeveloped countries, which has generated a feeling of impatience in these people manifesting itself in their pressing demand for a short-cut to economic growth. The problem, as seen against the historical perspective furnished by the continuous struggle for economic supremacy of the now developed countries, as well as against the perspective of Pakistan's emergence as an independent country, leads to the inescapable conclusion that there is no short-cut to economic growth.

This study which employs a combination of historical, descriptive, and analytical approaches, proceeds to examine this problem in terms of the real national income as representing the economic growth of a country over time. Despite the statistical and other limitations, it is argued, this criterion has been found to be relatively useful. However, depending on their availability, this criterion has been supplemented by certain non-monetary indicators.

A study of the individual sectors of Pakistan's economy reveals the nature of the problems Pakistan has had to contend with since its inception in 1947. These various problems indicate that Pakistan started life with a relatively more unfavorable relationship of population to actual and potential resources than many other of the underdeveloped countries.

During more than the decade of its existence Pakistan has made a phenomenal progress in the field of industry, although the industrial efficiency and productivity needs to be rationalized. The progress in the critical agricultural sector has been most disappointing. The agricultural lag has resulted in heavy foodgrain imports during this period. The agricultural efficiency and productivity can be achieved provided the agricultural organization is strengthened by streamlining the agricultural extension services and introducing a suitable land reform program.

The deteriorating food situation in the country and the declining terms of trade have had serious repercussions on Pakistan's balance of payments. The persistent inflationary pressures mainly resulting from heavy deficit spending, and the continuously deteriorating balance of payments situation, have called for a reappraisal of Pakistan's fiscal, monetary, and commercial policies in terms of promoting economic growth with stability. It is argued that none of these policies, per se, is effective enough to achieve this objective. They have to be integrated and geared to achieve the desired goal. The continuous injections of international aid into Pakistan's economy since 1951 have, however, introduced an element of stability in that economy and lessened, to some extent, its vulnerability to forces working for instability.

The progress during the first three years of Pakistan's First Five Year Plan (1955-60), as covered by this study, has not been encouraging. In terms of our criterion, while the population increased at an average annual rate of 1.4 per cent, the real national income increased at an average annual rate of over 2 per cent, thus allowing for a slight increase in the real national per capita income.

The conclusion is that Pakistan's economic policy should be firmly re-orientated toward the agricultural growth. To achieve the objective of economic growth with stability, this action should be accompanied by measures designed to boost exports, restrict development expenditures to their present level, curtail non-development expenditures below their present level, increase non-inflationary resources of financing, eliminate progressively deficit spending, and above all, hold the increasing menace of population growth in check. Only then could Pakistan's economy be expected to enter the stage of self-sustaining economic growth.

Source: Dissertation Abstracts, Vol. XXI, No. 1, University Microfilms, Ann Arbor, Michigan, July 1960, 399 pages.

Title: LAND REFORM IN RELATION TO SOCIAL DEVELOPMENT
OF THE FARM POPULATION IN EGYPT

(L. C. Card No. Mic 60-2092)

Author: Mahmoud Saad Soliman Gadalla, Ph.D.
University of Missouri, 1960

This study is based on an experimental sociological research designed to analyze the social changes effected by the Egyptian Agrarian Reform Law. The research procedure consisted of two phases. The first phase was an extensive survey of six matched estates, conducted to evaluate the effect

of land reform on the rural community as a whole. The second phase was an intensive interview of 600 matched farm families, conducted to isolate and measure accurately by empirical means the effect of land reform on the social level of the farmer and his family. The survey phase was viewed as a macro-analysis of the problem and the interview phase as the micro-analysis. The fundamental rule in the research procedure was to vary the land reform factor and maintain constant other factors which tend to influence the social level of the farm population.

As a frame of reference, sociological concepts were applied to the social changes effected by land reform in the agrarian structure, rural social systems, and social levels and attitudes of the farmers. The line of analysis developed indicated a growing population problem which creates an obstacle to the social development of the farm population in Egypt. The possibilities of land reform as a solution to this problem have extremely definite limitations. The purpose of land reform is to redistribute the already available wealth rather than to produce new wealth. The process of social development in Egypt tends to depend on the rate of population growth in its relation to the expansion of the cultivated area and the creation of employment alternative to agriculture. Land reform has neither checked the population growth nor compensated for the lack of land and industry. Land reform has, however, changed the institutional framework of the society and established situations favorable to social development. This is an essential first step. It must be followed by other steps for increasing the social well-being and preparing the peasants to overcome their centuries of deprivation. Because human conditions are extremely backward and illiteracy is very frequent, land reform by itself does not suffice to raise the levels of living or even to arouse the desire of the peasants to achieve and maintain higher living standards.

It was concluded that land reform, although not necessarily a condition of social development, is certainly the key to this development.

Source: Dissertation Abstracts, Vol. XXI, No. 1, University Microfilms, Ann Arbor, Michigan, July 1960, 563 pages.

Title: SELECTIVE CREDIT CONTROL
 FOR ECONOMIC DEVELOPMENT

(L. C. Card No. Mic 60-5760)

Author: Seung Yun Lee, Ph.D.
 The University of Wisconsin, 1960

Many underdeveloped countries are experimenting with selective credit controls in an effort to determine the relative effectiveness of each instrument under their own special circumstances and problems. The main purpose of this thesis is to evaluate the case for selective credit control in such countries. To this end, it examines, with special focus on underdeveloped countries: (1) the nature and characteristics of selective credit controls; (2) the extent to which the scope and effectiveness of traditional non-selective instruments are limited by the institutional settings of under-

developed economies; (3) what new forms and techniques of selective control have been developed and how they reflect the institutional settings; (4) what results have followed in the underdeveloped countries which have used selective controls.

Special attention is given to the use of selective controls in Asiatic countries, especially India, during the postwar years. The thesis is not concerned with selective tax policies, nor with foreign exchange rationing policies.

A review of the historical development of selective credit control is made in Chapter I. In a broad sense, it has existed in one form or another since the time of establishment of central banking.

In Chapter II an attempt is made to distinguish between general and selective controls. If the distinction is made in terms of economic impact rather than on the basis of principle, selective credit control is less selective and general control is less general than has been presumed.

The effectiveness of traditional non-selective credit control instruments is examined in Chapter III. The case for selective control in underdeveloped countries is stronger than in highly advanced countries with well developed money and capital markets because general control is less effective in the former owing to their inadequate money and capital markets. In view of the prevailing economic development planning in those countries, the case for selective control is further strengthened. To accelerate economic development, it is necessary to influence the direction and uses of bank credit according to an order of essentiality. Opposition to selective controls based on doctrinal grounds, such as complete economic freedom, have little relevance to underdeveloped countries.

Possible objectives of selective credit control in underdeveloped countries are examined in Chapter IV. In general, selective mechanism can be used in ways that will help long-run economic development and yet help maintain short-run economic stability.

The Indian experience with selective controls on foodgrain credit is examined in Chapter VI. The controls show some administrative difficulties under Indian conditions. A number of factors were responsible for this comparative ineffectiveness. It appears that some of these factors could have been removed by a more energetic and extensive use of this method.

The strength of selective control will depend on the extent of the range of credit and economic activity over which it operates. The wider the range of its operation, the greater will be its potency.

It is concluded that there is clear case for a positive use of selective credit control as a supplementary instrument in developing economies.

Source: Dissertation Abstracts, Vol. XXI, No. 6, University Microfilms, Ann Arbor, Michigan, December 1960, 224 pages.

Title: CAPITAL FOR REGENERATION OF
AGRICULTURE IN PAKISTAN

(Publication No. 22,808)

Author: Umar Khan Niazi, Ph.D.
The Ohio State University, 1957

The research was instituted with several objectives in view which can be summarized under the following broad headings:

1. To show how to regenerate agriculture to make it the primary source of capital in Pakistan
2. To find other major sources of real capital

Agriculture in Pakistan is handicapped by the use of outmoded techniques and lack of capital equipment. There is also much wasted opportunity for industrialization, owing to the presence of known resources which are not use merely because of the lack of capital. Potential markets exist at home and abroad for Pakistan's finished goods and raw materials.

Owing to the nature of the problem, much emphasis has been given in this analysis to what is happening to the economy of Pakistan as a whole, particularly with reference to surplus population and the rates of productive investment. Little emphasis has been given to the patient improvement of human institutions or a few brilliant insights and miraculous policies, because these are not economic actualities.

Important Findings and Suggestions

1. Greater emphasis should be placed on agriculture, which has been the foundation of Pakistan's economy, and needs special governmental treatment because of its requirements. Farmers can reap the soil's bounty by greater use of inanimate energy and scientific method. Mechanization of agriculture and electrification of farms are necessary even in overpopulated countries, for mechanization means more jobs if agriculture and industry are to be developed simultaneously.
2. According to this research, 56.6 per cent of the population of Pakistan were gainfully employed in 1956. Of the total number unemployed, 4.4 per cent were women, 22.4 per cent were accounted for by "economic inactivity," and 16.6 per cent were without jobs. The surplus population can be provided with jobs if production is increased by wide use of superior technology.
3. The present annual rates of productive investment and net economic development are respectively 6.5 per cent and 1.22 per cent of the total national product. Both of these rates, which are relatively low, can be increased considerably if monetary and fiscal policies are made to work effectively. A scheme to mobilize small savings into productive use is the paramount problem in Pakistan, since putting capital to use is more important than its accumulation. In order to promote an "export more" campaign, the devaluation of every unit of currency and "deficit financing," with due limitations, are necessary in this country.

Finally, at this stage of progress, the use of planned economy in the development of Pakistan would be a slow and time-consuming process. The application of "classical" economics will do the job more quickly.

Source: Dissertation Abstracts, Vol. XVII, No. 10, University Microfilms, Ann Arbor, Michigan, October 1957, 238 pages.

Title: CAPITAL FORMATION IN NIGERIA: SOME FINANCIAL AND ECONOMIC IMPLICATIONS

(Publication No. 24,296)

Author: Ebenezer Ogugua Iwuagwu, Ph.D.
The University of Wisconsin, 1957

This study aims at investigating the process and progress of capital formation in Nigeria and analyzing its impact on the economic development of Nigeria.

The process of capital formation in advanced economies is said to have three interdependent features: saving, finance, and investment. This is also true in Nigeria though in a country such as it, now emerging from subsistence agriculture, these features are very undeveloped.

Nigeria's traditional savings media--such as the "isusu," which usually keeps the saving invested in forms that remain directly under the control of the savers--lack the capacity for change and cannot cope with the technical requirements of the rapidly expanding money sector of the economy. Nevertheless, saving has not been negligible, and it could be considerably augmented if favorable institutions were developed. The marketing associations have been the main exception to an otherwise unfavorable institutional background.

In advanced economies the financial intermediaries convert savings into investment certificates, thereby serving as the bridge between the saver and the investor. In Nigeria, commercial banks are not only very few, but also concentrate heavily on short-term loans to finance foreign trade and domestic commerce. Nigeria has no central bank. Money markets are virtually non-existent, while capital markets are very much limited in scope and are also imperfect. There is a particular lack of medium-and long-term credit and finance for borrowers generally. There is thus a marked lack of balance in the allocation of commercial bank credit.

Tax yields are the main source of capital formation in the public sector of Nigerian economy. The tax yields are delicately dependent on the vagaries of international trade: about two-thirds of tax revenue is derived from export and import duties. Also tariff concessions and import duty reliefs made to pioneer industries are bound to cut into the total tax yields.

Capital expansion in Nigeria has been in general somewhat sluggish, though in recent years, since the inception of the Ten Year Plan, it has shown some relative buoyancy. The trend, however, reveals some concentration of capital expansion in light and consumer goods industries, with practically no change in the proportion of wage-earners in the economy since 1938. The Government has recently exerted some efforts to accentuate the rate of industrial expansion by fiscal inducements to pioneer companies.

From the foregoing there seem to emerge the following concluding remarks and recommendations:

1. Savings and financial intermediaries in Nigeria are inadequate, and the capital markets are also imperfect. Government intervention is not unwarranted not only to spearhead a campaign for mobilization of domestic saving, but also to restore competition in the capital markets.
2. Greater dependence should be placed on income tax as a source of revenue than on indirect tax. Income tax and the "general tax" should be amalgamated to be federally administered.
3. Fiscal inducements extended to pioneer industries would mean too much of revenue loss. It has yet to be proved conclusively that tax concessions can singularly influence the volume and direction of investments. Thus a moderate rate of corporate tax seems superior to tax concessions by wholesale.
4. Borrowing from the proposed central bank to finance capital formation has some favorable prospects in view of obvious underemployment; but, at least, until the shortage of skills is overcome this should be undertaken with some caution. In the meantime public policy should improve technical and professional education in Nigeria in order to enhance the pool for skilled labor and skilled management.
5. Integrated development should be fostered. Industrialization and agriculture should move hand in hand. Prudence demands that hard-earned foreign exchange reserve should not be depleted for agricultural imports that could be produced in Nigeria.

Source: Dissertation Abstracts, Vol. XVII, No. 12, University Microfilms, Ann Arbor, Michigan; December, 1957, 280 pages.

Title: **CENTRAL BANKING IN UNDERDEVELOPED COUNTRIES:
 THE RECENT LATIN AMERICAN EXPERIENCE**

(Publication No. 23,863)

Author: **Francis H. Schott, Ph.D.
 Princeton University, 1957**

This study deals with the central banking experience of the twenty Latin American republics since World War II. It emphasizes the policy responses of the Latin American monetary authorities to the special financial problems of underdeveloped countries and evaluates the efficacy of these policies by means of selected case studies.

The economic and institutional setting as well as some historical and legal aspects of central banking in Latin America are discussed. The dependence of Latin America's economies on foreign trade, the weaknesses of the money and capital markets, and the structural problems created by the persistence of large-scale inflation in many of the countries are singled out as the major factors influencing and complicating the task of monetary management. The continued heterogeneity of Latin America's central banks is explained by reference to the diverse origins of these institutions. It is shown, however, that certain common trends for the region as a whole--such as the strengthening of the banks' formal credit control powers--can be discerned. Some reasons for the banks' important role in the formulation of exchange policy and in influencing general economic policy in most of the countries are also suggested.

The monetary control instruments that have been used with special frequency in Latin America in recent years are taken up. These include, most importantly, variations in the commercial banks' reserve requirements and in central bank discount policy. Certain adaptations of these controls--such as supplementary and secondary reserve requirements, as well as preferential rediscount rates and direct central bank relations with non-bank borrowers--are also discussed. The potentialities and drawbacks of these adaptations are illustrated by means of case studies of Mexican reserve requirements and Brazilian discount policies in recent years. The obstacles encountered in using open market operations as a full-fledged instrument of monetary control and the related problem of the development of government securities markets are also discussed.

In recent years, many Latin American countries have placed increased reliance on flexible exchange rates in bringing about required balance of payments adjustments, while also attempting to simplify their earlier complex multiple-rate systems. The study explains the reasons for these trends; it notes and analyzes, in particular, the problem of maintaining fixed exchange rates in volatile and often persistently inflationary economies, and also points out the conflicts of policy objectives inherent in establishing multiple-rate classifications for international transactions. Two case studies--of Peru's exchange policies since 1950 and of Brazil's exchange policies since 1953--are presented. These illustrate, respectively, the rather favorable experience of a country that has used a simplified flexible-rate system for some years, and the continuing difficulties of a country which is still experimenting with a highly complex system of multiple-fixed and fluctuating rates that also incorporates exchange auctioning.

It is concluded that the Latin American countries have made considerable progress in adapting the central banking techniques of economically and financially more developed countries to their own requirements. It is also suggested, however, that Latin American countries have far too frequently failed to supplement these new techniques with the more basic economic-policy revisions and the institutional reforms that will be necessary to accelerate the area's real economic growth.

Source: Dissertation Abstracts, Vol. XVII, No. 1, University Microfilms, Ann Arbor, Michigan, January 1958, 248 pages.

Title: THE PROCESS OF ECONOMIC DEVELOPMENT IN IRAQ WITH
SPECIAL REFERENCE TO LAND PROBLEMS AND POLICIES

(Publication No. 17,292)

Author: Abdul Sahib H. Alwan, Ph.D.
The University of Wisconsin, 1956

This is a study of the strategic factors stimulating or limiting the processes of economic development in Iraq. Iraq is endowed with a plentiful supply of potentially fertile land and water resources and with immense deposits of important mineral resources, however the overwhelming majority of the people suffer from poverty and insecurity. The economy of Iraq has recently come under the influence of two very important stimulating factors: the expansion of oil production which in turn has made funds available for development projects. Nevertheless, there are still many factors limiting economic progress and growth in Iraq.

Special reference is given in this study to land problems and policies. Three out of five of the population derive their living from the land. The thesis is developed that the general causes of underdevelopment and poverty in a predominantly agricultural economy such as Iraq, stem in the main from defects in the agrarian structure. It is shown that economically, socially and politically, the present system is incompatible with the progress of the country.

The methods used in the study are both descriptive and analytical. Present problems are stated in terms of historical perspective, supplemented by statistical analysis. It has been the intent to both present and interpret the more important facts of the present situation.

The broad focus of the study is the problem of improving the economic and social welfare of Iraq. Consequently it has the objective of dealing with matters of concern to both the general public and the government of Iraq. The analysis is directed toward the twin goals of human aspirations and public policy. Accordingly the analysis has been pointed toward eventual policy judgments regarding the means needed to attain the goals sought.

Iraq is a sparsely populated, underdeveloped agrarian economy. It is suffering from many obstacles to economic growth and progress, but has, nevertheless, great potentialities for development. The economic performance of the economy has been poor because of numerous barriers to progress. Consequently, it has afforded the people a relatively poor end product of consumption and material well-being. The development programs in the country which started in 1951 have been concentrated largely on the development of natural resources and the construction of physical projects, with relatively little attention paid to the development of human resources. Since economic welfare is not measured by the construction of physical assets alone but even mostly by the extent to which the productivity of the man power is raised in the nation, it is recommended that development policy should be reoriented toward larger investments in human resources. In the final analysis economic progress depends upon such intangibles as the provision of knowledge and skill, the elimination of ignorance and debilitating disease, raising the standard of nutrition and health, and the creation of efficient socio-economic institutions. We conclude that an over-all reform in land tenure and use is desirable, with greater emphasis upon a system of owner-cultivatorship. Industrial development is emphasized both for the sake of creating a balanced economy and for supporting land reform programs.

Source: Dissertation Abstracts, Vol. XVII, No. 10, University Microfilms, Ann Arbor, Michigan, October 1957, 587 pages.

Title: THE RESERVE BANK OF INDIA
AND THE MONEY MARKET

(Publication No. 24,440)

Author: G. T. Huchappa, Ph.D.
New York University, 1955

The fundamental problems of Indian banking at present are: (1) the need to extend banking and credit facilities in all major sectors of the economy, and (2) the need for an integrated credit mechanism suitable to the requirements of India as a developing economy. Following the nationalization of the Reserve Bank of India in 1948 and the passage of the Banking Companies' Act in 1949, the Reserve Bank has assumed a new role in the banking and credit structure of the country. One of the principal objects of this study is to examine the role of the Reserve Bank in the money market--to examine the operations of the Bank and to trace their effects on the promotion of sound banking and on the mobilization of the financial resources of India as an aid in the great task of national economic development.

As a background for the study of the evolution and operation of the Reserve Bank, a brief description is given of the Indian banking system and of the rise of central banking in India. The observation is made that the Indian banking structure is still incomplete, although there are banking institutions of various types which are designed to meet the requirements of different sectors of the Indian economy. Modern banking institutions in India are largely concentrated in a few large centres of trade and industry, while large sections of the country, especially the rural areas, remain without adequate banking facilities.

The Reserve Bank, as the central banking authority, was designed to foster the growth of sound banking in India and, through it, the economic progress of the country. After reviewing the constitution, functions, and structure of the Reserve Bank, a description is given of the Indian money market, of the role of the Reserve Bank as a bankers' bank and in the control of credit, of its management of the financial operations of the Government, and of the regulation of banking under the recent Banking Companies Act.

As a manifestation of the underdeveloped economy of India, the Reserve Bank, until recently, had a relatively limited role in the money market; and the commercial banks had relatively little recourse to the Reserve Bank as the lender of last resort. The Reserve Bank remained for many years, essentially, a Government's bank; and, beyond its issuance of notes and management of the financial operations of the Government, it did little to extend the banking facilities of India and to integrate the Indian money market.

In recent years, however, the role of the Reserve Bank as a lender of last resort has expanded, and, assuming a continued development in the economy of the country and an increase in resources of the money market, the Bank should be able to exert considerable influence and control over the banking system, and through it, foster both the economic growth and stability of the country. It appears desirable that, besides the regulation of banking, attention be paid to other measures of extending banking facilities in India. Among other things, the organization of a Deposit Insurance Corporation and the extension of banking education and research appear essential if India is to have the benefits of a banking system adapted to her needs.

Source - Dissertation Abstracts, Vol. XVIII, No. 3, University Microfilms, Ann Arbor, Michigan, March, 1958, 210 pages.

Title: COOPERATIVE AGRICULTURAL CREDIT IN THAILAND

(Publication No. 23,140)

Author: Udhis Narkswasdi, Ph.D.
Cornell University, 1957

Thailand is a small country of about 220,000 square miles in area. The population is about 20 million people. The majority of people are engaged in agriculture. When Thailand entered a new phase of trade with foreign countries during the 18th century, the economic status of farmers was much affected. They need credit to finance their farms in order to produce more for commercial purpose. This led to the establishment of the first credit cooperative society in Thailand in 1916 along "Raiffeisen" line. The purposes of this credit society were mainly to assist farmers in the elimination of indebtedness, and to promote thrift, mutual help, and self-help. Since then the credit cooperatives have gradually spread over the country. Most loanable funds of these cooperatives were obtained from outside sources. Therefore, in practice, two serious problems arose, namely; the lack of prompt service and inadequate financing.

The Bank for Cooperatives was set up in 1947 to solve these two problems. The Bank could supply more funds with lower interest rates to cooperatives. However, the Bank itself obtained most of its funds from outside sources. These sources of funds have been drying up and inadequate financing has again become a serious problem. Also the centralization of work has made it impossible for the Bank to make loans promptly.

Two District Central banks were set up on an experimental basis in 1951 and 1952. The main purpose of District Banks is to secure funds from localities in the form of deposits and make loans directly to society-members. It is hoped that the District Banks will be able to raise their own capital in form of deposits so that the adequate financing and more prompt service can be obtained.

In the first few years of the operation of these two District Banks, they have proven themselves successful in raising their own capital in the form of deposits. It is recommended that similar District Banks should be set up in other suitable regions and finally that they should be crowned by an Apex Bank as a Federation of District Banks of Thailand. This Apex Bank will act as the central financial institution for all District Banks. This might be done by converting the existing Bank for Cooperatives into such a Federation. Thus the line of development of credit cooperatives in Thailand would be in 3 stages: as follows: (1) Individual farmers would become members of local credit societies, (2) local credit societies would become members of District Banks, and (3) the District Banks would be the members of the Federal Bank.

To raise the amount of net worth in the District Banks and to collect the saving in the form of share capital, it is recommended that all credit societies be recognized as societies with share capital. This should be done by requiring each member of a local credit society to buy at least one share of 50 bahts in his society, plus one share for every 1,000 bahts borrowed by him. The society, in turn, should buy equivalent shares in the District Bank.

Credit Cooperatives in Thailand now deal in both short term and long term credit. It is believed to be unsound to combine both credit terms in one and the same institution. It is recommended that long term loans should be made on mortgages by separate lending institutions.

State help is considered necessary in the development of cooperatives in Thailand. However, it is suggested that it should be given in such a manner that it will stimulate and foster self-help.

It has been recommended by some cooperative specialists that the multi-purpose cooperatives should be developed in Thailand. This would be done by enlarging the functions of credit cooperatives to supply its members with the other requirements such as seeds, and implements and in marketing of produce. However, this type of organization appears to be unsuitable for Thailand. It is risky to combine credit with other functions. The areas of interest and efficiency differ for different purposes. Also the interests of various purposes are often conflicting with each other. It might result in the performing of a bewildering variety of incompatible functions. The failure in one function would lead to the failure in others. Furthermore, the additional functions may involve more capital than the farmers can afford to contribute. It would lead to a change from unlimited to limited liability in local societies with a view to expanding business. At this stage it would appear to be a very serious development because unlimited liability is the most important factor in keeping credit cooperatives out of difficulty. It is recommended that more specialized purchasing and marketing cooperatives be developed instead of expanding the functions of local credit societies.

Source: Dissertation Abstracts, Vol. XVII, No. 2, University Microfilms, Ann Arbor, Michigan, February 1958, 172 pages.

**Title: A SUGGESTED PLAN FOR THE SYRIAN
AGRICULTURAL COOPERATIVES BASED UPON A
STUDY OF SELECTED AGRICULTURAL
COOPERATIVES IN OHIO AND IN THE
UNITED STATES GENERALLY**

(L. C. Card No. Mic 58-2106)

**Author: Adnan Shukay Shuman, Ph.D.
The Ohio State University, 1957**

In 1942 the first cooperative association in Syria was organized in Dar Itaya, a village 40 miles south of Damascus. In 1950, the Parliament of Syria passed the Cooperative Law. During the period between 1950 and 1955, only 47 agricultural cooperative associations were established. Because of the lack of education concerning cooperatives, insufficient capital, and the absence of good management, the cooperative movement in Syria faced many problems.

According to the Cooperative Law of 1950, a Cooperative Service was to be established to help and supervise the growing cooperative associations; but this government agency has not been established yet. It can be said that the Syrian Government did not assist the growth of the cooperative movement as much as other countries helped the movement--notably the United States and some European countries. The Federal Government in the United States created new government agencies in 1933 to help agricultural cooperatives as well as to aid farmers. These new agencies were the Bank for Cooperatives and the Production Credit System. The Bank for Cooperatives consisted of thirteen banks, The Central Banks for Cooperatives, and twelve banks, one in each of the Federal Land Bank Districts. The Production Credit System consisted of twelve production credit corporations, one in each of the Federal Land Bank Districts (later known as Farm Credit Districts), and a number of production credit associations founded on the cooperative basis by the farmer borrowers, and it used the Federal Intermediate Credit Banks for discounting farmers' notes. The Production Credit System was an essential factor in supplying the American farmers with short-term credit.

The Federal Government established the Rural Electrification Administration in 1935 as a credit agency to supply farmers with capital funds needed for the establishment of electrical power cooperatives. These electric cooperatives facilitate the mechanization of farm operations and improve farm life by introducing electric labor-saving devices in the rural areas.

In order to help achieve the purpose of this study, which is to build a plan for the cooperative movement in Syria, the author followed an historical study of the origin and growth of selected cooperatives in the United States, with emphasis on selected cooperatives in Ohio. The cooperatives selected were: livestock, dairy, grain, poultry and eggs, rural electrification, and Production Credit Associations. Also, a comparative statistical analysis was made for twenty county farm bureau cooperative associations and twenty cooperative elevators. Ten of these elevators are members of The Ohio Equity Exchange, and the other ten belong to the Ohio Farmers' Grain and Supply Association. The purposes of this study were to compare the major expenses of these two groups of cooperatives and to test the soundness of management and the economies of scale.

The following conclusions were drawn:

1. The Equity and Ohio Farmers' groups of cooperative elevators operate at a lower cost than the Farm Bureau Cooperative Associations.
2. Economies of scale existed for both groups.
3. The Equity and Ohio Farmers' groups of cooperative elevators appear to be better managed than the Farm Bureau Cooperative Associations.

On the basis of these studies, the author suggested a plan for the improvement of the Agricultural cooperative movement in Syria which provides for the establishment of legislative support, an educational society, a farm credit board, a production credit system, and several types of cooperatives.

Source - Dissertation Abstracts, Vol. XVIII, No. 6, University Microfilms, Inc., Ann Arbor, Michigan: 1958, 253 pages.

Title: INCOME DISTRIBUTION IN TURKISH AGRICULTURE

(L. C. Card No. Mic 61-861)

Author: Eva Hirsch, Ph.D.
Columbia University, 1960

The study attempts to estimate income distribution in Turkish agriculture in the early 1950's, both by functional shares and by income size.

The first part deals with the distribution of the agricultural product that goes to land, labor, and capital. Since in Turkey most peasants own and operate their own land a considerable proportion of the country's agricultural incomes is imputed and had to be derived by estimating what incomes they could earn if they were hired. Since, moreover, in Turkey the incomes of factors of production are determined not only by market valuations but also by share arrangements, which are influenced more by custom than by market forces, two functional distributions of agricultural income were derived, one by valuing imputed incomes according to the market system, and the other according to share arrangements. The two distributions derived differed markedly. For the country as a whole the proportion of the net agricultural product going to land was found to be considerably higher in the share system, and the proportion going to labor considerably lower. These findings are explained by the fact that share rents do not vary as much as market rents do in low productivity compared with areas, so that on poor land the share system provides for higher rents than the market system, and on good land for lower rents. Since most of the nation's farm land is of low productivity, the share system, on the average, would result in higher rents for Turkey than the market system.

In the second part of the study income distribution is estimated by size of income. The estimate takes the distribution of land operated as a point of departure because these are the only data having a bearing on agricultural income distribution that are available. Since, however, land operated is only one of many factors affecting the distribution of agricultural incomes, the distribution was then modified step by step to take account of factors that affect incomes per hectare of land operated and which might therefore give farms of different sizes greater or smaller incomes than one would expect on the basis of size of land operated alone. The factors considered were differences as between farms of different sizes in (1) fertility, (2) types of crops grown (some crops being more lucrative than others), (3) methods of production (which affect both gross incomes per hectare as well as costs), (4) costs incurred for paid labor, and (5) land rent paid. To derive the final distribution of agricultural income by size account was also taken of the effect on income distribution of incomes derived from animals grazed on common land, and of wages and rents earned by agricultural families. The final distribution showed that the highest 10% of all agricultural families earned somewhat over 50% of all agricultural income, and the lowest 10% about 1%. The distribution of income from crops alone was more unequal than this, but was compensated for by a relatively more equal distribution of incomes from animals and the equalizing effect of farm wages, mostly earned by low and medium income families.

As much as possible the statistics used in this study have been checked to determine their accuracy. In part this was done by finding out precisely how they were gathered and by discussing their possible shortcomings with the Turkish statisticians who were in charge of gathering and processing them. In addition, wherever possible, the data were compared with other independently derived series to test whether conclusions reach by means of one set of figures were supported by other data.

Source: Dissertation Abstracts, Vol. XXI, No. 11, University Microfilms, Ann Arbor, Michigan, May 1961, 312 pages.

Title: A COMPARISON OF THE LEGAL--ECONOMIC FEATURES OF
COOPERATIVE ORGANIZATION IN THE UNITED STATES AND THAILAND

(L. C. Card No. Mic 61-1534)

Author: Glom Isarapandh, Ph.D.
The University of Wisconsin, 1961

The objective of this study is to make a comparative study of the legal-economic aspects of the cooperative movement in Thailand and the United States. The main emphasis was placed on farmers' cooperatives because they are the most important mutual enterprises in both countries. The scheme of the study is divided into: (1) the origin and development of cooperative societies; (2) a comparative study of the structure of cooperative organizations of various types; (3) an analysis and evaluation of the business conduct and performance of cooperative associations; and (4) finally, some general observations will be noted.

In Thailand the greatest poverty and insecurity is found among farmers. The cooperative movement was introduced with the intent that it would help improve their status in the communities. The general structure of cooperative associations in Thailand is similar to that in the United States, and they adopt the same principles and methods of operation. They differ only in the degree to which they apply the principles. The extent of their success in the two countries is quite different; in Thailand the outcome is still doubtful, while in the United States their success is generally assured, especially in farm supply and marketing associations. The difference in the degree of success of the cooperative movement in Thailand and that in the United States is due to variations in the degree of application of principles. It is difficult to get Thai farmers to comprehend the principles and practices of cooperation. Consequently, Government officials--instead of teaching them to do things for themselves--venture to do almost everything for them.

The cooperative movement in Thailand is still in a trial and error stage. Government officials are still experimenting. Their policies, in the long run, are likely to do more harm than good if they persist in extending paternalistic assistance.

The legal evolution of the cooperative movement in Thailand differs from that in the United States in this respect. An enabling act was decreed by the King before any associations were formed. In the United States its citizens had voluntarily experimented with several forms of associations under the common law before this form of business enterprise was formally legalized by statutory law.

The Thai cooperatives rarely use contracts binding members to deliver their products to their associations, while in the United States a majority of the sales associations use formal contracts with their members.

The Thai associations have no membership relations programs whatsoever. Many U.S. cooperatives carry on a vigorous program of disseminating information to keep their members fully informed about the activities of their associations to sustain morale. In addition, many have an employee relationship program. They use incentive plans and other devices to meet and intensify competition between cooperatives and private business enterprises, and frequently between themselves.

Cooperative education in Thailand is restricted to Government officials and students in the College of Cooperatives and Economics. No instruction relating to cooperative subjects is offered in secondary or vocational schools. Graduates from the College of Cooperatives and Economics are few in number and they usually go into Government Service. The salaries paid by Thai cooperatives are so niggardly, that no one voluntarily enters such service for salary alone. Only a few corollary services have been established designed to force cooperative development on a voluntary basis where needed as compared with that which exists in the United States. This is illustrated by such agencies as the Cooperative Councils, State Department of Agriculture, Institutions, Foundations, and Federal Bureaus and Departments.

Research in this subject in Thailand is virtually nonexistent. In this country, various organizations and universities are engaged in comprehensive studies to ascertain new facts, figures, procedures, and policies designed to improve mutual association services to their members, and to the public.

Source: Dissertation Abstracts, Vol. XXI, No. 11, University Microfilms, Ann Arbor, Michigan, May 1961, 308 pages.

Title: THE USE OF A FARM MANAGEMENT APPROACH IN SOLVING
AGRICULTURAL PROBLEMS IN PAKISTAN

(L. C. Card No. Mic 61-902)

Author: Ali Mohammad Chaudhry, Ph.D.
The Ohio State University, 1960

Low productivity of farm resources, high indebtedness, and exploited tenants in Pakistan are results of defects in the basis on which agriculture functions. This study employed the farm management approach to build a framework essential for progress in Pakistan agriculture.

Farm management helps organize and manage the farm business judiciously and skillfully for the purpose of securing greatest continuous profit. Farm management employs the results of other arts and sciences in reaching its own conclusions. Farm management looks at the problems from the point of view of an individual farmer and considers the farm as a whole. It builds the foundations for profitable agriculture on certain economic principles used in connection with those laws which govern the growth of plants and animals and the use of factors of production. Important among these principles are the law of diminishing returns, the law of substitution; and the principle of equimarginal returns and the law of comparative advantage. For an efficient farm plan the farmer has to take inventory of such resources as land, its productivity and potentiality; his capital position and the scope of his credit; condition and amount of livestock, buildings, equipment and tools; labor and its distribution; his managerial ability; availability of market; future expectations, and so on. Then, farm plans promising the best use of the resources are drawn. Finally the income and costs are computed and the profitable or suitable plan is selected and followed. It is recognized that no two farms are alike with respect to their resources; therefore, there is one best plan for each farm. As prices and costs change, the plans may have to be adjusted to suit the conditions.

A well-organized extension program is imperative for the farm management approach to be successful. It takes the research and educational results to the farmers and brings back their problems for solution.

Defects in the tenancy system could be avoided by bringing about equitable farm leases, with provision for the landlord and the tenant to divide the output according to the resources contributed, valued at the market price.

The perfect market is another essential for the success of our approach. Bringing in relatively free competition, reasonably regulating the market and market functionaries, grading and standardizing products, providing storage and transportation facilities, and disseminating market information are some of the means to this end.

The problem of inadequacy of credit could be improved by thrift on the farmer's part and by government help in training, controlling, and financing the credit agencies. To make a loan productive, the farmer and the lender should plan ahead of seeking the loan to determine its profitability, amount, kind, and nature--whether self-liquidating.

The poverty of agriculture is intimately linked with many larger problems: economic development, high population growth, absence of industrialization, static social organization, and religious traditions. No solution to the problem is possible apart from a many-sided and comprehensive reconstruction of the corporate life of the country. Such a program needs government sponsorship, research, and proper planning.

Source: Dissertation Abstracts, Vol. XXI, No. 10, University Microfilms, Ann Arbor, Michigan, April 1961, 367 pages.

Title: PLANNING DEVELOPMENT IN IRAQ: 1950-1960

(L. C. Card No. Mic 61-227)

Author: Fadil Hasan Zuwaylif, Ph.D.
University of Illinois, 1960

This thesis, dealing with the development of Iraq, is a case study in a typically underdeveloped country. Except for the availability of capital, Iraq is confronted, more or less, with the same development problems as those of any underdeveloped country. The lack of an efficient administrative machinery, inadequate overhead facilities, the system of land tenure, inadequate water supply and control, scarcity of skilled workers, and the lack of private investment are only a few of such problems.

A theoretical framework is presented in the first part of this paper, in order to familiarize the reader with the subject of economic development and to provide answers to some basic development questions.

Capital plays an important role in the development process. Both the Ramsey Model and the Harrod-Domar Model show the need for diverting a substantial part of national product from consumption into investment if the level of income and consequently the living standards are to be raised in the future. Appropriate fiscal and monetary policies must also accompany such a diversion if inflation and balance of payment difficulties are to be avoided.

Once capital is secured, a country is confronted with the difficult task of investment planning. A major question is the distribution of investment among the various economic sectors. In a small country, external economies call for the concentration of investment funds in interrelated projects built on a fairly large scale in order to minimize labor and capital charges and to overcome the limited-market obstacle by creating industries that will become each other's best consumers. Under these circumstances, a gap will develop between production and consumption compositions. The economy could be balanced, however, by foreign trade.

A formula is developed to enable a planner, confronted with a choice among several alternative technologies, to make an intelligent choice. Since most underdeveloped economies are saddled with permanent unemployment due to a shortage of capital, the formula developed was intended to approximate the social marginal productivity of capital by taking into account the contributions of a unit of capital toward both reinvestment and employment.

The second part of the thesis deals with development in Iraq.

When a new agreement was concluded between the Iraqi government and the oil companies in 1951, a substantial amount of capital was made available to the government. This new source of capital was large enough, indeed, to enable the government to launch a large-scale development program without the need of foreign borrowing or worrying about balancing the budget and stabilizing the exchange rate.

The three plans formulated by the Development Board between 1951-1960 adhered very closely to the recommendations of the International Bank Mission. Flood control, water storage, and irrigation schemes received first priority (over 30 percent of total allocations). The remaining allocations were spread over the construction of roads, bridges, electrification and industry, and building construction.

The administrative machine was not capable of implementing its development plans, and consequently, many of the board's contemplated schemes did not outgrow their blue-print stages. Only two-thirds of planned expenditures were actually expended with a considerable amount of waste.

The impact of the board's development efforts on living standards was determined by applying the Harrod-Domar Model to the development of Iraq. An average annual investment of 24.9 million dinars for the period 1951-58 might have resulted in an annual growth of about 1.9 percent in per capita income. If the most recent figure on the board's annual investment is considered, however, the annual growth rate of per capita income could have been as high as 5.5 percent.

Source: Dissertation Abstracts, Vol. XXI, No. 10, University Microfilms, Ann Arbor, Michigan, April 1961, 206 pages.

Title: THE ECONOMY OF THE ISRAELI KIBBUTZ: A STUDY OF KIBBI
PRODUCTIVITY AND PROFITABILITY AND THE POSITION OF THE
KIBBUTZIM IN THE ECONOMY OF ISRAEL

(Order No. 61-3441)

Author: Eliyahu Kanovsky, Ph.D.
Columbia University, 1961

The central theme of the dissertation is an analysis of the relatively high degree of productivity in the kibbutzim (Israeli collectives) and the relatively poor profitability, within the context of the economy of Israel. The first chapters provide the necessary background for an understanding of the economic problems with which the kibbutzim must contend. This includes a discussion of Israeli agriculture, its various sectors and their production, and the changing position of agriculture in the national economy; a historical sketch of the kibbutz movement; a description of the institutional framework of the kibbutzim, including the various kibbutz federations; the allocation of resources; the radical changes in kibbutz consumption levels; and, the finances of the kibbutz.

The place of the kibbutzim in the Israeli economy underwent considerable change. The moshavim (cooperative) have superseded them as the main form of agricultural settlement. Nevertheless, the high level of investment in the kibbutzim has helped them maintain their strong position in agricultural production. However, they have been increasingly turning towards an emphasis upon nonagricultural enterprises.

The greater productivity of the kibbutzim is due to many factors, primarily economies of scale, specialization, and a high level of investment. They concentrate primarily upon those areas of production which are capital-intensive. The declining attraction of the collectives for Jewish youth, and the exodus of veteran members has brought about serious labor shortages and hence a greater emphasis upon mechanization.

An analysis of their accounts indicates that, at least since 1953, the kibbutzim have been sustaining losses. Though the situation varies, this generalization would apply even to the established older collectives (excluding all those founded after Israel's independence in 1948). Many kibbutzim were settled in areas of poor soil, inadequate rainfall, difficult climate, distant from the markets, and of high costs of irrigated water. Since the collectives started without any capital of their own, and since the initial investment capital provided by the Jewish Agency and the Government Development Budget was inadequate and unsuitable for the investment projects, the kibbutzim increasingly resorted to high cost short-term loans which have had a cumulative negative effect upon their profitability. Agricultural subsidies have not offset the adverse parity index. The exodus from many kibbutzim has raised production and consumption costs (both of which are closely related in the kibbutz). The emphasis of the collectives upon diversification has also had the effect of increasing costs, especially since the labor shortage and the ideological conviction which opposes the use of hired labor has restricted the possibilities of economies of scale.

Under the kibbutz setup, labor costs are determined by the percentage of the membership working in production and by the consumption costs of the settlement as a whole, hence their consumption patterns--especially in the

area of child care--and the radical improvement in the levels of consumption in the 1950's have a constant negative effect upon the profitability of the economy of the collectives. A specific comparison of the two main forms of rural settlement, the moshav and the kibbutz illustrates many of the problems of the collectives. Since 1957 the number of members of both groups has been declining. While the rural-urban movement of population is typical of developing and developed countries, the exodus from the moshavim need not affect the profitability of the remaining moshav farmers; the effect upon the kibbutz is definitely detrimental.

There are many sociological and political factors which are of basic importance to an understanding of the kibbutz movement. This dissertation addresses itself to an understanding of its economic problems.

Source: Dissertation Abstracts, Vol. XXII, No. 4, University Microfilms, Ann Arbor, Michigan, October, 1961, 314 pages.

Title: AN ECONOMIC ANALYSIS OF TAIWANIAN
AGRICULTURAL DEVELOPMENT SINCE 1950

(Order No. 61-5854)

Author: Wei-ping Liu, Ph.D.
University of Minnesota, 1961

The purpose of this study is to analyze the achievements of economic development plans in Taiwan since 1950 and factors affecting economic growth. An investigation is also made of structural changes in the island's agriculture and their relationship to the economy as a whole.

The economic development of Taiwan has progressed steadily since its formal beginning at 1953. Two Four-Year-Economic-Development-Plans were implemented in 1953 and 1956. The results of these plans are sizable but not enough to lift the Taiwan economy from the subsistence level to a self-propelled and self-sustained economy.

Real national income increased 37 percent, or at an average of 5.3 per cent per year from 1952 to 1959. Per capita income, however, increased only 12 per cent, less than two per cent per year, during the same period. Agricultural production increased by 44 per cent but industrial production increased by 115 per cent. Industrial employment rose 9.4 per cent from 1952 to 1959. Inflationary forces are still strong but have been moderating. The balance of payment is still in deficit despite substantial aid from the United States because of an excess of imports over exports.

The relative importance of agriculture in the economy has declined. Agriculture's share of the gross national product decreased from 39.4 per cent to 29.9 per cent from 1953 to 1959. The per cent of total foreign exchange earned from the export of agricultural products decreased from 95 per cent in 1953 to 74 per cent in 1959.

Gross capital formation increased 66 per cent during this period. Capital formation in agriculture was smaller than the over-all capital formation. The average ratio of capital formation to national income was about 14 per cent annually. Factors affecting capital formation in Taiwan are: the rapid growth of population, the high rate of propensity to consume, the inflow of foreign aid, and inflationary forces.

Targets of production of agriculture set up in the original plans have been fulfilled, however, actual investment in agriculture was less than the amount projected. Sugar cane production increased at a more rapid rate than rice production. Factor productivity in agriculture increased at a moderate rate due mainly to improved technology and land reform program. The rate of increase in agricultural output fell in the latter years of the development periods.

The sugar industry is the number one foreign exchange earner in Taiwan but its relative importance has been decreasing because of deteriorating sugar prices. It would be profitable for Taiwan to shift land from sugar cane to other crops.

Balanced growth between agriculture and industry in Taiwan is a desirable policy. However, within industry it would be better to select one or a few industries as the "take-off" industries which can provide the stimulus for economic development.

Taiwan should undertake two primary programs. One is a firm policy of population control. Second, it should increase savings by either voluntary or compulsory methods. Without population control Taiwan cannot substantially increase its per capita income. An increase of savings is a necessary condition to promote and maintain economic growth.

Source: Dissertation Abstracts, Vol. XXII, No. 6, University Microfilms, Ann Arbor, Michigan, December 1961, 158 pages.

Title: AGRICULTURAL CREDIT IN TRIPOLITANIA

(Order No. 61-4531)

Author: John Anthony Bottomley, Ph.D
University of Virginia, 1961

The most desirable allocation of capital resources is such as to cause their marginal social product to be equal everywhere. This equality of return is not found in Tripolitanian agriculture, and this dissertation sets out to explain why.

To begin with, there are the distortions which arise as a result of the fact that the greater part of all cultivable land is held in common by the Arab tribesmen. Since only a small proportion of the provincial terrain can be held in private hands, we must expect the rents thereon to be unnecessarily high, and it is the need to cover these rents which causes the landowner to plant crops which show considerable monetary returns per hectare. Because such

crops require a relatively heavy application of capital in conjunction with a comparatively small employment of land and local labor, the returns on capital itself are diminished below what they might otherwise have been, and much land and labor is left without a full employ. Capital would show higher returns and finance the employment of a larger number of the currently under-employed if it were allowed to combine freely with the common land. This proposition is supported by an analysis of the costs, methods of production, and returns on a variety of crops grown in Tripolitania. As elsewhere, a solution to the problem is discussed partly in terms of the role which the agricultural credit system must play.

Ultimately high monetary returns are also foregone because of the Libyan farmer's predilection in favor of liquidity which clashes with an insufficiently liquid market for maturing trees. In addition, the best opportunities are sometimes missed on account of a conspicuous lack of knowledge on the part of the indigenous investor. These propositions are supported by an analysis of the facts and plans are presented for overcoming the difficulties involved.

Lastly, there is a powerful tendency for the nomadic herdsmen to over-graze the common land and its productive capabilities have been much impaired. A solution to this problem is put forward in terms of identifying the nomad's self-interest with the preservation of the range upon which his tribe holds the grazing rights.

A number of subjects ancillary to these main issues are introduced, but the general proposition which this work sets out to prove is that the institutional environment in which the Tripolitanian farmer works is highly unsatisfactory, and that until it is improved, no reasonable amount of foreign capital will allow him to take off on the path of self-sustained growth. It is evident from the discussion which this work contains, that capital in the form of trees, stock-watering wells, and the like could always have been created by some sacrifice of the Libyan farmer's superabundant leisure, but that the common ownership of land and other institutional structures have discouraged the conversion of surplus labor into roundabout production. The poverty of the Tripolitanian peasant is, the author claims, not so much the result of a relentless pressure of population upon existing resources, which denies the opportunity to save and accumulate the necessary capital, but rather a consequence of the fact that the province is not organized to create capital; that this also means that neither is it equipped to absorb it and that in such a situation any outside funds will tend to waste away.

Source: Dissertation Abstracts, Vol. XXII, No. 5, University Microfilms, Ann Arbor, Michigan, November 1961, 231 pages.

Title: FACTORS INFLUENCING USE OF CREDIT IN
AMERICAN AGRICULTURE
(INCLUDING COMPARISONS WITH INDIA)

(Order No. 61-4089)

Author: Kamud Chintaman Karnik, Ph.D.
University of Missouri, 1961

This study contains quantitative estimates of factors that influenced the use of credit on farms in the United States and in nine selected states representing different type of farming areas during the years 1914-58. Simple and multiple regression equations were used to determine the extent of relationship between the amount of credit used by farmers and such factors as the value of real estate, commodity prices, income, and resources of credit institutions.

The value of farm real estate was found to be the most important factor influencing the real estate mortgage debt in the United States. During the years 1914-58, increases in land values were closely associated with rising mortgage debt and declining values with decreasing debt. To a certain extent, expansion in size of farm units also influenced the volume of debt.

The amount of short-term debt was closely associated with expenses of farm production during the years 1914-58. Increasing mechanization on farms and improvements in techniques of production greatly influenced the use of credit. An increase in disposable income was found to be associated with a decline in the amount of short-term loans held by institutional credit agencies.

Prices received for farm products showed no consistent relationship either with the long-term mortgage debt or the short-term non real estate debt. The relationship was, however, closer for short-term than for long-term debts during the greater part of the period under review.

The generalizations made for the United States as a whole were modified to some extent when applied to particular type of farming areas. In areas where incomes were relatively uniform and stable, as in the dairy states, a decline in value of farm real estate did not result in a decline in the volume of debt. Similarly, as long as incomes were high, an increase in land values did not result in an increase in debt but in higher repayments and a decline in the amount of debt outstanding.

Though the variables included in the equations accounted for a large proportion of the farm debt, the regression coefficients cannot be considered as statistically reliable in forecasting the exact magnitude of credit requirements in the future. This lack of reliability grows out of the nature of the data. Conditions change through time and the characteristics of the universe change. In spite of these limitations, however, future changes in the volume of farm debt can be ascertained with a reasonable degree of accuracy, once the changes in explanatory variables are known.

In an underdeveloped country like India, the factors influencing the volume of farm debt largely stem from the low level of income. The credit structure of the country can be better organized if conditions are created for the growth of institutional credit. This will require, on the one hand, assumption of greater risks by non-profit organizations that provide finance to agriculture and, on the other hand, measures for the development of agriculture along economic and commercial lines.

Source: Dissertation Abstracts, Vol. XXII, No. 5, University Microfilms, Ann Arbor, Michigan, November 1961, 235 pages.

Title: ALTERNATIVES IN AGRICULTURAL LAND
TENURE, JAMAICA, WEST INDIES

(Order No. 61-4893)

Author: Irving Errington Johnson, Ph.D.
Cornell University, 1961

The purpose of the study is to determine what adjustments should be made to the existing system of land tenure in Jamaica to enable farmers to obtain a better level of living from farming.

Material used in the study consists largely of data from sample surveys, agricultural statistics from various sources and relevant literature.

The study is presented in three sections. Section I analyzes the situation in Jamaica mainly for the period 1655 to the present time. Section II discusses tenure systems in selected countries in Latin America, Europe, Asia and the Caribbean; the chief methods of land reform which have been adopted and the results arising therefrom. Section III presents hypothetical situations based on the earlier presentation.

Jamaica has a predominantly agricultural economy, oriented to the production of export commodities, the chief of which are sugar and bananas. It is characterized by having a land area of steep and rugged topography, only 18-20 percent being flat or gently rolling. About 50 percent of the land area is potentially suitable for agriculture, 37 percent for forestry, while about 6 percent yields rich bauxitic ores. Soils in general are not very productive; crop husbandry covering a wide variety of crops dominates the agriculture.

Jamaica has a high man-land ratio, a rapidly growing population and few alternatives outside agriculture, resulting in constantly high levels of underemployment and unemployment. About 49 percent of the active labor force is engaged in agriculture.

Land tenure is mainly of the freehold type initiated by the grant of large patents of land by the British to early white colonizers under the sugar and slave economy. Considerable absentee proprietorship developed as did subsistence farming and a pattern of tenancy characterized by shifting cultivation. The distribution of land is highly skewed and land holdings are considerably fragmented. There exists a very low degree of proper entitlement to ownership.

Inadequate knowledge of farming skills; a low degree of application of technology, absence of labor saving equipment for most small farmers; and a skewed distribution of command over capital are some of the factors which limit agricultural production. Improper use of land is rampant and a considerable degree of soil erosion exists. Absence of agricultural records and farm management data makes it impossible to plan programs of development satisfactorily.

The merits and demerits of the different types of land tenure as they operate in Jamaica are discussed.

Changes in institutional arrangements have led to considerable improvements in the economy. The per capita income at constant values has been increasing at an average rate of 5 per cent per year over the last 5 years. The per capita income of persons engaged in agriculture remains the lowest for any sector of the economy.

Government land reform programs based largely on land settlement have seen the government become the biggest realtor on the agricultural land market.

Suggestions are made for adjusting many undesirable features of tenure, particularly those resulting from the Inheritance and Tenancy laws, insecurity of tenure and improper land use.

Conclusions as to possible modifications of the tenure system are based on the overwhelming attachment to freehold tenure, on the need for the state to exercise more fully its rights in property, and on the necessity for adjusting the undesirable elements current in leasehold tenure.

Source: Dissertation Abstracts, Vol. XXII, No. 7, University Microfilms, Ann Arbor, Michigan, January 1962, 454 pages.

Title: PUBLIC POLICIES IN THAILAND UNDER THE CONSTITUTIONAL
REGIME--A CASE STUDY OF AN UNDERDEVELOPED COUNTRY

(Order No. 62-115)

Author: Eliezer Ben-zvi Ayal, Ph.D.
Cornell University, 1961

This study is an empirical analysis of public policies in an underdeveloped country, Thailand. It involves the identification description and analysis of the motives, nature, forms of application and economic effects of public policies in Thailand since the revolution of 1932. Many pursued by Thailand after the revolution pioneered policies now common in underdeveloped countries. The experience of Thailand can, therefore, provide a basis for the analysis of the probable repercussions of similar policies in such countries.

The major factors affecting both the choice of policies and the results of their implementation were the state of economic backwardness of the country, the dominance of Chinese over important sectors of the economy, and the need recognized by the clique currently in power to maintain its authority by arbitrarily distributing economic favors.

The over-all approach of Thai policy-makers toward economic matters was pragmatic. This was manifested in the absence of clearly articulated long-run economic objectives. Taken together with the paucity of statistical and other data and occasional misunderstanding of the issues involved, this resulted in a series of uncoordinated policy measures. No clear priorities in budget allocations could be discerned, either in the capital budget or the ordinary budget. Indeed, there was no consistent basis for distinguishing capital from ordinary expenditures. The process through which the size and scope of the budget were determined was inadequate. Legislative control over budgetary appropriations was acutely curtailed by the political weakness of the legislature, the frequent use of extra-budgetary funds by the ministries, and the existence of departmental companies with access to public funds.

The importance of currency in circulation as part of the money supply, the relative dependence of the volume of currency on the balance of payments, and the narrow scope of operation of banks and other financial institutions

limited the effectiveness of monetary controls. The money supply expanded rapidly during the war and, while the pace slowed down, it continued to increase after the war because of the persistent over-all governmental deficit. Throughout this period Thailand experienced a persistent rise in the general price level. Various attempts to control this rise in prices proved unsuccessful.

A greater degree of sophistication was generally demonstrated in exchange-rate policies. True, some measures, such as the method chosen for fixing the exchange-rate after the war and the arbitrary change of the Bank of Thailand foreign exchange rate in February, 1952, were puzzling. On the other hand, flexibility, realism and a willingness to experiment were demonstrated at other times. The best example of the latter was the use of multiple exchange rates between 1947 and 1951. Today, Thailand is unique among the underdeveloped countries in that it has practically no exchange controls.

In the field of foreign trade, very little was done to encourage exports. The main concern of the government was to secure revenue through various forms of export taxes and, in the case of rice, through an export monopoly. Attempts to control the composition of imports were sporadic.

Economic nationalism, taking the form of a desire to dealienize the economy, provided the nearest thing Thailand had to a persistent, long-run policy objective. Measures which were obviously irrational when appraised in terms of objective economic criteria assume a new perspective when viewed in light of this social goal. As in other fields, however, only minor progress has been made toward the realization of this goal. The hold of the Chinese on the economy is so deeply rooted, that it appears a hopeless task to remove it. The rapid increase in population at a time when the resources used by the traditional methods are being exhausted, requires a drastic change in methods of production and in the whole approach to economic development. The poor record of Thai enterprises, governmental and private, suggest that the solution lies in making greater use of the skills of the Chinese rather than in restricting their activities. This, together with a bold new program for governmental action is imperative for the attainment of sustained economic growth.

Source: Dissertation Abstracts, Vol. XXII, No. 9, University Microfilms, Ann Arbor, Michigan, March 1962, 364 pages.

Title: THE NATIONAL BANK OF EGYPT

(Order No. 62-2542)

Author: Khalil Dibee, Ph.D.
The University of Texas, 1962

The development of the National Bank of Egypt from its creation in 1898 to the present time is traced in this study. During that period, the Bank by the force of necessity and circumstances gradually evolved from a British-owned commercial bank into the Central Bank of Egypt. As increased powers and responsibilities were delegated to the Bank, its organization was modified to enhance the Bank's ability to accomplish the new goals. In the most recent

revamping of the law, the Bank was granted broad and sometimes arbitrary powers to control banks and credit. On the other hand, the Bank was nationalized, and placed under the control of the government.

The economic, financial, and institutional setting as well as the political aspects of central banking in Egypt are discussed as a background for the development of the National Bank of Egypt. The importance of cotton growing and the prevalence of small farmers in agrarian Egypt, as well as the Anglo-Egyptian financial ties and the predominance of foreign banks in Egypt, are evaluated as factors bearing on central banking in that country. The financing of cotton export and the lending to small farmers are presented as major activities of the Bank. Anglo-Egyptian financial ties are viewed by the writer as incompatible with the control of money supply, and the foreign character of the banking system is considered to have been an impediment to bank supervision. On the other hand, Anglo-Egyptian ties stabilized the exchange rate of the Egyptian pound in terms of the sterling pound, and provided a market for Egyptian. English-owned and other foreign banks filled the gap created by the lack of domestic commercial banks.

The most important functions of the National Bank of Egypt are studied. As a commercial bank, the National Bank of Egypt accepted deposits and made loans to individuals, particularly farmers, as well as to public entities. Although the Bank was made a de jure central bank, its commercial banking aspect was continued on a limited scale as a supplement to central banking activities. Among the central banking functions performed by the Bank, note issue, credit control, and bank supervision are considered at length. Effects of note issue provisions on the Egyptian monetary standard and the economic conditions are stressed. The instruments of credit control and the methods of bank supervision used by the National Bank and the degree of control they afforded the National Bank are given special attention.

It is concluded that the National Bank of Egypt, contrary to the common views held by extreme Egyptian nationalists, has served the best interests of Egypt. An Egyptian-owned central bank created under the circumstances that prevailed before World War II, would have been unable to render services similar to those provided by the National Bank of Egypt. The powers of the Bank are found to be adequate for the fulfillment of its current objectives. The subordination of the Bank's management to the Egyptian Government is in keeping with economic planning current in Egypt. Due to the State partial or complete ownership of the most important commercial banks in Egypt, it is recommended that the National Bank of Egypt discontinue commercial banking.

Source: Dissertation Abstracts, Vol. XXIII, No. 1, University Microfilms, Ann Arbor, Michigan, July 1962, 226 pages.

Title: INTERSECTORAL INCOME--REDISTRIBUTION IN EGYPT

(Order No. 62-3221)

Author: Robin Barlow, Ph. D.
University of Michigan, 19

This study is concerned with the redistribution of income between the sectors of an underdeveloped economy which occurs as a result of government taxing and spending policies.

A simple two-sector model is outlined for the purposes of arriving at general recommendations for the direction of income-redistribution between the agricultural sector and the rest of the economy in Egypt. In this model the government is seen as lowering real income in the two sectors through taxation and then raising real income in the sectors as a result of its expenditures. The problem to be solved is how the fiscal burdens and benefits should be distributed between the sectors if the objective is to maximize the growth of per capita income. Among the variables which have an important influence on the solution are the marginal capital-output ratios prevailing in the two sectors, the tendency of taxes to impinge on saving rather than on consumption, the extent to which increases in private income due to government spending are invested rather than consumed, and the influence of the tax-expenditure structure on the rate of population growth.

With such a model in mind, the general features of the Egyptian economy are analyzed and a prima facie case is presented for discriminating fiscally against the agricultural sector. The case is founded on the following propositions: 1) heavy taxation of agricultural rents would permit funds to be diverted from consumption or unproductive investment into productive investment, 2) taxation of agriculture might release the surplus part of the agricultural labor force for productive employment in the nonagricultural sector, 3) government investment in the agricultural sector yields relatively low returns, 4) government investment in the nonagricultural sector yields relatively high returns, 5) fiscal redistribution of income from landowners and peasants to nonagricultural capitalists would raise the rate of private capital formation, and 6) fiscal discrimination against agriculture might serve to lower the rate of population growth.

The redistributive policies which might be desirable on theoretical grounds are then compared with the actual redistributive policies followed during the period from 1948 to 1960. An attempt is made to measure the intersectoral incidence of the government's taxes and expenditures in each of the years of the period. The intersectoral burdens of the main taxes and quasi-taxes are analyzed in some detail. The intersectoral benefits flowing from government expenditures cannot be measured with any precision, and the benefit estimates which are presented must be regarded as hypothetical.

The measurement of intersectoral burdens and benefits is attempted in considerable detail, 124 receipt items and 217 expenditure items being classified separately. The actual or estimated tax collections and expenditures are presented for the entire period from 1948 to 1960. This information is otherwise only available in several different publications, most of them in the Arabic language.

The comparison of each sector's burdens and benefits yields estimates of the direction and extent of the redistribution of income from one sector to the other. The main conclusions which emerge from the quantitative part of the study are as follows: 1) throughout the period the redistribution of income between sectors occurred on only a minor scale, 2) there was no tendency over time to redistribute income away from the agricultural sector. Thus the actual redistributive policies in Egypt have not fully exploited the potentialities for economic growth.

Source: Dissertation Abstracts, Vol. XXIII, No. 2, University Microfilms, Ann Arbor, Michigan, August 1962, 268 pages.

Title: AN ANALYSIS OF THE CROP LOAN PROGRAM OF
AGRICULTURAL CREDIT AND COOPERATIVE
FINANCING ADMINISTRATION

(Order No. 62-981)

Author: Orlando de Jesus Sacay, Ph.D.
Cornell University, 1961

The economy of the Philippines is predominantly agricultural. During the past decade, there has been increasing concern about economic development. One of the requirements for economic development is credit at low cost.

Credit has been a serious problem of the Filipino farmers. High interest rates on loans were charged by the private unregistered lenders. For this reason, the Agricultural Credit and Cooperative Financing Administration (ACCFA in short) was established "To extend liberal credit to small farmers, to release them from the clutches of usury, and to enable them to acquire essential tools of production." Loans were granted to farmers through duly organized Farmers' Cooperative Marketing Associations.

Crop loans were made available at low cost to help farmers raise their principal crops. The only security requirement was a promise to pay and a pledge to deliver a certain amount of produce to the cooperative association.

A large number of farmers were able to obtain crop loans. During the six-year period from 1952-53 to 1957-58, ACCFA released a total of P 50.6 million for crop loans. However, continuation of the program is being threatened by the farmers themselves through non-repayment of loans. As of June 30, 1958, over-all repayment was only 58.2 per cent.

Crop loans, as granted by ACCFA, were very risky loans. Loans were granted on the basis of need. Many borrowers did not have the capacity to pay. The borrowers' financial conditions and credit situations were not thoroughly examined. In addition, borrowers were allowed more than the agreed period of time to repay their loans. As a result, 60 per cent of all borrowers became delinquent.

Continuation of the program at this low level of repayment is difficult. Operation on the same basis is possible only if the government subsidizes the losses in crop loans. However, this will further encourage non-repayment of loans.

Basic to ACCFA's continued operation is the recovery of loans. ACCFA is not a welfare institution. Its liberal credit policy connotes liberality in the nature of security requirements and does not mean credit for all those who need it.

A high rate of repayment is necessary if ACCFA is to break even; and more so, if it is to operate on a profit. A high rate of repayment can be attained only under strict conditions--highly efficient administration of loans.

Selection of borrowers must be made properly. Only farmers with the capacity to pay should be granted credit. Some supervision of loans should be done in order to encourage the productive use of borrowed funds. It is imperative that crop loans be collected on time. Otherwise, the chances of recovery become considerably less.

Lastly, a continuous and effective program of membership education should be undertaken. Farmers should be made to realize their roles in this program which was designed primarily for their benefit.

Source: Dissertation Abstracts, Vol. XXII, No. 11, University Microfilms, Ann Arbor, Michigan, May 1962, 240 pages.

Title: AN ANALYSIS OF THE MONETARY AND
BANKING SYSTEM OF NIGERIA

(Order No. 62-1047)

Author: William Okefie Uzoaga, Ph.D.
Fordham University, 1961

The Nigerian economy depends on the production and export of primary products, and on the United Kingdom for a large proportion of imports and a market for primary export products. Since 1955, Nigeria has been subject to increasing adverse trade balances partly due to the volatility of primary export prices, and partly because of sharp increases in the value and volume of imports.

This dissertation undertakes to examine the monetary and banking system in Nigeria in the light of internal economic development. The study considers the currency system, the commercial banks, and non-bank financial institutions.

An analysis of the West African Currency Board System which supplied Nigeria with currency from 1912 to 1959, shows: First, that the rigid, 100 per cent sterling exchange standard system, precluded local monetary management. By investing the currency reserves exclusively in sterling securities,

the Currency Board made impossible the issue of fiduciary money. Thus, the monetary system was incapable of effective response to economic growth except through the accumulation of export surplus.

Second, that the Board distributed to the constituent territories--Nigeria, Ghana, Gambia, and Sierra Leone--part of the earnings from their currency reserves, but total distributions, though substantially increased during the 1957-1959 period, represented a low average yield on resources. Finally, that the magnitude of the fiduciary issue recently introduced by the Central Bank, seems insignificant when compared with the burden of accumulating the reserves in terms of imports foregone, and the depreciation of values of accumulated sterling balance as prices rise.

An examination of the Nigerian banking system reveals the dominance of foreign banks affiliated with London banks. This affiliation implies dependence on the London money market for the investment of funds surplus to the requirements of local government and expatriate trading firms. The inaccessibility of bank credit to wider sectors of the economy spurred the establishment of indigenous banks whose expansionist policy accelerated the reduction of low banking density, and increased bank holdings of local assets. However, their aggressive banking policy has, at times, strained their liquidity position and public confidence. Unlike the indigenous banks and cooperative credit institutions, the Post Office Savings Bank and the Regional Development Boards invest large proportions of their reserves in sterling securities.

The growth of demand deposits in the banking system during the last ten years has been impressive. However, bank credit expansion during the same period lagged very much behind the increase in demand deposits because of the paucity of local borrowers acceptable to the dominant banks, and the availability of alternative investment opportunities outside Nigeria. The resulting dependence on the balance-of-payments conditions for the bulk of the money supply has been harmful to the economy because of sharp fluctuations in primary export prices, and the high propensity to import.

Thus, the monetary and banking system increased the obstacles to internal development at the same time as it facilitated transactions in the export sector of the economy. Indeed, changes in the monetary and banking system alone cannot ensure corresponding changes in economic development. But the attainment of sustained economic advancement requires an increase in the magnitude, range, and variety of institutional credit available to different forms of economic enterprise.

The Federal Government and the Central Bank should direct the monetary and banking system to internal economic development through: (1) the extension of the exchange control system over current transactions in the Sterling Area, and the alteration of the exchange rate parity with sterling; (2) a significant reduction of currency reserves; (3) the development of a money market, and the establishment of agricultural and industrial banks; and (4) the abrogation of regulations encouraging the repatriation of public and the Savings Bank's funds.

Source: Dissertation Abstracts, Vol. XXII, No. 11, University Microfilms, Ann Arbor, Michigan, May 1962, 227 pages.

Title:

COOPERATIVE FARMING AND FAMILY
FARMING IN THE PUNJAB:
A COMPARATIVE STUDY

(Order No. 63-70)

Author:

Harbans Singh Mann, Ph.D.
The Ohio State University, 1962

The objective of this study is to examine the experience of cooperative farming in the Punjab State in India and to identify and examine the problems of cooperative farms and family farms. The method of comparative case studies is used. Out of twelve case studies, two deal with cooperative tenant farming societies of ex-servicemen and land reclamation cooperative farming societies in Karnal district. In each of the remaining ten case studies the accounts and working of the cooperative farm are compared with family farms in the same village. Only those farms on which land was pooled for joint management are defined as cooperative farms. Data for the year 1953-54 were collected by personal visits to these villages. Net income was calculated on three bases. Net income on basis C was computed by subtracting the total value of all the inputs owned or purchased from the value of the output. This gives profits for the work of the entrepreneur of the farm. Net income on basis B was computed by excluding the imputed value of family labor from the costs. This gives a measure for the return of family labor including entrepreneurship. Net income on basis A was computed by excluding the imputed value of family labor, interest on owned capital invested in bullocks and implements, and the rental value of owned land from the costs. This gives the farm business income which is a measure of the earnings of the farm family for management, risk, labor and use of land and capital.

The following conclusions emerged from the study. Net income per acre on basis C for seven cooperative farms out of ten was lower than the average net income per acre on basis C for the family farms. The net income on basis C of each of the remaining three cooperative farms was lower than the net income per acre on basis B of the family farms. The cooperative farms had a better pattern of cropping. Six cooperative farms had higher yields per acre of important crops. The number of workers and bullocks per hundred acres of land on the cooperative farms was smaller than the average number maintained by the family farms. Cooperative farms had a higher investment in machinery. Cooperative farms of absentee or non-working landowners have a longer life than those of peasant proprietors. Sociological factors are as important as economic factors in the problem of cooperative farming. On joining a cooperative farm the owner-operator finds his status reduced from a landowner to a wage earner. He therefore does not join cooperative farms or leaves the society after the experience of a short period. For reclamation of land, cooperative farms with their financial resources and equipment have an advantage over family farms, but for farming the reclaimed land they do not show any advantage. Important motives for the organization of cooperative farms in the Punjab were (1) expectation of financial assistance from the government, (2) reclamation of land, (3) evasion of land reform measures by absentee or non-working landowners, and (4) purchase of tractors.

The member workers did not work so well as hired workers. The leadership in the organization and management of the cooperative farms was provided by

Three offices of agricultural lenders provided data. The lenders were asked to select a dichotomous sample of "successful" and "unsuccessful" borrowers. The Farmer's Home Administration and a Production Credit Association were used as data sources since these lenders have more complete information on their borrowers than other agricultural lenders. Prediction models were developed independently for each of the samples used in the analysis. The form of these functions was much alike although the importance of the different variables did change.

The equations which were selected as being most useful were those which could most accurately predict loan outcomes with relatively few variables and had rather high values for R^2 . Loan risk formulae were developed from the prediction equation to aid in applying the results of the study to prospective loans.

The results indicate that lenders generally may have overemphasized the role of debts and assets as risk predictors. These factors did not appear to be important in predicting risk.

Factors which seemed to be important for the PCA borrowers were conventional factors such as: farm ownership, experience on the particular farm and the relationship between non-real estate debts and total debts. Individuals who were able to make annual gains in their net worth by taking risks appeared to be discriminated against by the PCA.

Analysis of the Ingham County FHA sample produced evidence that the relationship between the firm and the household needs to be given more consideration for these borrowers. Other factors which seemed important were: attitudes toward insurance, the relationship between non-real estate and total debts and planned debt repayment. The ability to make annual increases in net worth prior to the loan seemed in the case of these borrowers to be an indicator that the borrower would succeed.

For the Eaton County FHA sample past level of living was an indicator of potential future capacity of the farm to produce needed income. Factors such as the relationship between debt repayment and income, the relationship between non-real estate debts and total debts and the intensity of the farmers' crop program also appeared to be important.

Source: Dissertation Abstracts, Vol. XXIV, No. 2, University Microfilms, Ann Arbor, Michigan, August 1963, 129 pages.

Title: FINANCIAL INTERMEDIARIES IN MEXICAN
ECONOMIC DEVELOPMENT, 1944-1960

(Order No. 63-5229)

Author: Robert Lee Bennett, Ph.D.
The University of Texas, 1963

This dissertation is an analysis of the role of financial intermediaries in the Mexican capital funds market during the period in Mexico which Rostow calls the "take-off into self-sustained economic growth."

Mexican flow of funds tables from 1944-1960 are developed for an economy of four sectors--business and individual, government, rest-of-world, and financial. The financial sector is disaggregated into four basic subsectors--the central bank, government nonmonetary intermediaries, deposit and savings banks, and private nonmonetary intermediaries. These financial subsectors are then aggregated into government and private subsectors and into monetary and nonmonetary subsectors.

Linear least-squares regression equations are computed for each real flow of funds of each sector and subsector; the values predicted by these equations for the years 1944, 1952, and 1960 are used to describe (1) the average relative importance of the various funds flows and (2) trends in the relative importance of the funds flows. The importance of individual flows relative to total uses of funds of each financial subsector is shown and the relative importance of each financial subsector flow to the corresponding flow for the aggregate financial sector is shown. Flows of the business and individual, rest-of-world, government, and financial sectors are compared by expressing them as percentages of gross national product.

Differences in the cyclical timing of the funds flows of the financial subsectors are measured through lead-lag correlation analysis using quarterly data of financial sector and subsector flows, industrial production, and wholesale prices.

The above empirical data are interpreted using a theory of the relationship of financial intermediaries to economic development drawn largely from the Gurley-Shaw theory of finance, the Schumpeterian theory of the relationship of innovation to economic development, and the institutional theory of economic development. This theory emphasizes the allocation function of financial intermediaries rather than their role as repositories of the liquid savings of the public.

The findings of this study of Mexican financial experience from 1944 through 1960 include the following:

- (1) a relatively constant relationship between the flow of external long-term financing to businesses and individuals and increases in per capita industrial and agricultural production was present;
- (2) financial intermediaries supplied virtually all external long-term funds early in the period and supplied approximately 60 per cent of those funds toward the end of the period;
- (3) nonmonetary intermediaries, particularly government nonmonetary intermediaries, supplied approximately four-fifths of these long-term funds;
- (4) the cyclical timing of the supply of funds from government intermediaries differed from that of private intermediaries in such a way as to suggest that the funds provided by government intermediaries were more permissive of increases in per capita output and less inflationary than were the funds provided by private intermediaries; and
- (5) during the period the nonfinancial sectors and private nonmonetary intermediaries developed into increasingly important sources of long-term financing of businesses and individuals.

The entire analysis leads to the conclusion that planned financial intermediary flows of funds may play a significant permissive role during the early stages of industrial development.

Source: Dissertation Abstracts, Vol. XXIV, No. 2, University Microfilms, Ann Arbor, Michigan, August 1963, 480 pages.

Title: ECONOMICS, POLITICS, AND LAND TENURE REFORM:
A COMPARATIVE STUDY

(Order No. 63-6048)

Author: Elias Hanna Tuma, Ph.D.
University of California, Berkeley, 1962

Agrarian reform means improvement in the agrarian structure. It comprises land tenure reform which deals with land title, and land operation reform which treats the pattern of cultivation, the scale of operation, the terms of land-holding, and credit. The vague concept of land reform can be discarded.

This study compares 12 reform movements--Solon's, Peisistratos', and Gracchan; Commutations; Enclosures; French reform; Emancipation; Stolypin's, Soviet, Mexican, Japanese, and Egyptian--on 23 variables representing the backgrounds, processes, and effects of reform. The results suggest that reforms fall in two categories, presented in their extreme forms as Type I and Type II, denoting western democratic and socialist reforms, respectively. Although the two types share common features, they are mutually exclusive regarding: attitude toward land tenure, meaning of equality, scale of operation and efficiency of production, political stability, and relations between the state and the individual. Variants of these two extremes share some of the basic features of both, but never all those of either in combination.

Although defects in the agrarian structure were recognized in the past, usually reform was introduced only after organizational crises had caused disequilibrium in the socioeconomic structures and made change inevitable. The motives for reform were more often political than economic or social. Reaction and discrimination usually characterized the reform process and limited the effects and permanence of reform. Dual tenures were common results.

The comparison suggests that unrestricted tenure tends towards concentrated landownership and unequal distribution of income and power. It also suggests hypotheses which have implications for contemporary underdeveloped countries as follows: If the reform objective is to improve productivity and use of resources, the scale of operation must be enlarged to allow investment of indivisible capital and modernization of techniques. If it is to equalize income and wealth distribution, land must be redistributed, private ownership restricted, and land alienation regulated. The more extensively these conditions are satisfied, the more far-reaching the reform will be. If the objective is to raise total production and per capita real income of the

peasantry without changing the pattern of distribution, labor productivity must be raised and underemployment reduced. This is possible by colonization and/or development of industry and commerce to absorb surplus rural population. If potentially arable land is limited, industry and commerce are the only alternative. If the objective is a combination of all these, the respective conditions must be satisfied in combination.

Land tenure reform can be useful in achieving short-run political objectives; these usually pertain to security and legitimacy of the regime in power. It is inadequate for long-run political goals such as creating a middle class, establishing a democracy, stabilizing the political system, or averting a revolution.

Source: Dissertation Abstracts, Vol. XXIV, No. 3, University Microfilms, Ann Arbor, Michigan, September 1963, 542 pages.

Title: **FINANCIAL AND REAL GROWTH IN VENEZUELA:
A STUDY OF THE RELATIONSHIP BETWEEN
FINANCIAL AND REAL VARIABLES**

(Order No. 64-115)

Author: **Caron Richard Waits, Ph.D.
The University of Texas, 1963**

Traditional monetary theory deals with the relationship between two sets of variables, the demand for and supply of investment funds. The interest rate is related on one side of this market to changes in the conditions under which money is demanded for the purpose of adding to the stock of capital. On the other side of the money market, the interest rate is related to the uses of money by surplus budget spending units. Changes in interest rates can be expected to lead ultimately either to changes in output or to changes in price levels or to a combination of both types of changes depending on a variety of circumstances. The proposition that "financial" variables are operative in the market for money involves the hypothesis that the structure of this market (the kinds of financial assets offered) can affect growth and price levels independently either by causing changes in the interest rate or by causing a shift in the demand for nonmonetary financial assets at given rates of interest. The shift in the supply of funds may be evidence of one or both of two changes, an increase in the propensity to save and a decrease in the demand for money as a proportion of gross income.

The following problems arise from this view of the determinants of capital formation: the definition of financial development, identification of the financial variables, identification of the real variables, and the measurement of the statistical relationship between the financial and the real variables.

The Venezuelan case is typical of financial development in developing economies. Predominance of commercial banking among financial institutions and the rising role of the public sector through five semi-independent agencies of the national government characterize Venezuela's financial development. The growth and diversification of the financial institutions in Venezuela have been very recent and relatively rapid.

Two conclusions seem to be apparent. One is that the pattern of development of financial institutions in Venezuela reflects a change in the attitudes of savers toward financial institutions, a willingness to hold indirect as well as direct securities. The second conclusion is that policy should be guided by the potential that these institutions seem now to possess for making a significant contribution to real growth through increasing the efficiency with which funds are allocated among various uses and the possibility of increasing the propensities to save and to invest. The level of financial development reached by Venezuela during the 1950's is not clearly associated with real growth but it appears that an essential framework has developed as a basis for that association.

Source: Dissertation Abstracts, Vol. XXIV, No. 7, University Microfilms, Ann Arbor, Michigan, January 1964, 205 pages.

Title: PROJECTING CAPITAL ACCUMULATION FOR
THE AGRICULTURAL FIRM-HOUSEHOLD.

(Order No. 64-2358)

Author: Varge Gilchrist, Ph.D.
Oregon State University, 1963

The accumulation of capital is of prime importance for a large sector of farming in which farm family income is restricted by limited resources. The rate of accumulation by a particular farm depends on the allocation of net income between withdrawals and savings for investment in the farm. The close intermingling of the farm business and household provides the context in which the operator and his family make this allocation. In the competition between the firm and the household, farm family decisions are aided by a better understanding of their likely results.

Deciding whether to consume or save requires a comparison of the utility of present income with the utility of future income from "plowed back" savings, so the future income must be estimated. Assuming that income depends on total resources, the problem is that of predicting the periodic growth of resources and accompanying changes in income. The purpose of this study is to develop a method for projecting this growth by exploring the main variables involved.

These variables are determined from the equation: "annual addition to capital = annual net income - annual withdrawals." Living expenditures, income taxes and the social security levy were taken as the important components of withdrawals. The latter two can be calculated directly from net income, but the first must be estimated, as must net income.

Regression methods are used to estimate the variables and the following estimating equations are used:

$$N = bA + a$$

$$L = cN + \gamma S + d$$

where: N is usual net income,

L is usual living expenditures, and

S is household size in adult equivalents.

In the projection, total capital changes annually by the amount of the "plow-back" from the previous year. The effect of trends in prices of inputs, outputs and living expenditure items are incorporated in the model.

Assuming inter-firm and intra-firm relationships to be the same, cross-sectional data from a localized random sample of farms in Marion County, Oregon, were used to test the relationships between the variables. The regression coefficients were significant at the .01 level. The variable A

accounted for 39 per cent of the variability in N and the variables N and S accounted for 64 per cent of the variability in L. Variations in type of farm and soil series had no significant effect on the relationship between usual net income and total input capital, although the useable soil series were too closely related to generalize beyond the strata represented.

Using two differing farms, selected from the sample for illustration purposes, several projections of capital accumulation were made, to demonstrate the use of the model and to show the effects of income taxes, family size, level of living, level of management, various credit arrangements, and unpaid family labor. The effect of adverse trends in prices of inputs and outputs is stressed. Specific application requires parameters derived from the subject farm or a homogeneous group of similar farms.

As a long run planning tool the method is flexible enough to incorporate planned withdrawals in any year, anticipated changes in unpaid labor, parameters and price trends, and planned capital replacements. Further exploration of its use is needed to refine the estimating procedures and to further test the relationships among variables with historical data and a wider variety of farm types and soil conditions.

Source: Dissertation Abstract, Volume XXIV, No. 8, University Microfilm, Ann Arbor, Michigan, April 2, 1964, 333 pages.

Title: FARM FORMED CAPITAL
IN AMERICAN AGRICULTURE, 1850-1910.

(Order No. 64-1883)

Author: Martin Leonard Primack, Ph.D.
The University of North Carolina at Chapel Hill, 1963

The primary purpose of this study is to analyze the historical and statistical data pertaining to the agricultural labor input in capital formation in agriculture in the United States from 1850 to 1910. Statistical series of farm labor input was constructed for the five major forms of agriculture capital -- land clearing, farm buildings, fencing, farm drainage and irrigation. Historical material was presented in support of the statistical series. To further clarify the import of the labor input for farm capital estimates were made of the proportion of the agricultural male adult labor devoted to this capital formation.

The decade with the highest labor input for all categories of capital was the 1850's with 6,282,000 man years, while the decade with the lowest was the 1860's with 3,906,000; the 1900's had 4,881,000 man years. The labor input for land clearing comprised the majority of the labor in farm formed capital from 1850 to 1900. In the 1900's the labor in farm buildings comprised the majority. The second most important category of capital in regard to farm labor input was the labor input in farm buildings. The labor input in fencing compared to land clearing and building is relatively small but significant. It ranged from 6 to 8 per cent from 1850 to 1880, rose to 11 per cent in the 1880's and 12 per cent in the 1890's and fell to 1 per cent

in the 1900's. The labor input for drainage and irrigation was relatively small and was not significant enough to measure till the 1880's.

The percentage of the adult male labor force devoted to farm capital formation ranged downward from the 1850's -- 16.8 per cent -- to the 1900's-- 5.3 per cent. The percentages in the 1850's for the settled regions were moderate -- 9.5 per cent in New England to 12.5 per cent in the Southeast. In the more frontier areas the percentage of the labor force devoted to capital formulation was higher, 15.6 per cent in the South Central to 43.4 per cent in the Lake states.

There are two most interesting observations to be drawn from this study. The first is that the high level of self-sufficiency in agricultural capital formation in the frontier areas in the 1850's leads one to doubt the relevance of the traditional determinants of capital formation as related to that time period and area. The determinants of agricultural capital formation in the frontier in the 1850's would more properly be the expected rate of return in relation to some utility index of farm labor expenditures rather than to the rate of interest. The second observation concerns the overwhelming importance of the prairie -- nonforested -- area in labor productivity of land clearing and fencing. The proportion of forested lands in the total land cleared in the 1850's was 81 per cent. This dropped considerably by the 1900's. This coupled with the great difference between labor input requirement in land clearing in forested and nonforested areas is primarily responsible for labor productivity in land clearing. The absence of suitable fencing material in the nonforested areas was a pervasive factor in the development and wide use of wire fencing after 1875. This shift to low labor requiring wire fences was the primary course for increased labor productivity in fencing from 1850 to 1910.

Source: Dissertation Abstract, Volume XXIV, No. 9, University Microfilm, Ann Arbor, Michigan, May 4, 1964, 281 pages.

Title: INVESTMENT CRITERIA FOR ECONOMIC DEVELOPMENT:
THE INDIAN EXPERIENCE

(Order No. 64-3139)

Author: Balwir Singh, Ph.D.
The American University, 1963

A considerable interest has been exhibited since the Second World War in the formulation of investment criteria for the planning of overall investment strategy and the selection of techniques of production most conducive to step up the tempo of economic development in underdeveloped countries. The main objective of this study was to determine the feasibility of having an objective criterion which could be empirically applied in this respect. For the latter purpose, the Indian endeavour at economic development since 1951 was utilized as an instance.

The explicit assumptions made are (i) that initially available investment resources are given, and (ii) that the development effort is made under a democratic set up. The questions of determining the broad strategy of investment policy and the selection of techniques have, as far as possible, been considered separately.

The controversy between balanced and priorities criteria looks futile, when viewed in the light of prevalent conditions in underdeveloped countries. The relative scarcity of capital and entrepreneurs, demand their allocation on priority basis to maximum advantage. However, the practice cannot be carried too far in underdeveloped countries because of their comparatively rigid economic structure. Any concentration at particular points, therefore, poses a serious danger of retardation in expansion on account of bottlenecks. In framing of investment strategy, a compromise has necessarily to be forged, therefore, between these two approaches.

On critical appraisal of the various criteria put forward for determining the optimum capital intensive techniques of production it was found that, given the assumptions made and objectives kept in view, in spite of the errors of logic involved in the formulation of some of the important criteria, each criterion represents a basically sound judgment. However, once the strength of the underlying assumptions and objectives kept in view were challenged, it became obvious that each criteria at best could be utilized to resolve only a particular facet of the multifacet development problem.

Thus, it was pointed out that it is not feasible to formulate a simple criterion based on singular considerations which could be universally applied. Any attempt like H. B. Chenery's to formulate an investment criterion based on the multiplicity of objectives is bound to result in a composite criterion embodying the various simple criteria. Though correct in approach, such a composite criterion not only involves the difficult problem of reducing the various parameters to common measure, but the weightage to be given to each component ultimately has to be based on value judgment.

The above conclusions arrived on the basis of purely theoretical analysis were subsequently justified by the manner in which investment allocation decisions were made under the three five year plans of India. The analysis

of the plans indicated that the problems actually faced by the planning bodies in underdeveloped countries are infinitely more complex than often conceived in the exposition of theoretical approaches.

The analysis of arguments put forward by the Planning Commission of India and others in justification of the investment allocation made under the three plans amply illustrate how, with the change in the economic situation and the scope of applying varying degrees of capital intensive techniques of production in different sectors result in the application of divergent investment criterion simultaneously in different combinations. In the ultimate analysis, the investments made under the three plans could be justified only on the basis of the broad principles of social cost and social benefit, and cannot be said to have been determined on the basis of a particular criterion.

Source: Dissertation Abstracts, Vol. XXIV, No. 10, University Microfilms, Ann Arbor, Michigan, April 1964, 207 pages.

Title: **FAMILY FARM ADJUSTMENTS TO MEET THE
 IMPACTS OF ECONOMIC, TECHNOLOGICAL, AND SOCIOLOGICAL
 CHANGES ON CENTRAL MISSOURI FARMS**

(Order No. 64-3796)

Author: **Albert Ross Hagan, Ph.D.
 Michigan State University, 1963**

Farm families always have faced the necessity of adjusting to changing conditions, but the degree and rapidity of these changes during the past two decades have created unique and perplexing problems. A lack of understanding of these problems and of the economic consequences of measures to alleviate them motivated the staff at the Missouri College of Agriculture to undertake an unusual type of coordinated research and extension effort.

The work involved selection of a two-township laboratory area where all of the family farms and their problems could be studied in depth over a period of years. The Blackwater area of Cooper county was chosen.

Initial work included a detailed soil survey of the area and personal interviews with each farm family to get complete data on resources owned and used in 1959 which was selected as the base year from which adjustments would be measured.

The data were analyzed to determine the kinds of adjustment problems peculiar to the different types of farming operations found in the area. The results disclosed 220 separate farm units, ranging from 1,100 down to a few acres in size. The farms were grouped into ten economic classes, using a breakdown similar to that in the 1959 Census of Agriculture. The groups included 95 commercial farms, 40 part-time farming units, 37 part-retirement operations, two abnormal holdings, and 37 unclassified farms.

Estimates of the rate at which primary lenders reduce a farmer's loan limit in response to the farmer's use of merchant credit were obtained from data collected in a 1961 survey of banks and PCAs. Loan limit discount factors were computed as a ratio of the reduction in the loan limit established by a primary lender to a farmer's increased liability to a specified type of merchant. Large variation among primary lenders in their responses to a borrower's use of merchant credit did not permit acceptance, at the 10 per cent level of significance, of the following three hypotheses concerning behavior of primary lenders: (1) that total borrowing capacity of a borrower can be increased by use of merchant credit, (2) that large banks, small banks, and PCAs each respond differently to a farmer's use of merchant credit, and (3) that primary lenders respond differently to a farmer's use of open-account as opposed to longer term merchant derived contracts.

Thirty East Central Illinois farm supply firms from each of five classes of merchants (feed, fertilizer, petroleum, farm machinery parts and service, and farm machinery whole goods) were interviewed to obtain information concerning merchant credit limits and terms. It was found that the credit available from one merchant, to a farmer with a given net worth, is little influenced by his use of another source of merchant credit. This information provided the coefficients concerning merchant credit used in an intra-year linear programming model which was used to deduce the consequences upon farm income and organization of various constraints.

The profitability to the firm of additional capital inputs resulted in use of merchant credit whenever possible, except for purchase of machinery in the spring. Cash shortages during two periods of the year exerted considerable influence on the farm's enterprise and financial organization. Prohibiting sale and repurchase of corn and deletion of the hog enterprise, two intra-year cash supplying activities resulted in lowering income 5.3% and 26.8%, respectively.

Increasing merchant credit financing charges from the modal rates to 12 per cent resulted in a reduction in profit proportional to the increase in financing charges. However, the enterprise and financial organization remained constant. Increasing the size of the loan limit discount factor reduced the livestock enterprises and lowered farm income, but had little effect on the financial organization.

The largest increase in farm earnings through supplemental use of merchant credit occurred when it was combined with borrowings from large banks. Large banks had the most restrictive primary lender loan limits. A situation which combines highly restrictive primary lender loan limits and small loan limit discount factors is most conducive to increase in profit through use of merchant credit.

Alternative credit plans were developed for those classes of merchants offering credit plans differing from the modal plans, but common to the trade. Profit differences among the alternative plans were small. Credit plans with repayment tailored to income periods offered a slight advantage.

It may be concluded that all farm operators should examine the merchant credit alternatives available to them. Some merchant credit plans result in lower financing costs than comparable credit from a primary lender. Farmers subject to credit rationing by primary lenders should take particular care in examining the feasibility of combining merchant with primary lender credit. However, such multiple source financing requires a high level of financial management.

Source: Dissertation Abstracts, Vol. XXIV, No. 10, University Microfilm, Ann Arbor, Michigan, April 1964.

Title: ROLE OF AGRICULTURAL CREDIT IN THE
 ECONOMIC DEVELOPMENT OF INDIAN AGRICULTURE

(Order No. 64-7103)

Author: Hira Singh, Ph.D.
 The University of Wisconsin, 1964

The central aim of this thesis is to understand the role of credit in the economic development of Indian agriculture. In this quest we have viewed agricultural development as a process by which a subsistence economy is transformed into a market-oriented agricultural economy in which farm and family expenditures and resources come to be allocated by economic calculations, with a reduced emphasis upon customs and traditions.

The analysis of agricultural credit demonstrates that two important variables largely determine the nature and function of agricultural credit in India: (1) the socio-economic structure of village society, and (2) the nature of farm business. Agricultural credit is now largely supplied by money-lenders. This finding is consistent with the conclusion of the All-India Rural Credit Survey that: "The professional money-lender, agricultural money-lender and trader still reigns supreme in the field of rural credit, supplying 70 percent or more of the total requirements. The government supplied as little as 3.3 percent and the cooperatives the equally insignificant proportion of 3.1 percent. Out of this very little, the larger part went to the bigger agriculturist and only a minor fraction percolated to the smaller cultivator. Most of the societies lent on the security of land and they tend to set aside as 'non-creditworthy' those who could not offer such security."

The small and medium cultivators still depend heavily on money-lenders for credit. Such loans are made largely on considerations of personal character with the money-lender willing to advance loans on this basis. A farmer's loyalty to his money-lender and his adherence to village customs and traditions are considered by village people to be the main indices of respectability and representative of his character. Thus, low income, social prestige, ceremonial credit and borrowing from the money-lender are all intertwined. Due to his low income, the farmer is much concerned about his social position. He contracts ceremonial credit to maintain position in the community by expenditures on ceremonies and customs which give his family respectability.

In such a society the importance of production credit is minimized. For high production and consequently greater income are not the means of social prestige, except for big farmers. Thus, a central issue in agricultural development is the change from a "status society" to an economic "going concern" in which agricultural credit is used for production rather than ceremonial purposes. The use of agricultural credit should both increase productive capacity of the farmer and help transform attitudes from inclinations to spend on unproductive items to investment in production. Such changes require that more economic rationality be brought into decision-making by farmers. Since economic rationality is largely a product of the operation of the market mechanisms, it is essential that markets be widened so that more of the income and expenditure decisions of farmers become responsive to market forces.

In this process of transformation a system of agricultural credit needs to be devised which will both recognize the present functions of ceremonial credit yet reduce and eventually eliminate larger expenses for ceremonies. Such a change in the use of agricultural credit would improve the economic status of both borrowers and lenders.

The study concludes by a proposal for the establishment of a system of local development organizations which would combine the extension of agricultural credit with some supervision of village agriculture and perform selected market services as well as institute programs to rationalize ceremonial spending by village people. These are referred to as Community Development and Loan Associations. Some suggestions are offered regarding ways in which the money-lenders might be induced to become stockholders in or members of such local associations, with the stipulation that money-lenders make loans according to prescribed standards of fairness in return for the opportunities to use rediscount privileges, participate in loan insurance and related programs of the village development and loan association.

Source: Dissertation Abstracts, Vol. XXIV, No. 11, University Microfilms, Ann Arbor, Michigan, May 1964, 420 pages.

Title: **THE ROLE OF FOREIGN CAPITAL MOVEMENTS IN
 THE ECONOMIC DEVELOPMENT OF BRAZIL
 AND MEXICO, 1947-1960**

(Order No. 64-5057)

Author: **Darrell Richard Lewis, Ph.D.
 Louisiana State University, 1963**

The purpose of this study is to examine the roles of foreign long-term capital in the post-war economic development of Brazil and Mexico. An attempt is made to identify and contrast its evolution, importance and amount, forms and fields of implementation, and balance of payments effects between the two countries, and to compare the complementary measures taken by the two governments concerned.

Chapters I-II provide an analytical discussion of some of the approaches and problems involved in the effective utilization of foreign capital. The factors governing the different forms of investment are different and so also are the criteria applied in their use. The developmental effect of foreign capital is also different depending upon the sectors of the economy into which it flows. Accordingly, Chapters III-V seek to throw light on the factors governing the pattern of foreign capital in the two countries. Chapter VI examines the long and short-run problems of foreign capital servicing in terms of internal and external economic implications. Chapter VII concludes and summarizes the main findings of this study.

The Brazilian and Mexican cases represented a high degree of dependence on external capital in the post-war era. Net foreign long-term capital increased in Mexico by \$1.5 billion and in Brazil by more than \$2 billion between 1947 and 1960. Of these aggregate amounts, public and quasi-public borrowing was the most important vehicle of inflow in both cases--ranging from 60 per cent in Mexico to over 70 per cent in Brazil. Grants composed 3.2 per cent of the total inflow in Brazil and 4.8 per cent in Mexico. Private direct investment, which went mainly into the manufacturing sectors, composed almost all of the remaining amounts in both economies. Between 1953 and 1960, foreign capital constituted 21 per cent of domestic fixed capital formation in both countries. In the same period, foreign capital as a proportion of foreign exchange was 24 per cent in Brazil and almost 16 per cent in Mexico. These figures, along with other supporting data in this study, tended to reveal the importance of external capital in the post-war economic development plans of the two countries.

It is also concluded that while private portfolio investment has declined, three important new sources of such investment have emerged to fill the gap: (1) intergovernmental loans and grants, (2) loans by multilateral lending institutions, and (3) medium-term credits and loans advanced by private enterprises but guaranteed by the governments.

The post-war expansion in public capital to both countries revealed a conflict between the official policy and practice of the lending sources. The evidence in this study revealed significant increases in public and quasi-public capital flows to the underdeveloped countries. Notwithstanding, most of the important capital exporting nations and institutions still tend to "officially" favor greater reliance on private capital.

It was found that a certain degree of prior development and expansion proved helpful in facilitating a further inflow of capital. Moreover, the cases illustrated that a certain degree of governmental actions proved helpful and at times necessary for capital importation, capital servicing and long-run growth. Public domestic action was found to be necessary in such fields as provision of social overhead capital, tariffs and quotas, diversification and expansion of exports, mobilization of domestic savings, proper monetary control over the money supply and at times the direct undertaking of industrial and agricultural projects. The case of Mexico, contrasted with Brazil, clearly illustrated a relatively successful pattern of domestic action.

Finally, it was shown that the satisfactory servicing of foreign capital was a function of not only exports but also of positive monetary, fiscal and exchange policies.

Source: Dissertation Abstracts, Vol. XXIV, No. 12, University Microfilms, Ann Arbor, Michigan, June 1964, 341 pages.

Title:

THAILAND'S FOREIGN TRADE:
STRUCTURE AND POLICIES, 1951-1960.

(Order No. 64-5481)

Author

Sriprinya Ramakomud, Ph.D.
Indiana University, 1963

Thailand is an agricultural and primary-producing country. Her major exports are rice, rubber, and tin, representing, in the 1950's about 70 per cent of the total export value. The rest consists almost entirely of agricultural products. All of the export items, except rice and few minor exports have only a small share of the world market. The elasticity of the foreign demand for exports is expected to be very high. During the 1950's it is estimated to be about - 8. The domestic supply of exportable goods, on the other hand, is inelastic. Imports of Thailand consist mainly of manufactured goods. Each of the import commodities represents only a small fraction of trade in the world market. The elasticity of the foreign supply of imports therefore is expected to be very high. Because of the fewness and small size of the import-substitute industries, the substitutability between the import and home-produced goods is likely to be very low.

These conditions support three principal conclusions. First, expenditure-switching measures are not effective in correcting a balance-of-payments deficit, except in the case when the deficit is caused by a decline in the foreign demand for exports. Second, the marginal propensity to spend on imports is high and thus expenditure-reducing measures alone are sufficient to remedy a balance-of-payments deficit when it is caused by a rise in the foreign supply price of imports, unfavorable climatic conditions, an increase in government borrowings from the central bank and a decline in the net capital inflow. Although the expenditure-switching effects of a rise in import duties may be negligible, because of the low elasticity of substitution between domestic goods and imports, its expenditure-reducing effect is substantial. The reason for this is that import tariff revenue bulks very large in total tax receipts; thus a rise in duty rates has a marked effect on the government's budgetary balance and on the level of its borrowings from the central bank. Devaluation and export tax variations have little expenditure-reducing effects. Nor have exchange controls and quantitative import restrictions. Third, following the optimum-tariff argument, the import tariffs should be replaced by other forms of taxation, when practical, as these rates are higher than the optimum level. This applies also to the export tariff except the rice export tariff, the rate of which at the present is probably lower than the optimum.

During the 1950's, Thailand enjoyed substantial external stability. Responsible for this stability were the stability of foreign demand, a cautious policy concerning government borrowings from the Bank of Thailand, and an increasing rate of inflow of private foreign capital. Also responsible for this stability was the use of fiscal policy, particularly through variations in import duty rates, to vary expenditures in response to disturbances affecting external balance. Although monetary policy was largely ineffective during the period, its effectiveness may be enhanced by measures strengthening the Bank of Thailand. Characteristics of Thailand's

balance-of-payments problems may seem to be unique when compared to those of industrialized countries, but they are not uncommon among developing nations. This study perhaps has much greater applicability than just to Thailand.

Source: Disertation Abstracts, Vol. XXV, No. 1, University Microfilms, Ann Arbor, Michigan, July, 1964, 310 pages.

Title: A QUANTITATIVE MODEL OF GROWTH
OF THE ALGERIAN ECONOMY

(Order No. 64-5591)

Lionel Guy Stoleru, Ph.D.
Stanford University, 1963

1. Statement of the Problem

This study proposes to deal with the following question: What is the best way to allocate investment in an underdeveloped country where there is grave unemployment? In order to make the words "best way" more precise, the targets we wish to achieve must be defined. The analysis for this purpose leads to the introduction of three criteria:

(1) Employment and balanced growth criterion: A stage of full employment steady growth is desirable.

(2) Welfare criterion: To produce a total amount of consumer goods as large as possible.

(3) Subsistence criterion: To guarantee at least every year a fixed minimum level of per capital consumption.

2. The Method

We build a simple model of the economy with a simplified structure where, for instance, technical progress is not introduced, which takes unemployment into account and where the growth path depends on one "control variable" or "policy". In the model, the policy is based upon allocation of investment between a capital sector and a consumption sector.

The optimal policy is then obtained as a solution of a problem in the calculus of variations by using the recently published Pontryagin's Maximum Principle. Although such a mathematical method has much more general application, this study is restricted to the case in which the values of the parameters are those now existing in Algeria. Therefore, a description of the Algerian economy is given in Part 1, the model is solved for a closed economy in Part 2, and the solution extended to an open economy in Part 3.

3. The Results

A. The results of Part 1: After a general description of the main features of the Algerian economy, the macro-economic data are derived:

- (1) An effective unemployment of 40%.
- (2) A per capita income of \$220.
- (3) A high capital-output ratio of 4 in the capital sector, and other important figures to be used in the model.

B. The results of Part 2: A mathematical optimum is first described which would lead to full employment steady growth in 19 years by investing only in the capital sector during the first 15 years. However, it is shown that the per capita income would temporarily decrease to such a low value that this policy is not admissible.

Taking this remark into account leads to another optimal policy whose results are the following:

- (1) Full employment steady growth is achieved in 23 years.
- (2) Per capita consumption has a minimum equal to 45% of its initial value.

Recalling that this Part is devoted to a model of closed economy, the conclusion is that Algeria is not economically mature enough to grow by itself; development without foreign aid would be almost impossible.

C. The results of Part 3: In Part 3, the model is extended to the case of foreign aid, more specifically in the case in which the foreign aid is equal to the actual amount now available to Algeria as a result of the peace treaty of Evian. Then

- (1) The optimal policy consists of investing during 12 years in the capital sector at the highest rate compatible with keeping per capita consumption at a level not less than 75% of its initial value.
- (2) Full employment steady growth is obtained after 15 years.
- (3) A rate of growth of 6.3% can be achieved and per capita income can be increased from \$220 to \$450 in 15 years.

The conclusion is that, with an adequate investment policy, Algeria will no longer be underdeveloped in 15 years and that, from the present system of government, it is actually possible to apply the optimal policy above described to the development of the country.

Source: Dissertation Abstracts, Vol. XXV, No. 1, University Microfilms, Ann Arbor, Michigan, July, 1964, 156 pages.

Title: ECONOMICS OF RESOURCE USE
ON RICE FARMS IN KOREA

(Order No. 64-7114)

Author: Jin Hwan Park, Ph.D.
University of Minnesota, 1963

Domestic consumption of foods has exceeded domestic production by about 19 to 15 per cent in the Korean economy in recent years. The possibilities for increasing the area of land use for the production of food are limited. Further increase in production of food may be possible by a re-allocation of resources to different crops, and by greater use of supplementary crops.

In order to determine future food production needs the probable demand for food was analysed, and some of the possible and desirable shifts of farm resources were examined, including the increasing production of supplementary crops (winter crops on rice paddies).

Cereals, particularly rice, is the most important item in the average domestic consumer's budget for food. Non-cereal foods, particularly livestock products, will increase in importance as the proportion of the population living in cities grows and as consumer income increases. Based on the estimated growth of population and per capita real income, the aggregate demand for cereals will increase by about 30 per cent, vegetables and fruits by about 50 per cent, livestock products by about 75 per cent from 1960 to 1970.

A very large proportion of the Korean farm resources are being employed for rice production, and about 70 to 80 per cent of the farmers obtain at least 50 per cent of their income from rice. As the demand for non-cereal foods increases more rapidly than for cereals the relative importance of cereals in the domestic food production is likely to decline.

Among cereal crops, rice produces the highest income per unit of land. Among non-cereal crops, vegetables, fruits, industrial crops and livestock will compete strongly with rice in farm resource use.

Major factors which influence the competitive use of limited land for rice and other products were examined. The supply of water on rice paddies, size of farms, distance of farms from markets, security of the farm food supply, the supplementary use of farm resources are the factors affecting the alternatives to rice in the use of farm resources. On rice paddies where drainage conditions are relatively good but the supply of water is uncertain, the possibilities are high that the land can be used more profitably for the market oriented upland crops. Near city areas or near the transportation centers, the relative importance of rice in the farm organization is likely to decline. In shifting farm resources from rice to the market oriented upland crops, additional capital and better managerial abilities of operators are needed. In the areas where transportation is less developed, upland crops produce significantly less income than rice. The cost of converting the less productive upland into rice paddies will prevent better use of the land and farm resources. As the demand for livestock products increases, the economic feasibility of using the less profitable uplands for feed will be increased.

Among the various factors restricting further use of rice paddies in the off season in the southern provinces are poor drainage of the rice paddies, shortage of labor, expense for fertilizer, and uncertainties in winter crop production; in the northern provinces an unfavorable winter is also a factor. The cost of fertilizer inputs for winter crops is high; the price of credit is high and the market price of fertilizer has increased more rapidly than the price of output. As the demand for livestock products increases with increasing price of livestock products, the economic feasibility of forage production on rice paddies in the off season will be increased.

Source: Dissertation Abstracts, Vol. XXV, No. 1, University Microfilms, Ann Arbor, Michigan, July, 1964, 241 pages.

Title: SOME PROBLEMS OF INSTITUTIONALIZED
AGRICULTURAL CREDIT IN VIET-NAM.

(Order No. 64-8083)

Author: Nguyen Duy Xuan, Ph.D.
Vanderbilt University, 1964

THIS STUDY was primarily concerned with the institutionalized aspect of agricultural credit in Viet-Nam and its impact on resources productivity of the paddy farming sector.

The Republic of Viet-Nam is essentially a two-sector agricultural economy: one is engaged in producing rubber for export on large-scale, well capitalized, foreign managed, and highly productive plantations; the other is producing food (paddy) on small farms with primitive techniques and involves more than 70 per cent of the total labor force. To make credit available to farmers of the food producing sector in Viet-Nam has always been an object of concern to the administration.

Earlier studies of the activities of the various agricultural credit institutions set up under the French administration have revealed that they benefited the medium and large-scale landowners. The National Agricultural Credit Office (NACO) established in 1957 by the present government of the Republic of Viet-Nam has adopted a lending policy based on the repayment capacity of the peasants. Now under NACO, agricultural credit is not rationed by security requirements in terms of existing wealth or income of the potential borrowers. Statistics of NACO's lending operations show that the volume of loans granted and the number of farmers served by NACO greatly exceed those under the French systems.

To establish guiding elements for future use of NACO's loans, the author has fitted a series of Cobb-Douglas paddy production functions to cross-sectional data of the 1960 Agricultural Census in Viet-Nam. One paddy production function was computed for the 9 Central Provinces, one for the 18 Southern Provinces, and one for the total 27 Central and Southern Provinces. The computational method is based on the "Stepwise Multiple Regression Program" written in Fortran No. 11.3.009 I.B.M., Guide General Program Library.

Analysis of these estimated paddy production functions revealed that: (1) the paddy farming sector in Viet-Nam suffers a serious problem of underdevelopment characterized by low return to labor input; (2) there is a differential between resource productivity of the Central and Southern groups of Provinces; (3) the techniques of paddy production are still primitive, and the outstanding contribution of land and insignificant contribution of other inputs to paddy output show the limits of improvement which cannot come but from a qualitative improvement of inputs; and (4) a large fraction of paddy labor force has a marginal productivity smaller than the minimum of subsistence. In the light of these results and other recent studies on agricultural output growth, this study recommended that an increase in paddy farming productivity in Viet-Nam can best be achieved by the qualitative improvement of inputs and by introduction of new production processes. Therefore emphasis should be focused on agricultural

research, extension services, farmers' education, and use of better seed and appropriate fertilizers. To that end, NACO should stand ready to provide credit to farmers who adopt new techniques of farming with the use of new inputs. In order to minimize the misuse of agricultural credit for non-productive use, cash loans at the farm level should be made within a well thought-out plan of supervised credit. In the meantime NACO should organize a combined system of input supply lines and of marketing facilities for the farmers.

In view of the shortage of government fiscal capacities, it was also suggested that NACO begin to establish a system of credit cooperatives with the ultimate objective of playing the role of central bank for the cooperatives and meeting directly only the credit needs of farmers who cannot qualify for loans granted by these credit cooperatives or other private banks.

Source: Dissertation Abstracts, Vol. XXV, No. 1, University Microfilms, Ann Arbor, Michigan, July, 1964, 307 pages.

Title: THE ROLE OF MONETARY AND
FISCAL POLICY IN THE ECONOMIC
DEVELOPMENT OF EGYPT (U.A.R.).

(Order No. 64-7363)

Author: Khamis Adib Abdul-Magid, Ph.D.
University of Pennsylvania, 1963

Between the middle of the nineteenth century and the end of World War II, Egypt constituted an agricultural colonial unit of the British Empire, integrated, however, with industrial Europe. Its monetary system was linked with the pound sterling. Financial institutions were branches of foreign banks whose main activities were confined to foreign trade. Under these conditions, the Egyptian Government had little control over the flow of money and credit in the country.

In addition, the tax structure had evolved out of the particular political and economic conditions through which Egypt had passed. Up to the beginning of World War II the Egyptian Government had limited fiscal autonomy. After the war, and especially after 1952, the Egyptian Government introduced important monetary and fiscal measures designed to accelerate the economic development of the country.

The purpose of the study is to explain the nature and the effects of the monetary and fiscal measures on the credit and tax structure, and in turn on the economic development of the country.

To secure the independence of the Egyptian pound, Egypt decided to leave the sterling area in July, 1947 and a currency reform was introduced in July, 1948 (Law 119). Once this law was passed, the way was open to concentrate on the reorganization of domestic credit. The central banking reform of 1951 and the banking and credit legislation of 1957 provided the new Central Bank of Egypt with new tools of credit control. The government through the central bank was able to control the allocation of credit to suit the overall economic policy of the country. The commercial bank lending and investment activities became more responsive to domestic economic conditions. There was a rise in the holding of Egyptian government securities by the commercial banks. Also, banks greatly expanded loans to industrial enterprise. Furthermore, with the aid of the central bank, the activities of both the Agricultural Cooperative Credit Bank and Industrial Bank increased.

In order to provide the additional revenues required for economic development, new taxes were introduced: progressive income tax, inheritance tax and social security tax. To encourage domestic industries, the government exempted the import of capital goods from any customs duties and raised duties on imported luxuries and those goods which are likely to compete with home produces. As a consequence of these measures, the proportion of government revenue derived from direct taxes increased while that from indirect taxes decreased. Also the government revenue from profits of public enterprises and the nationalization of some private enterprises increased. On the other hand, the size and pattern of government expenditures during the past decade also have changed. The proportion of government expenditures to national income increased from 14 per cent in 1945 to

38 per cent in 1960. Also, a rising proportion of the government revenue has been spent on economic development. For instance public expenditures on economic development in proportion to government budget increased from 16 per cent in 1950 to 26 per cent in 1960. Public development expenditures made up 3.7 per cent of national income in 1950 and this rate increased to 9.9 per cent of national income in 1960.

Largely due to the influence of this new monetary and fiscal policy the rate of capital formation increased during the period covered. National and per capita income increased from 1953 to 1955, decreased in 1956, the year of the Suez hostilities, and increased sharply by 1960. The proportion of national income which originates from the industrial sector of the economy increased while that which originates in the agricultural sector declined. Meanwhile the country's exports became more diversified. After utilizing most of the accumulated "sterling assets," the future development of the country will depend, to a large extent, on the ability of the economy of securing the necessary foreign exchanges needed for development.

Source: Dissertation Abstracts, Vol. XXV, No. 1, University Microfilm, Ann Arbor, Michigan, July 1964, 202 pages.

Title: ROLE OF FINANCIAL INTERMEDIARIES
 IN FINANCING PRIVATE
CORPORATE INVESTMENTS. (A COMPARATIVE
STUDY OF INDIA, THE UNITED KINGDOM
AND THE UNITED STATES).

(Order No. 64-8075)

Author: Kedar Nath Kohli, Ph.D.
 Vanderbilt University, 1964

THIS THESIS examines the various financial intermediaries in India for providing long-term funds to private corporate industry and compares them to those which exist in the United Kingdom and the United States. The purpose is to identify and highlight by such a comparison the gaps which exist in the Indian capital structure and to suggest measures for filling them.

In the United Kingdom and the United States, the financial intermediaries play an important role as a channel of personal saving and a source of long-term funds to industry. Currently they account for over three-fourths of personal saving (excluding consumer durables) and practically the entire requirement of industry. In India the personal saving channeled through the intermediaries is steadily growing. As against 8 per cent in 1950-51, nearly 30 per cent of personal saving in 1958-59 passed through the hands of financial intermediaries. But in the sphere of corporate financing, except for loans against mortgages, their role is very limited.

If the private corporate sector in India--which has been assigned an important position in the Five Year Plans--is to be assured of funds, it is essential that the financial intermediaries must play a much greater

part in corporate financing. However, a detailed and critical examination of the existing financial institutions shows that they suffer from several limitations. Some important institutions such as investment trusts and investment bankers are practically non-existent. The activities of the existing institutions are not fully coordinated. Severe restrictions are placed on the pattern of investment of certain major institutions such as the Life Insurance Corporation and the Provident Funds. These factors limit the resources made available by these institutions to private corporate industry.

Several suggestions have been made for improving the role of financial intermediaries in India. Important ones among these relate to the (1) improvement in stock exchange practices and provision of facilities to small investors for purchasing corporate securities, (2) setting up of investment trusts on the lines of United States opened companies, (3) formation of a consortium on a permanent basis for underwriting security issues and promoting new industries, (4) relaxation of restrictions so as to allow the Life Insurance Corporation and Provident Funds to invest a growing proportion in corporate securities, and (5) rationalization, coordination, and a greater role for the new financial institutions (set up since independence), especially in the field of corporate shares and provision of foreign exchange to private enterprises.

The reforms suggested are mainly of a long-run nature and their effect will be felt in the Fourth and subsequent Plans. The effect will be three-fold. Firstly, the rate of personal saving is expected to show an increase and the existing savings put to more productive uses. Secondly, the reforms would reduce the gaps in the existing capital structure and introduce coordination among various institutions. As a result, the delays and uncertainties faced by the industrial enterprises will be reduced and they would be able to raise funds quickly. The third major long-term effect resulting from the proposed measures would be that the private corporate sector would be able to secure financial resources on a much larger scale. While a part of this increase will come from enhanced saving, it mainly would cut into the resources available to the Government for direct investment. But since, practically all the major financial intermediaries are either fully or mainly owned by the Government, it would not reduce the ownership of the Government in the corporate sector. In fact, under the new arrangement, it will be possible to combine government ownership with private efficiency, which has been shown to be considerably higher in the private sector.

Source: Dissertation Abstracts, Vol. XXV, No. 1, University Microfilms, Ann Arbor, Michigan, July, 1964, 408 pages.

**Title: TECHNICAL CHANGE AND RETURNS TO SCALE:
AN ECONOMETRIC STUDY OF JAPANESE AGRICULTURAL DEVELOPMENT
IN THE POSTWAR YEARS**

(Order No. 64-7654)

**Author: Hiromitsu Kaneda, Ph.D.
Stanford University, 1964**

This study is an analysis of the developments in the supply side of Japanese agriculture in a fairly short period of time, since the end of the Second World War. Particularly, attention is focused on the production relationships underlying Japanese agriculture during this period. I have attempted to make this study econometric in the sense that economic theory is subjected to statistical analyses of observable realities and the inferences derived from such analyses are examined in view of economic reasoning and above all in view of economic meaning of the assumptions made in the process of analyses.

The main body of the study is composed of four parts. The first part is concerned with determining the fundamental characteristics of production relationships underlying postwar Japanese agriculture through an examination of the developments of agricultural inputs. This part provides an empirical basis for selecting economic variables and relationships that are employed in the econometric studies of the later parts.

In the second part the so-called constant elasticity of substitution (CES) production function proposed by Arrow, Chenery, Minhas and Solow is discussed in the context of Japanese agriculture. The assumptions underlying the estimating procedure of this function are critically examined, a set of new concepts and relationships introduced, and then a new model for estimating the elasticity of substitution between labor and other inputs is proposed.

In the third part technical change in Japanese agriculture in the years 1952-1960 is measured by using (a) the model of the preceding part, (b) the neutral efficiency parameter of the CES production function, and (c) Professor Solow's original method of 1957. Variations in the rates of technical change among different scale farms are investigated.

In the fourth part attention is directed to the productivity of inputs and to questions concerning possible improvements in production efficiency through the use of interscale shifts of resources and factors of production. At this point I examine the differential production efficiency associated with farms of different scale rather than the rate of change efficiency.

Some of the conclusions of this study may be summarized as follows:

(1) In spite of the relatively small size of land holdings, the Japanese Farmer is remarkably market oriented. The study indicates that the farmer increased his dependence on purchased inputs and sold a larger share of his output during the decade of the 1950's and that he was also able to enjoy relatively good credit lines, supported by the government and the agricultural cooperatives.

(2) The analysis based on the model adopted in this study yielded estimators of the elasticity of substitution between labor and other inputs somewhat less than unity but the deviation from unity was small relative to the standard error of estimate.

(3) The examination of output trends of different scale farms indicates that the rate of technical change was faster in larger-scale farms than in smaller-scale farms.

(4) The analytical results in the fourth part reveal that there are economies of scale associated with shifts of resources from the smaller to the larger farms.

The problem of agricultural development in an economy which has acquired almost all of the essential components for continuous general economic growth is largely the problem of transformation of agriculture to conform with other non-agricultural sectors of the economy. This study clearly indicates that there are further economies of considerable importance to be achieved by letting the size of farms increase in Japanese agriculture.

Source: Dissertation Abstracts, Vol. XXV, No. 2, University Microfilms, Ann Arbor, Michigan, August 1964, 209 pages.

Title: FARM SIZE AND INCOME: AN ECONOMIC
STUDY OF SMALL FARM AGRICULTURE
IN SOUTHERN BRAZIL

(Order No. 64-9688)

Author: Norman Rask, Ph.D.
The University of Wisconsin, 1964

Scope and Method of Study

A crucial question in agrarian reform and farm adjustment problems is how large must farms be to provide satisfactory income to farm people. This question of minimum farm size was analyzed in the following way. A sample of 142 small farms of various sizes in the municipio of Santa Cruz do Sul, Rio Grande do Sul, Brazil was selected to find levels of productivity and income under present conditions, together with adjustment problems being faced.

This information was supplemented by personal interviews with professional people serving agriculture in the area. Potential levels of income were budgeted for seven farm sizes, ranging from two to eighteen tillable hectares. This second part of the study was carried out to outline paths of improvement for small farms and to isolate more clearly the relationship between farm size and income. Five specific farm enterprises were analyzed in various possible combinations, with varying labor inputs and under two levels of management. To establish minimum farm size, an adjusted minimum wage was used as the necessary return to labor in agriculture.

Findings and Conclusions

Actual incomes on farms of various sizes were found to be very low in relation to the minimum standard. The low incomes were accompanied by low levels of labor, animal and crop productivity. Low productivity on small farms did not provide sufficient levels of output to achieve the determined acceptable standard. The experiences of local people indicate that lack of credit facilities, demonstrated management ability, information, education and marketing are major handicaps and keep incomes near subsistence levels.

The results of the budgeting analysis demonstrated that it was possible to achieve acceptable levels of income on small farms if certain conditions were satisfied. First, the combinations of enterprises must be such that labor can be fully and productively utilized. With the given enterprises and assumed labor supply, a size of about ten cultivated hectares is essential, although specific situations would allow smaller sizes. A much greater effort in the fields of agricultural credit and technical assistance is needed to achieve the production levels assumed.

The study indicated that even under high levels of productivity, hand methods soon limit the amount of productive work one man can do. While the farmers in general are not presently following production practices necessary to provide a minimum income standard, use of these practices would do little more than provide this standard. Any greater increase in the level of farm income must be accompanied by basic changes in the nature of technology in order to make agricultural labor more productive. These changes would undoubtedly include a substitution of at least limited mechanization for hand methods of work.

Source: Dissertation Abstracts, Vol. XXV, No. 2, University Microfilms, Ann Arbor, Michigan, August 1964, 286 pages.

Title: FARM PLANNING AND POSSIBILITIES OF
CAPITAL ACCUMULATION ON SELECTED
FARMS IN NASIK DISTRICT OF MAHARASTRA
STATE INDIA: AN APPLICATION OF
MULTI-PERIOD PROGRAMMING PROCEDURES

(Order No. 64-7453)

Author: Raghunath Shankar Savale, Ph.D.
Kansas State University, 1964

Problems of Indian farming are associated with limited land, scarcity of capital and pressure of population. Considering the existing resources, the aim of this study was to evaluate the possibility of capital accumulation, and attainment of specified living standard on representative farms in western part of India.

Farm Management data from Nasik district collected by cost accounting method by the Government of India served as a basis for this study. A multi-period dynamic linear programming model was used to find out continuous farm plans for the modal class farms for a period of 12 years. Budgeting was used to project living costs and other fixed costs. Two situations, one of subsistence type, the other of commercial type farms, were considered. In the subsistence type situation, the farmer would give priority to produce a specified quantity of cereal grain and fodder for household use. The commercial type situation calls for maximum profits without any such restrictions. The resources of the modal class farmer consist of a 10 acre farm with 1.6 acres under irrigation, Rs. 400 capital, a pair of bullocks and 2.2 adult working units. The irrigated area was permitted to be extended up to 5 acres. Other situation included a 10 acre dry farm with other resources the same as above.

Total annual requirements for an average family for a balanced diet come to Rs. 1,600. Addition of Rs. 665 for other living costs makes a total budget of Rs. 2,265. A partially irrigated subsistence farm of 10 acres with 5 acres of irrigated land needs Rs. 839 as working capital for optimum plan and promise a net revenue of Rs. 2,904. This holding will be unable to provide the farmer with the necessary standard of living, in the absence of supplementary income from other business; but it still provides living standard almost three times higher than the existing one. The commercial type farms with the same resources need Rs. 859 as working capital and offer net revenue of Rs. 3,303, which not only permits them to attain a specified standard of living but to have some savings for the farmer.

Cropping plans for the commercial type partially irrigated farms with limited capital include cotton on irrigated land and hulga on dry land. Increased levels of capital permit lucerne to substitute for cotton and groundnut to substitute for hulga. Subsistence type farms with limited capital include bajri on a specified acreage of land and cotton on part of irrigated land. Increased levels of capital permit bajri-gram to replace bajri on dry land and use part of irrigated land to grow vegetables-wheat to fulfill the cereal grain requirement and the rest of the area is devoted to lucerne. For purely dry farms limited capital permits bajri on specified acreage of land and keep the rest of the area under hulga. Availability of more capital permits bajri-gram to replace bajri and groundnut to replace hulga.

Marginal net returns indicate the following order of priority in granting loans: irrigated farms, partially irrigated farms, dry farms. For individual farmer priority order in using capital should be: as working capital, for increasing irrigation facilities and for increasing the farm size. An irrigated farm of 8 acres or a partially irrigated farm of 10 acres with 50 per cent or more area under irrigation in this area.

Source: Dissertation Abstracts, Vol. XXV, No. 2, University Microfilms, Ann Arbor, Michigan, August 1964, 191 pages.

**Title: THE COTTON AND SUGAR INDUSTRIES
OF MEXICO AND PERU:
A COMPARATIVE STUDY.**

(Order No. 64-9693)

**Author: Richard Lee Ruth, Ph.D.
The University of Wisconsin, 1964**

The purpose of this thesis is to provide a better understanding of the economic growth of two less developed countries, Mexico and Peru, by investigating the growth and development of two of their most important industries, cotton and sugar. The roles of international trade, land tenure, and the foreign factor stand out as important influences on their growth. Cotton and sugar have been and still are important sources of foreign earnings for both countries. Together cotton and sugar provide a good picture of Mexican and Peruvian land tenure systems and their development. Finally, the role of the foreign factor as a catalyst is found to be important in the early stages of the development of these two industries.

The principal method used is a historical analysis comprising inter-period and intercountry comparisons. A summary analysis of the pre-Independence conditions of these two countries is made; a more detailed analysis is made of the nineteenth and early twentieth centuries (to 1910); and with greater availability of quantitative and historical data, the period 1925-1960 is observed in more complete detail. Time series comparisons do not become possible until the last decade of the nineteenth century, so that the analysis prior to this time must depend on travel accounts, bits of quantitative data, and historical observations of institutional change. The two periods for which continuous numerical data are available are 1890-1910 period of the expropriation and collectivization of the more important Mexican cotton and sugar estates.

There was basically little difference in the land tenure systems of the Mexican and Peruvian cotton and sugar industries in the Colonial Period. In this period an export-import trade came into being in both countries when the Spanish introduced concepts of the ends of economic production different from those of the Aztecs and Incas. And the prime reason for the greater development of the Mexican cotton and sugar industries and their exports in the Colonial Period, is that Peru had a comparative disadvantage because of its more remote geographical location.

In the nineteenth and early twentieth centuries there were modest changes in the land tenure systems of these two crops. This was also the period when foreign entrepreneurs became interested in developing the Peruvian and Mexican cotton and sugar industries. Percentage differences in the trend of exports, and in export fluctuations, appeared because of the degree of foreign competition to which each was exposed, problems of inland transportation, and the extent of the market, domestic or foreign.

The investigation of the period from 1925 to 1960 indicates the more rapid growth of Mexico's cotton and sugar industries as compared with Peru's. Important influences on Mexico's cotton and sugar development

relative to Peru's during this period were found to be: (1) the agrarian reform, (2) the government's role in increasing cultivable area by land redistribution and irrigation projects, and (3) other government policies aimed at encouraging production for domestic consumption and export.

Source: Dissertation Abstracts, Vol. XXV, No. 2, University Abstracts, Ann Arbor, Michigan, August 1964, 267 pages.

Title: THE ECONOMIC AND SOCIAL IMPACT OF CREDIT
INSTITUTIONS ON AGRICULTURAL DEVELOPMENT IN IRAN

(Order No. 64-9524)

Author: Ahmad Kamali-Nafar, Ph.D.
University of Minnesota, 1963

Several changes in technique can increase the production of Iran's agriculture and raise the income of her farmers. Most of these changes will involve increased use of capital. This thesis is trying to answer the following questions: (1) Can farmers use credit profitably for investing in irrigation water and fertilizer? If so, how? (2) What are the capital and credit needs for small owners who recently received land under the land distribution program? (3) Are the present credit institutions equipped to provide services for farmers? (4) What changes or modifications are needed in order that credit institution can fulfill the needs effectively.

Two types of capital investments have been considered in this study--drilled well for irrigation and chemical fertilizer. Both types of investments have been shown to be profitable under the conditions of the analyses used in this study. The potential profits to the farmers were sufficiently large that the investments would increase the standard of living. The potential profits also were sufficiently large to justify making loans to these farmers.

Under a land distribution program where farms are given to people who formerly were sharecroppers, it is unlikely that they will have savings which will permit them to make these capital investment in well and commercial fertilizers. Loans are necessary for these investments. Several alternatives of loan for investments in drilling well were discussed. Formation of cooperative is a good way in utilizing the credit. Loans for the use of fertilizers were also discussed. Since the farmer doesn't have high managerial ability, technical help may be needed in addition to credit. Supervised credit is important to farmers.

The adequacy of the credit system was investigated. The major part of agricultural credit is through the Agricultural Bank of Iran. Analyses showed that the present system might not be sufficiently equipped to deal with the needs of farmers. Some improvements in the credit system are necessary and important. The Bank must be prepared to serve a large number of small borrowers. Extend the limitation of the maximum amount of loans to individual farmers. The Bank needs more funds and branches or offices to take care of loans. It can supervise the borrowers to use the credit in the right way, to increase production and to become more commercialized. Government can play a big role in these improvements of the agricultural credit system.

Source: Dissertation Abstracts, Vol. XXV, No. 3, University Microfilms, Ann Arbor, Michigan, September 1964, 145 pages.

Title: MONEY AND CREDIT EXPANSION, INFLATION AND ECONOMIC DEVELOPMENT; AN APPLICATION OF MONETARIST AND STRUCTURALIST DOCTRINES TO INDIA AND PAKISTAN

(Order No. 64-7968)

**Author: Harold Louis Bride, Ph.D.
University of Oregon, 1963**

The thesis tests the Monetarist and Structuralist doctrines on the relations between money and credit expansion, inflation and economic growth in the developmental experience of India and Pakistan from 1951 to 1961. The purpose is to assess the reliability of a policy of budgetary restraint and inflation avoidance in the two countries. The methodology comprises the following steps: 1) presentation of the fundamental tenets of the Monetarist and Structuralist doctrines; 2) developing simple models and deriving hypotheses capable of empirical testing from the controversial issues; and 3) testing these hypotheses by Indian and Pakistani statistical data and experience.

Chapters I and II of the thesis present the Monetarist and Structuralist doctrines as they developed since the mid-1950's. An appended section presents the models and the following hypotheses identified in the analysis of the controversy between the doctrines: 1) demand inflation is generated by monetary expansion beyond the offsets arising from incremental production, imports, savings and taxes; 2) inflation deters savings and leads to the misuse of past savings; 3) inflation distorts investment from infrastructure, long-term capital projects and exports to inventory holding, real assets and quick turnover investment schemes; 4) inflation redistributes income by way of profits to dynamic groups who save and invest; 5) inflation leads to deficits in the balance of payments or increases the deficits in those countries suffering from deterioration in their terms of trade; 6) inflation distorts the tax system and complicates efforts to reform the tax structure; and 7) inflation interferes with efforts to expand agricultural output and hinders necessary organizational and structural reforms.

Chapters III and IV test the foregoing hypotheses against statistical data for India and Pakistan, respectively, and establish the following conclusions:

1) Deficit budgets financed by monetary and credit expansion were major factors creating demand for agricultural products and imports, raising prices and feeding the effects to other sectors through wage and industrial costs.

2) Rates of saving were raised substantially in India and moderately in Pakistan during inflationary periods but the sectors experiencing the largest increases in monetary income failed to increase their rates of saving. An apparent preference for holdings of money, demand deposits, time deposits and small savings certificates was the result of controls and unavailability of consumer and investment goods including imports. Investment of savings in government securities, preference shares and corporate bonds was generally avoided.

3) The hypothesis that inflation transfers income to profits and investment was not verified for sectors experiencing the largest increase in income as a consequence of inflated prices. Neither the private corporate sector nor government enterprises registered marked increases in reinvested profits during inflationary periods.

- 4) India's terms of trade were stable while the Pakistani position progressively deteriorated during the period under study. In both countries inflation widened the gap in the balance of payments. Controls and the allocation policy biased investment towards capital intensive industries with a high import content, so that neither country could meet its import needs for fully utilizing its existing industrial capacity from current export earnings.
- 5) Tax collections increased substantially in both countries but the effects of inflation induced a shift to indirect taxes on cost of living items and shifted the tax burden to the urban sector.
- 6) Inflation induced controls which limited increases in agricultural production and stimulated farm consumption and speculative crop withholding. Fear of further inflation also delayed expenditures for land reforms.
- 7) In general, the effects of budgetary deficits in India and Pakistan were detrimental to economic growth so that a policy of inflation avoidance through budgetary restraint is indicated for the future.

Source: Dissertation Abstracts, Vol. XXV, No. 3, University Microfilms, Ann Arbor, Michigan, September 1964, 293 pages.

Title: **THE FARMERS HOME ADMINISTRATION
AND AGRICULTURAL POVERTY IN TENNESSEE**

(Order No. 64-10,559)

Author: **Jimmie Ray Monhollon, Ph.D.
Vanderbilt University, 1964**

This thesis assesses the contribution of the Farmers Home Administration to a solution of agriculture's low income problem. Data from Tennessee were used in making the study since the agriculture of that state is something of a microcosm of agriculture in the South where the FHA is extremely active.

The FHA is a small agency within the Department of Agriculture which makes credit available on a supervised basis to low-income farmers. Its particular approach to the problem grew out of rural relief during the Great Depression and has been modified over time to meet changing conditions. In general, it has tried to raise productivity on low-income farms by providing credit and technical guidance in matters of farm and money management.

In recent years the FHA has probably become less instrumental than in the early postwar period in bringing about fundamental changes in the structure of Tennessee agriculture. In large part this has been due to the fact that credit programs not directly related to agriculture are consuming a larger portion of the agency's time and energy. Also, there is some evidence that a subtle change has occurred in the agency's philosophy and objectives. In combating the low-income problem, the agency seems to be pursuing a more defensive, less dynamic role than it once did. This may have resulted, not

from a deliberate change in policy, but from basic changes in underlying economic and technical conditions. The agency, for example, has recently been allocating a larger fraction of its funds for refinancing existing indebtedness and for providing subsequent loans to sustain those already indebted to the FHA. This shift in the large part has been a natural consequence of agriculture's deteriorating income situation and the rapid advance of agricultural technology.

The fitting of a production function to FHA farm records indicates that on the whole the agency has led farmers to make sound resource adjustments. As a result, FHA borrowers have made substantial economic progress. The average income of borrowers who received initial credit in 1956 increased faster in the ensuing four years than the average income of other farmers in Tennessee and faster also than that of production workers in Tennessee's industries. Despite this progress, however, the average income of FHA borrowers remained substantially below the average income earned by production employees in industry.

The ultimate solution of the low-income problem requires a substantial transfer of labor resources from agriculture to industry and a very substantial reorganization of agriculture's land and capital resources. Unless the FHA credit programs are administered very expertly, they may impede rather than promote desirable resource adjustments.

Success of the FHA approach depends, therefore, on a clear understanding of the low-income problem, its root causes and cures. This understanding must extend all the way from the national office in Washington to the county offices scattered throughout the country. The careful selection of farm families is crucial. Only by expert selection can the FHA avoid impeding outmigration. Except for legitimate welfare cases who are trapped in agriculture as a result of age, training or disability, the FHA should choose only those families who will be able to create viable units which can succeed in today's economic climate. On the whole, the FHA has done a reasonably good job but continued vigilance is required. In the periodic employee training sessions, the role of the agency within the context of the low-income problem should be a continuing theme. The agency should take every opportunity to encourage the transfer of labor from agriculture to industry.

Source: Dissertation Abstracts, Vol. XXV, No. 4, University Microfilms, Ann Arbor, Michigan, October 1964, 391 pages.

Title: AN ANALYSIS OF RELATIONSHIPS BETWEEN
FOREIGN ECONOMIC POLICY AND
ECONOMIC DEVELOPMENT
IN MEXICO

(Order No. 64-11,811)

Author: Floyd Brant McFarland, Ph.D.
The University of Texas, 1964

The military phases of the Mexican Revolution lasted from 1910 to 1917 and were followed by sporadic efforts at redistribution of large land holdings to villages and peasants. Absentee landlords found their ties to rural land severed, while at the same time many peasants found themselves released from the bonds of debt slavery. The Mexican social and economic structure was in a state of flux. Following the general depression in the Western world during the early 1930's, and the disruptions associated with expropriation of foreign-owned properties in 1937-38, World War II cut off foreign sources of supply and thereby encouraged Mexican efforts at industrialization. After the war, foreign suppliers sought to recover former markets, whereupon a variety of trade restrictions were instituted to protect domestic production.

The restrictions encouraged foreign capitalists to invest in manufacturing in Mexico to get behind the barriers. Foreign capital was encouraged because capital was scarce. The root of the trouble, however, seems to be that the small part of the population with high incomes did not accomplish adequate capital formation. They lacked technical and managerial skills, they had traditions of investing in land and speculative ventures, and they were accustomed to small-scale operations designed to supply the needs of the high-income clientele. Foreign capital operations have not been an efficient source of capital, however, because service charge outflows have exceeded foreign capital inflows for the years since 1939.

The government instituted many programs to assure availability of funds to domestic investors. Exemption from certain taxes was granted to investors, but was not effective because the programs did little to improve the availability of technical skills, machinery, or materials, and did not expand markets.

Because Mexico had no comprehensive system of economic planning, much of the industry that was fostered under the protective measures has been inefficient and unable to compete with foreign producers, either at home or abroad. Businessmen insist on continuation of protection, but resultant high product prices contribute to heavy concentration in distribution of income, which restricts markets. Modern technology requires large scale for efficiency, and mass production requires mass distribution. Mexico continues to export mostly agricultural commodities and raw materials, the prices of which fluctuate, and the markets for which have grown slowly. The nation has difficulty securing adequate quantities of foreign exchange for purchase of essential machinery and materials, especially since frequently there is substantial outflow of Mexican-owned funds and considerable smuggling of goods into the country.

With good planning for large-scale, standardized operations, Mexico could export much larger amounts of manufactured goods, especially to the United States. Larger quantities of specialty foods, textiles and textile goods, ceramics, leather goods and shoes, artistic creations, books, children's toys, electric motors and copper products, and alcoholic beverages could be exported. Many types of labor-intensive products offer good prospects. With expanded foreign exchange earnings, imports could be expanded, including complicated industrial products which Mexico presently is manufacturing inefficiently. Good planning would include reform of the public revenue system by increasing the use of progressive income taxes. Abolition of regressive taxes would expand markets. Expanded governmental revenues would permit economic and social improvements, including expansion of infrastructure services such as power, transportation, communication, and better education and health programs. With greater foreign exchange earnings plus improved educational programs, there would be little need for additional foreign investment, and it might prove feasible to buy out some of the present foreign holdings.

Source: Dissertation Abstracts, Vol. XXV, No. 5, University Microfilms, Ann Arbor, Michigan, November 1964, 269 pages.

Title: CHILEAN LAND TENURE AND LAND REFORM

(Order No. 63-5456)

Author: Marvin John Sternberg, Ph.D.
University of California, Berkeley, 1962

This study of Chilean land tenure is focused upon the role of the large landholder, the latifundista. As the central figure in agriculture, the extent of the latifundista's economic power, his position in the productive process, and his influence upon agricultural and general economic development are examined.

This study is primarily empirical. Its purpose is to show the extent of land concentration in the Central Valley of Chile, its effect on income distribution in the agricultural sector, the manner in which the large landholder utilizes his income, and the effects of these conditions on agricultural production and productivity.

Despite a relatively favorable position with respect to that of other Latin American countries, Chilean agricultural performance is poor and its growth is unsatisfactory. Since the mid-forties agricultural output has increased 0.9 percent per annum, while the demand for agricultural food-stuffs has increased by approximately 3.0 percent. From a net exporter of agricultural products Chile has become, in the last few decades, a large importer. The contribution of Chilean agriculture to the process of capital formation outside the immediate sector has approached zero.

The stagnation of Chilean agriculture has been found to be caused primarily by the staying power of the traditional forms of land tenure and by the attitudes and actions of the large landholders. The study reveals that the owners of the largest properties in the Central Valley, containing half the farm land, save and invest about half as much of their income as do similar groups in the developed nations. The large landholder consumes over sixty percent of his disposable income, seventy-five percent of which goes for luxury consumption. Twenty-five percent or more of his consumption expenditures are for imported products.

The large farms were found to be among the least efficient in Chile, measured by either output per man or output per hectare. While the technological level of the large farm is higher than on subsistence units, it is no higher than that on the family or middle-sized commercial farm. In general, the large farm is operated in an extensive manner, while the middle-size and small farms are operated intensively. Much land capable of cultivation is left in natural pastures.

The prestige value of land inhibits its use as a productive factor. To the degree that land ownership confers social status upon the proprietor and an income sufficient to maintain this status, productive efficiency and the maximization of profit are secondary goals. Insofar as the status of the large landholder is dependent upon the traditional paternal system of labor use, it impedes a rationalization of farm management and of the use of labor. Increased efficiency and a more equitable distribution of land and income in Chilean agriculture can only be achieved by altering the agrarian structure.

Source: Dissertation Abstracts, Vol. XXV, No. 6, University Microfilms, Ann Arbor, Michigan, December 1964, 217 pages.

**Title: AN ECONOMIC ANALYSIS OF STRAIGHT AGRICULTURAL
LOANS GRANTED BY THE BRANCHES OF THE DEVELOPMENT
BANK OF THE PHILIPPINES IN NUEVA ECIJA AND ISABELA, 1962**

(Order No. 62-1213)

**Author: Vicente Urdaneta Quintana, Ph.D.
The Ohio State University, 1964**

This study was undertaken with the basic objective of formulating practical recommendations to improve the straight agricultural loan programs of the Development Bank of the Philippines and its branches. Information from randomly selected samples of borrowers was statistically analyzed. Two hypotheses about the loans approved and the rate of repayment were tested by employing multiple regression and correlation analysis.

The borrowers in both branches who were, on the average, about fifty years of age had formal schooling of approximately eight years. About 70 percent of them obtained loans of not more than ₱2000 each.

In Nueva Ecija, the average net income of the crop borrowers was more than that of the livestock borrowers. Comparing the borrowers in the two branches, the borrowers in Nueva Ecija had higher net incomes than did those in Isabela. Also, the farms of borrowers in Nueva Ecija were relatively larger than the farms in Isabela. In both branches, about 90 percent of the real estate was titled.

Before a loan application is approved, it has to pass through the hands of the receiving clerk, appraiser, loan examiner, branch manager and/or Board of Governors, legal officer, and accountant. It took an average of 83 days to process and approve loan applications in both branches. But appraisers in Nueva Ecija spent more time than did the appraisers in Isabela.

In estimating loans that were solicited, borrowers in both branches arrived at figures stated in the loan application which were mainly based on the needs or requirements. Amount of collateral offered was second in importance. Another basis was an allowance for a reduction of the amount applied for. Repayment was not given serious consideration.

In Nueva Ecija, borrowers received loans that averaged only 40 percent of the appraised value of collateral compared with 57 percent in Isabela. As a consequence, the Nueva Ecija borrowers obtained only 68 percent of the amount applied for, while the Isabela borrowers got 77 percent.

Crop borrowers lacked ₱1444 of their needs compared with an average shortage of ₱1044 among the livestock borrowers. Between branches, Isabela borrowers fared better than did the Nueva Ecija borrowers.

The schedule of releases greatly influences the use of loan proceeds. More approved loans in Isabela than in Nueva Ecija were released in two or three installments. More than 90 percent of the borrowers preferred a one lump sum release in order to reduce expenses and to have adequate capital to start projects immediately. They wanted also to save time and avoid misuse of the loan proceeds.

There was lack of supervision of borrowers in both branches. Visits were rarely made after the first or full release of the loans. Because of a lack of supervision, several borrowers without approved projects were able to get subsequent releases that were spent for unauthorized items, such as subsistence, education, medical bills, other debts and expenses.

There were more dissatisfied than satisfied borrowers in both branches. Dissatisfaction was due to delay in the release of loan proceeds, "too many requirements," small amount of loans, high cost of credit, and poor public relations.

Some borrowers of the Development Bank simultaneously borrowed from other sources too. The other common suppliers of funds were private individuals, rural banks, The Philippine National Bank, commercial banks, and insurance companies and cooperatives. The Philippine National Bank supplied more than 50 percent of the total loans from other sources.

In both branches, the size of loans approved was significantly related to the amount solicited, size and appraised value of collateral, income and expense. The other variables were not significant. The rates of repayment were not significantly explained by the same variables.

To improve the straight agricultural loan programs, the Development Bank should decentralize its powers, guide and supervise the borrowers, eliminate some of the unnecessary requirements, and give the employees in the branches more training in public relations.

Source: Dissertation Abstracts, Vol. XXV, No. 8, University Microfilms, Ann Arbor, Michigan, February 1965, 155 pages.