

8
75
E234
no. 2

The Effects of United States Agricultural Surplus Disposal Programs on Recipient Countries

LIBRARY
MICHIGAN STATE UNIVERSITY
EAST LANSING, MICHIGAN

an

*Interregional Publication for the
State Agricultural Experiment Stations*

MICHIGAN STATE UNIVERSITY
Agricultural Experiment Station
Department of Agricultural Economics
East Lansing, Michigan

ACKNOWLEDGMENTS

This research was developed and supported as a part of an Interregional Project on Agricultural Policy. Members of the Interregional Committee on Agricultural Policy made valuable suggestions and criticisms during the course of the research and as this report was being prepared and reviewed. Serving on the Committee during this time were the people listed below.

- * H. G. Halcrow, University of Illinois
D. E. Hathaway, Michigan State University
Elmer Menzie, University of Arizona
Sidney Hoos, University of California
E. W. Learn, University of Minnesota
- ** Don Paarlberg, Purdue University
K. L. Robinson, Cornell University
- † R. W. Rudd, University of Kentucky
G. S. Shepherd, Iowa State University
George Tolley, North Carolina State College
Bennett S. White, Cooperative State Experiment Station Service, U. S.
Department of Agriculture
L. W. Witt, Michigan State University
Administrative Advisors
- †† C. P. Wilson (North Central), Kansas State University
G. F. Dow (Northeast), University of Maine
R. E. Huffman (West), Montana State College
W. A. Seay (South), University of Kentucky
- * North Central representative for 1962-63
- ** North Central representative for 1963-64
- † Chairman of Technical Committee
- †† Chairman, Administrative Advisors

Thanks are due also to the members of the staff of the Michigan Agricultural Experiment Station who assisted in the preparation and publication of this report. Also, special thanks go to Jimmye Hillman of Arizona, former member of the Committee, and to Stephen Schmidt of Illinois who served as ex-officio members of the Committee in reading and reviewing this manuscript. Lloyd Halvorson of the Cooperative State Experiment Station Service attended a number of meetings at which this research was discussed.

C. Peairs Wilson
Interregional Administrative Adviser

PREFACE

STATE AGRICULTURAL EXPERIMENT STATIONS have joined together to conduct studies on the Impacts of Present and Proposed Agricultural Price and Income Programs. This reports one of several such studies. It builds on and extends work reported previously in Arizona Technical Bulletin 150, Policy for United States Agricultural Export Surplus Disposal.

During the past ten years the amount of agricultural products sent overseas under special arrangements has increased to about \$1.5 billion annually at export prices. There now are a number of studies which analyze the effect on specific countries or specific sectors of a national economy. Many of these reports already are out of print; in any case there is a need to bring the results of these studies together so that the policies for export disposal can be improved.

This report pulls together these separate studies, and develops them primarily in terms of the effects in the countries receiving the commodities. Thus it moves toward a general evaluation of the program based upon the reported experiences of a number of countries.

The reader of this bulletin will note the many ramifications of this program. The ways in which the surplus exports have been used in the recipient countries have many implications for the foreign aid and foreign relations policies of the United States, and through these for our domestic policy. This report helps us to understand the many interrelationships of domestic and foreign policy.

TABLE OF CONTENTS

Chapter	Page
I Introduction	4
The Problem	5
Sources of Information	5
Methodological Issues	6
Program Operation Under P. L. 480	7
Size of P. L. 480 Relative to Foreign Assistance	9
II Farm Products in External Assistance	10
Reasons for Economic Assistance	10
Concept of External Assistance	11
Commodity Aid—An Addition or Substitution	13
Estimates of the Proportion of Food Aid	14
Relation to Commercial Trade	26
Summary	28
III Agricultural Prices and Production in Recipient Countries	29
The Agricultural Price and Production Record	31
A General View	37
IV Consumer Expenditures, Food Prices and Dietary Patterns	39
Consumption Dimension of Economic Development ...	39
Population, Food Supply and Inflationary Pressures	40
Impact of P. L. 480 on Consumers in Four Countries ...	42
Summary	50
V Commodity Aid in Internal Development	51
Alternative Effects of Title I Imports	51
The Record Examined	52
Implications of Commodity Aid for Development	63
Implications of Local Currency for Development	65
VI Summary and Implications for U. S. Policy	69

The Effects of United States Agricultural Surplus Disposal Programs on Recipient Countries

By LAWRENCE WITT and CARL EICHER

DEPARTMENT OF AGRICULTURAL ECONOMICS

Chapter I — Introduction

INTERNATIONAL CAPITAL TRANSFERS through public aid have played an important role in financing development programs in the less-developed nations of the world. A recent statement notes that "In the past three years, aid amounted to 25-30 percent of investment in less-developed countries of the non-communist world and to about 20 percent of their export earnings (33)." The United States has been a major contributor of aid; the combination of a *relatively* large (0.6) percent of its GNP¹ and the sheer magnitude of the U. S. economy makes the absolute amount of aid large compared to any other country (1).

As part of the U. S. economic aid, substantial quantities of farm products have been shipped abroad under special government programs. Shipments under these programs—largely through Public Law 480—now total about \$1.5 billion annually at imputed export prices. The United States and other advanced nations need better guidelines as to the degree to which agricultural commodity assistance can provide some of the external aid needed in the 1960's.

It appears that, during most of this decade, many advanced nations will be in a position to provide agricultural commodity assistance—perhaps as easily as dollar aid. The question is how can this capacity to produce surpluses contribute to the development of the less-developed nations? This report seeks to answer this question through an examination of agricultural commodity assistance programs in Israel, Colombia, Japan, Pakistan, India and Tunisia.

One of the reasons given for supporting food aid shipments is that food aid stimulates more development in the recipient countries than otherwise would occur. Contrary opinions have been expressed, based upon the idea that food aid is likely to exert debilitating effects upon agricultural production in the recipient country. This research report presents recent information which may help to resolve this issue.

¹The United States ranks fifth after France, Portugal, Belgium and West Germany, including both public funds and private capital investment.

The Problem

This report will focus on two questions: First, to what extent can food aid contribute to the foreign aid or external assistance program for a particular country? Second, what effects will the inflow of food aid have on the domestic economy of the recipient nation? The examination of these two broad issues will require information and analysis of several more specific problems.

With respect to external assistance, the evidence will be examined to see whether food aid was an important part of the total external assistance. Also, is there evidence that the recipient country would have preferred to receive and would have developed more rapidly had there been less external food aid and more external aid in machinery, tools, equipment and technical personnel? Another question is whether aid in farm products was an addition to regular agricultural imports. It is possible that a reduction in commercial imports enabled the recipient country to switch its foreign exchange earnings to the purchase of nonagricultural items. Chapter II will consider these questions.

Three interrelated issues will be examined in considering the impact of commodity aid on the economy of the receiving nation. First is the effect of commodity imports upon agricultural prices and production in the recipient country. A second issue is the effect of commodity aid upon levels of food consumption and expenditures in the recipient nations. Both will start with an examination of the direct effect of increased imports. The third question will consider the indirect effect of commodity imports upon the aggregate economy and the effects of the expenditure of local currency upon the development program. Chapters III, IV and V will discuss these questions.

Chapter VI will deal with the interrelations between external aid, internal programs, and the various elements of the internal development program. It will conclude with a consideration of the policy implication for the United States programs of developmental assistance to other countries.

Sources of Information

A number of recent reports deal with the effect of P. L. 480 programs in specific places. They provide an empirical basis for an aggregate view. These reports discuss P. L. 480 in Israel, Colombia, Japan and Pakistan.

The study on Israel was the first of a series of studies supported by local currency contracts with the United States Department of Agriculture. The principal work was under the direction of F. Ginor (18); A. E. Kahn of Cornell University served as a consultant and has published a shorter report separately (23).

The study in Colombia was begun by James Goering with foundation and University funds. He gave primary attention to production and consumption impacts. This work has been reported in several places, but the primary reference will be to the bulletin prepared by L. W. Witt and T. J. Goering (20). An abbreviated report has been prepared by Goering (19). An additional inquiry was undertaken under a local currency contract with the United States Department of Agriculture (45) (similar to that for Israel).

The report on P. L. 480 in Japan is the first of the four published studies. It was prepared under the sponsorship of the United Nations, Economic Commission for Asia and the Far East, and the Food and Agriculture Organization (40). The study in Pakistan, completed in 1961, is under the same joint sponsorship (41). A second Pakistan study by Beringer of the Institute of Development Economics in Karachi was available in preliminary draft (2).

A number of other studies are underway but were not completed in time to be included.²

Methodological Issues

This report draws primarily on the studies in the four countries—Israel, Colombia, Japan and Pakistan. In Chapter V India is also considered. Each study was designed primarily to review the Title I program in that country; in consequence, the methodology does not lend itself readily to cross-national comparison. As will be seen below, there are substantial contrasts among these countries and the nature of the P. L. 480 programs operating within them.

The approach used here will be to examine certain problems conceptually—problems which arise out of experience with the program. After developing the meaningful alternative possibilities, the empirical evidence in country studies will be examined to test hypotheses or to estimate the parameters, where appropriate. This appears to be the most useful way to evaluate Title I, P. L. 480 in the

²These studies are supported by USDA local currency contracts in Spain, Greece, Turkey and India. There are many other published reports. See the bibliography in (30).

An early study of P. L. 480 was made in Brazil in 1957 and 1958. While a report was prepared for publication, it has never been released. The information has been available to key U. S. policy makers, but, of course, cannot be included in this report.

real world. Other approaches, more empirically and quantitatively oriented, may be feasible when the reports on India, Turkey, Greece and Spain become available, and can be related to the studies reported here.

In carrying out these research studies, there are many statistical problems. The data often are not available in a single reliable series for a long enough period to make historical comparisons. Production data are subject to sampling errors and perhaps biases. Economic and financial data are fragmentary, making it extremely difficult to apply macro-economic analytical tools. National fiscal and monetary policies in recipient countries often are based on similar fragmentary data, making it even more difficult to estimate what alternative policies would have been in the absence of P. L. 480 programs. Despite these shortcomings, an examination of the data and descriptive material available may provide insights on the effects of this controversial program.

Program Operations Under P. L. 480

Some clarification of Title I, P. L. 480 operations is required before examining its impact upon receiving nations.³ A request is made for commodity aid by a prospective recipient country. The reasons for the request and the information which led to a formal request may have involved a variety of interactions between Embassy and technical assistance personnel of both countries. After evaluation and negotiation, an agreement is signed for an approximate amount of several commodities and estimated total export values. The agreement also designates uses for the local currency, the exchange rate applicable, arrangements if imports lead to exports, and other matters.

Specific arrangements are made between exporters and importers. The exporter generally is a private United States export firm; the importer may be a private trader in the recipient country or a government agency charged with responsibility for importing certain commodities. In any case, financial and other arrangements must be made with both governments. The United States Government pays dollars to the exporter as he ships designated quantities of commodities. The receiving government collects local currency from the importer as the commodities are imported and sold in the local distribution system. These currencies are paid by the receiving government to the

³See (30) Chapters IV and V for a further discussion.

United States Government—the United States Embassy in the receiving country. The ultimate uses of these currencies determines whether the program is a loan, gift or partial gift of the United States economy to the recipient economy.

All United States firms—farmers, market agencies, etc.—are paid dollars for P. L. 480 products just as in commercial sales transactions. In the importing country, importers, processors and consumers purchase P. L. 480 products by giving up local currency just the same as if the commodity were locally produced and sold in the processing and retail marketing channels.

Food aid under Title I, part of Title II and Title IV is not a gift to consumers nor a gift by producers.⁴ Title I wheat (or other commodity) is indistinguishable from other wheat, so far as the consumer is concerned; he pays the local market price for his purchases. Some local currency is designated for, and actually used by the United States Government; this amount is equivalent to a prepayment in farm products of future United States expenditures in the recipient countries, which otherwise would have been paid in dollars. Thus, the Title I sales agreement essentially is a government to government loan or grant.

In economic terms, commodity aid allows for the expansion of spending on either consumer or investment goods. Commodity aid may expand investments and development efforts through the employment of unused resources—mainly underemployed labor. Moreover, the sales of P. L. 480 commodities in local channels will absorb purchasing power created through the expanded investment and development program. For example, consumers exchange local currency for the commodities and, as the local currency is withdrawn from the economy, excessive inflationary pressures can be dampened.⁵ If the local currency is subsequently spent by the government (and the time lag varies greatly), it may have an inflationary effect; it does not, as some would argue, make a second contribution to development.

Such double counting implies that the bank accounts of local currency are an additional developmental resource; actually they only represent a possible future claim against the developing nation's resources. There are some limited conditions under which these ex-

⁴Title III shipments and much of Title II, however, are a gift to the final consumer.

⁵The recipient government's monetary and fiscal policies can offset or support these effects. Are there multiplier effects? Perhaps, but since much of the increased consumption goes to imported food, it is likely to be small (23, p. 576.).

penditures can augment, or more likely shift the focus of, the development program. Such conditions require that the recipient government be pursuing conservative money and credit policies and be ignoring sectors with considerable developmental potential.⁶

Size of P. L. 480 Relative to Foreign Assistance

Agricultural commodity aid cannot be appraised adequately except as a part of the total foreign assistance operations in the less-developed nations. The total United States public foreign assistance for 1959 to 1961 is shown in Table I-1. Military assistance abroad is not included in this table, but is nearly as large as economic assistance for 1959-61. The shipment of farm commodities under P. L. 480 and Sections 402 and 550 of the Mutual Security Act make up 30 to 50 percent of the economic aid program. There are, however, questions as to whether the nominal figures in P. L. 480 are an accurate estimate of their value in the receiving country.⁷ Despite this, it is evident that the volumes now being shipped are large enough to require more careful country by country programming if they are to make the most effective contribution to development.

TABLE I-1—U. S. agricultural commodity assistance in relation to total U. S. public economic assistance^(a)

	Calendar Years 1956 and 1959 to 1961			
	1956	1959	1960	1961
	(millions)			
Total net U. S. economic assistance	\$2,226	\$3,253	\$2,770	\$2,711
Total net U. S. agricultural commodity assistance	1,013	942	1,269	1,324
Public Law 480	561	796	1,124	1,158
Mutual Security Act	452	146	145	166
	(percent)			
Total agricultural as a percent of total net U. S. public economic aid	45	29	46	49
Public Law 480 as percent of total public economic aid	22	24	41	43

(a) Excludes foreign currencies used for military purposes and U. S. uses under P. L. 480, Title I and military grants under the Mutual Security Act, Section 402 and 550.

Source: U.S.D.A., *Foreign Agricultural Trade of the United States*, February 1963, p. 8.

⁶See Chapter V.

⁷T. W. Schultz argues that these figures substantially over-estimate the market value of farm imports to recipient countries (36).

Chapter II — Farm Products in External Assistance

MOST NATIONS in the two-thirds of the world in which per capita annual incomes range from \$50 to \$500 have organized efforts to develop and to expand the rate of development. Development programs require a comprehensive series of policies with respect to both internal and external affairs. Investments in both physical and human resources play a crucial role in the development process. In nearly every case, governments have found it necessary to seek additional savings, both internally and internationally, to finance the desired investment programs. This chapter will concentrate on the contributions of farm products to the *external* assistance programs.

Reasons for Economic Assistance

The United States has three major interests in helping underdeveloped nations raise their per capita income: (a) humanitarian, (b) foreign policy considerations, and (c) economic interests.

Many people feel deeply that the world contrast of plenty and poverty requires aggressive efforts to improve the levels of living of the low income people everywhere. They support programs aimed at improving the welfare of nations, groups and individuals abroad whose incomes are limited. Food consumption is of special concern, both because it is a major element in the expenditures of low income people, and because the United States continues to have abundant supplies of several farm products. Likewise, there are substantial programs to improve the welfare of farmers, of unemployed workers and handicapped people within the United States. These humanitarian views have found expression in various ways: in support of assistance programs after earthquakes, floods, drouth, and other natural disasters; in support of CARE and UNICEF (United Nations Children's Fund) efforts to provide food and other aid; in church related programs to improve economic well-being; and in various governmental foreign aid programs.

Foreign policy considerations range from combatting communism to advancing levels of income so that a greater proportion of the population participates and shares in the growth of the nation. These considerations may include efforts to induce a "favorable image" of the United States as a people interested in the welfare of the less fortunate.

They may include a desire to make a nation more interrelated with the United States so that their international policies are more in agreement with our own. Probably the most important foreign policy reason is the desire to have the United States associated with a major objective of the developing nations—economic development—and thereby gain their support for some United States foreign policy objectives.

The most important economic interest of the U. S. in foreign aid involves trade. On a per capita basis, developed nations generally provide larger markets than underdeveloped countries, both as importers and as exporters. Successful development would be accompanied by a growth of trade. It is hoped, also, that close association in development will lead to close association in the expanding volume of trade. Thus, both the volume and direction of trade may change. More subtle economic interests also are involved. A foreign aid program helps finance the import of goods into the developing country, which means expanded United States exports.

Concept of External Assistance

An underdeveloped country which embarks on a development program must allocate a larger amount of resources to the expansion of production and distribution facilities. Though usually analyzed in physical capital terms, the same principles apply when investing in human capital. How does a nation increase such facilities? It expands the number of people and other resources engaged in the capital goods industry; in building factories and offices; in manufacturing tools and machinery; in constructing roads, railroads, ports and other communication facilities; in improving transportation and marketing facilities, and in investing in certain kinds of educational programs.

As an underdeveloped nation launches a development program, it requires increased external resources to facilitate its expanded investment program. Moreover, because of its poverty, an underdeveloped country is often hard pressed to increase its domestic savings, accumulate capital and earn foreign exchange. This is usually called a resources or savings gap.

A second gap, limiting the ability of a nation to import external resources for its development, is the foreign exchange gap caused "by deteriorating terms of trade as the volume of nondiversified exports increases (33)." Foreign exchange is a generalized factor of produc-

tion; it can purchase external resources, such as raw materials and machines, which the less-developed country either could purchase more cheaply or more quickly abroad than at home.

There are various alternatives in filling the foreign exchange gap. These include (1) decreasing its normal purchases of consumer goods; (2) increasing its exports and therefore foreign exchange earnings sufficiently to pay for the additional goods needed; (3) public and private borrowing from the industrial nations of the world; (4) receiving grants of money and goods needed in its development program; (5) living precariously with narrower exchange margins and deficits; or (6) following some combination of the above programs. The appropriate policy will vary with the particular circumstances, and will have different effects on consumers and producers at home and abroad.

External resources in the form of foreign capital inflow, including aid, supplement low domestic savings and fill the resources gap as well as the foreign exchange gap. In many underdeveloped countries, the foreign exchange gap is often more critical at early stages of development than its resources or savings gap. Hence, foreign aid, including agricultural commodity aid, can play an important role in financing a development program.

What is external economic assistance? Typically, such assistance is a loan or grant of funds which may be used for the purchase of equipment, tools, machinery or commodities. In most cases, there is an agreement with the nation providing financial assistance as to the types of products to be purchased and the purposes for which the funds and commodities are to be used. Often, arrangements for a dollar grant may require that the proceeds be spent in the United States for United States products.

In any case, a major share of the United States dollar aid is spent in the United States while most of the rest is subsequently used by third countries to purchase United States products. There are two general exceptions to the above statements. Technical personnel, who are sent to an underdeveloped country, most commonly are paid directly or through contract by the United States Agency for International Development (AID). Thus, services rather than dollars are provided to the developing nations. Similarly, farm commodities are sent directly rather than via a dollar loan or grant.

Thus, there is a difference of degree among general developmental assistance, technical assistance, and agricultural commodity assistance.

General developmental assistance involves more week by week decisions by the recipient governments and is more flexible in terms of the commodities eventually imported. Agricultural commodity assistance involves specification of commodities—primarily those in “surplus” status in the United States. In each case, the external assistance involves the transfer of goods and services from the industrial nation to the underdeveloped nation. To the extent that such loans and grants are available, the developing country is able to support a more ambitious development effort than otherwise would be possible.

Commodity Aid—An Addition or Substitution?

The process of development requires the creation of additional productive resources. Agricultural commodity aid usually does not represent capital in the sense that a building, a generator or a piece of machinery represents future production potential. In some cases, food may serve as a producer good if a better diet increases the energy and capacity of the consumer to work *and* this added capacity expands capital production (27). More commonly, agricultural commodity aid helps the development process in other ways; it may serve as raw material (such as cotton) for a new or expanded industry, provide food for urban-industrial workers, or provide food for the growing population. Successful development raises levels of income. In underdeveloped nations a substantial part (over half and sometimes three-fourths) of this increased income is spent for farm products; thus, more people and more income require more consumption goods.

Without external commodity assistance, there are three major alternatives in meeting the expanded demand of consumers: (1) expansion and changes in internal farm production, (2) some combination of higher prices and rationing which adjusts use to existing food supplies or (3) a shift in the use of foreign exchange for the purchase of imported foods.

External food assistance can eliminate or reduce the need for any of these three alternatives. Farm imports can be facilitating resources which enable development to move forward more rapidly and also remove some of the short-run pressure for expanding internal farm production. Farm products may substitute in part for dollar aid but they cannot substitute completely. Can they be an additional stimulant? This question requires a judgment on the kind and degree of financial assistance that would be forthcoming without the agricultural commodity aid. If a country has ample dollar or hard cur-

rency aid, it could use part of it to purchase imported food; hence, extra aid in farm commodities probably would not increase the rate of development. However, no country has an unlimited supply of foreign exchange; in reality the foreign exchange gap is a critical problem. Development requires a nation to allocate limited earnings, borrowings and grants (including imported farm products) to a variety of uses.

If farm commodity aid is offered as an addition to financial aid, then the receiving country may reduce its commercial purchases of farm products and increase the purchase of development goods, and still have more farm commodity imports than before. This suggests that the country believes development will be greater with somewhat less farm products and more of other products. On the other hand, the receiving country can maintain commercial purchases of food, fiber and other products, believing that they thus make maximum contribution to development. In either case, one of the key questions is: How much of the external assistance can be absorbed as agricultural commodities?

Estimates of the Proportion of Food Aid

The first estimates on food aid in relation to total economic aid were that 30 to 50 percent might be provided through food, based in part on food consumption patterns in India (17). A later FAO report estimated

. . . that food aid for economic development alone could not be expected to amount to more than one sixth to one fifth of the total capital aid required by underdeveloped countries (11, p. 3).

One of the experts who contributed to this FAO report, Rosenstein-Rodan, recently pointed out that this ratio applies to India and is larger than can be used in most other countries.

. . . food deficiency and a general lagging behind of agriculture are considered to be the main obstacles to reaching the plan's (Third Plan) objectives. It may be therefore legitimately inferred that the scope for a productive use of food surplus is larger in India than in most other countries. Yet the scope for it is not more than between 1/6 and 1/5 of total foreign aid (32).

The key words in the above quotation are "productive use of food surplus." He also notes that:

. . . the Institute for Economic Development of the International Bank of Reconstruction and Development has the most complete collection of development programs of various countries. . . . Going through all

those plans one cannot find one which could use more than 15 to 20 percent of surplus foods as aid (32).

It should be noted that the reference is to total capital required and not to U. S. public assistance alone.

Let us examine in more detail the problem of specifying how much food can be used productively. Data are needed on the amount of additional food that would be consumed, if available, with a given development program. Data are needed on the consumption patterns under several realistic, alternative programs, presumably something less than a complete closure of the food gap. These data need to be compared with the additional local production of farm products which is likely to accompany overall development in the nation.

Internal taxes to finance development may reduce food consumption for various groups. From these data a calculation of the possible deficits and surpluses of the internal economy leads to estimates of import needs and export prospects. The increase in food or farm product consumption associated with a particular increase in income can be approximated through the use of income elasticities. It is known that income elasticities are substantially higher in the underdeveloped than in the developed nations.

The difficult tasks are to (1) estimate the probable amount of income change which will take place, and its distribution, and (2) the extent to which local production will increase to supply some part of the expanded demand through income and population increases. Rather than attempt to project the amount of external food aid that can be absorbed, this study will review, insofar as possible, what has happened in the four nations of primary attention.

Israel

The Israeli economy grew rapidly during the 1950's. The real GNP increased by 11 percent annually between 1950 and 1960 (12), with a per capita increase of about 5 percent. Population approximately doubled—mainly through substantial immigration—yet capital investment and internal growth enabled the nation to increase per capita incomes to more than \$730 by 1962 (18, pp. 9-10). Gifts from abroad contributed 20 to 25 percent of the resources for capital formation. The balance of payments summaries for 1949-60 indicate that only 34 percent of the receipts came from exports, approaching 50 percent at the end of the decade, while 45 percent came from donations, grants and other unrequited transfers. About 20 percent of the exchange receipts came from capital movements.

Of the \$3.6 billion import surplus for the 1949-60 period, the United States Government provided \$0.7 billion (a fifth of the total). Shipments under P. L. 480 represented over a fourth of the United States assistance. Since Title I imports began only after 1954, the proportion is much higher when calculated for the later years; the \$159 million are 55 percent of United States Government aid between 1955 and 1960 (see Table II-1). Additional shipments of farm products (some \$25 million) provided Israeli pounds for the use of the United States Government in Israel. (Shipments of Title III supplies, under an earlier authorization, totaled over \$40 million for 1949-54.)

The volume of Title I shipments to Israel was substantially larger, on a per capita basis, than to any other country. In fact, the per capita market value of Title I assistance received by Israel over the 1954-61 period was \$81 compared with \$25 for the second largest recipient—Yugoslavia. Though United States Government assistance was large—\$290 million for the 1954-60 fiscal years, and \$647 million for the 1948-60 fiscal period, total capital imports were far larger—\$3,600 million for the 12-year period. Against this total, farm commodity aid represented less than 10 percent during the years of P. L. 480 shipments. Moreover, during this period, population was growing rapidly, primarily through the immigration of about one million people to Israel.

TABLE II-1—Israel: Source of financing for import surplus and U. S. economic assistance

	1949-60		1949-54		1955-60	
	\$ Millions	Percent	\$ Millions	Percent	\$ Millions	Percent
Import surplus	3,655.2	100	1,688.9	100	1,966.3	100
Non-U. S. economic assistance	3,007.4	82.3	1,331.2	78.8	1,676.2	85.2
U. S. economic assistance	647.8	17.7	357.7	21.2	290.1	14.8
Grants-in-aid ^(a)	319.0	8.7	228.5	13.5	90.5	4.6
P. L. 480, Title I	159.2	4.0	—	—	159.2	8.1
Other loans, net of repayments ^(a)	169.6	5.0	129.2	7.7	40.4	2.1

(a) Includes additional commodity aid under P. L. 480, Title III and Mutual Security Act.
Source: Calculated from data presented in Table 9.3 of the Ginor Report (18).

Such a situation is particularly propitious for the absorption of food imports, while the new inhabitants are establishing themselves in productive occupations. Also, the P. L. 480 program began during a period of food shortages and rationing. A part of the imports permitted a relaxation of rationing, another part went to build up inventories, and a third part, especially wheat, displaced commercial

purchases and in this way freed exchange to purchase other commodity imports.

Israeli imports of all commodities increased 32 percent between the annual average for 1950-54 and that for 1955-60, a total increase of \$100 million on an annual basis. Imports of Title I commodities increased by almost the same percentage, 31, or a total of \$13 million annually (see Table II-2). The report shows that the major increases were in feed grain imports, partly under Title I and partly as commercial imports, with relatively small increases for most other Title I commodities (18, pp. 93-94). Were it not for stockpiling, wheat imports probably would have declined—at Israeli's per capita income, wheat is an "inferior good."

Commercial imports of Title I commodities from the United States increased by \$1.2 million or 6.8 percent between the two periods. The increase is largely due to feed grains, while commercial trade volumes for most other commodities declined slightly (18, pp. 103-104). Imports from other countries of Title I commodities declined by 40 percent; about a third of the increase in Title I imports from the U. S. was countered by a decrease in commercial purchases from other countries (see Table II-1).

Turning to non-Title I commodities (including industrial products), the tables are reversed. Israeli commercial purchases in the United States declined slightly, while such purchases in other countries increased substantially.

TABLE II-2—Israel: Imports of commodities included in Title I, P. L. 480 agreements and total imports of merchandise
(Annual averages 1950-54 and 1955-60: \$ thousands)

	Annual average		Absolute	Change	
	1950-54	1955-60			Percent
<i>Imports of Commodities Included in P.L. 480, Title I Agreements</i>					
Imports under Mutual Security					
Act and P.L. 480, Title III ...	5,364	525	— 4,839		—90.2
P.L. 480, Title I	—	25,324	25,324		
Other imports from the U. S. ...	17,638	18,842	1,204		6.8
Total from the U. S.	23,002	44,691	21,689		94.3
Imports from other countries ...	20,840	12,530	— 8,310		—39.9
Total	43,842	57,221	13,379		30.5
<i>Imports of Other Commodities</i>					
Imports under Mutual Security					
Act and P.L. 480 Title III ...	3,396	865	— 2,531		—74.5
Other imports from the U. S. ...	73,538	73,432	— 106		— 0.1
Total from the U. S.	76,934	74,297	— 2,637		— 3.4
Imports from other countries ...	192,698	282,370	89,672		46.5
Total	269,632	356,667	87,035		32.3

Source: (18, p. 95).

The Ginor report estimates that 31 percent of the Title I receipts were additional; the remainder are classified as diversionary of commercial sales, affecting both U. S. and other suppliers (18, pp. 94-95). To some extent P. L. 480 imports substituted for imports no longer available from Turkey and Argentina, or sporadic as those from Bulgaria and the USSR—the source of 15 percent of imports in 1950-54. There are complex arguments about whether half or more of the Title I imports are diversionary of commercial trade—arguments about the level of development which would have occurred without P. L. 480. Kahn (23) makes the following statement:

The conclusion seems inescapable that the major portion—though far from the total—of the Title I shipments to Israel were at the expense of normal commercial sales, rather than going to satisfy incremental demands generated by the program itself. The diversion would appear even larger if one assumed the alternative to Title I aid were an equivalent flow of free dollars (23, p. 590).

In this framework, it is not surprising that commodity assistance was easily and usefully absorbed in the growing society. Assuming, as the analysts did, that with additional dollar aid the Government of Israel would have relaxed controls over consumption, then the commodity aid actually received served the same purposes. Kahn (23) concludes:

... from the standpoint of Israel, the aid (Title I) it provides has been almost as good as free dollars. And the preponderantly important effect has been a significant contribution to the stabilization, growth and ultimate viability of the Israeli economy. In these fundamental respects, aid-in-kind has not been markedly different from aid-in-dollars (23, p. 591).

The analysts also indicated that the proportion of commodity assistance at 8-10 percent of total external assistance approached the limit of effective absorption. Substantial inventories of wheat and feed grains were added to Israeli stockpiles at existing prices; the structure of consumer demand and livestock requirements were more than adequately supplied. The growth of exports of poultry products, made possible by the food grain imports and the growth of the industry beyond the needs of the local economy, also supports this view. However, Israel is not a typical underdeveloped nation; its per capita income is relatively high and its population is a mixture of immigrants from developed European areas and from underdeveloped areas in the Middle East. The conclusions drawn from Israel may not be appropriate in nations with substantially lower incomes.

Colombia

Colombia, among the Latin American nations, has had considerable success in maintaining economic growth in the 1950's despite the problems engendered by a sharp decline in the price of coffee, its principal export. The growth rate has averaged 5.7 percent for the 1950-60 period, and about 1.6 percent on a per capita basis. The growth rate was over 6 percent for 1950-54, remained nearly stationary for 1955-58, and rose to 5.7 for 1959-60 (45, pp. 22-24).

Export earnings were increasing most of the postwar years to 1954 and again in 1956, but dropped in 1955 and again in 1957-61. Colombia had a severe balance of payments problem in 1956 and 1957, largely due to a high rate of importation. Short-term borrowings and import controls were used to bring about adjustment—made more difficult by the 1957-59 decline in coffee prices. After a period of stability and renewed growth, Colombia's balance of payments again began to deteriorate in 1961-62; despite renewed stabilization efforts, internal prices rose sharply and the exchange rate deteriorated.

Colombia's general success in maintaining development and reasonable exchange stability, despite adversity, has been viewed favorably by international financial agencies. The result is a proposed international consortium, the only one in Latin America, which will provide a steady flow of international loans and investments on a long-term basis beginning in 1963.

Excluding United States uses of pesos derived from Title I sales, about 25 percent of the United States Government aid to Colombia was provided as farm commodities for the 1954-60 period (45, pp. 115-118). However, long-term loans from the World Bank and United States private capital investments each were almost as large as United States Government grants and loans. All of these together (\$53 million annually) were far smaller than Colombia's foreign exchange earnings of \$600 to \$760 million annually. That portion of foreign exchange earnings used for the import of capital goods probably was larger in most years than that derived from external public and private loans, grants and investments. Consequently, farm commodity aid did not constitute more than 5 percent of the capital imported from abroad.

Colombia's P. L. 480 receipts were about one-third of those received by Israel, and about 5 percent as much as Israel on a per capita basis. Similarly, both the volume of external assistance on a per capita basis and the rate of population growth were smaller (though fairly high in terms of natural increase). The report on Colombia suggests

that the first two P. L. 480 agreements, effective for the years 1955 and 1956, were essentially commodity imports for consumption and did not significantly contribute to developmental assistance. This conclusion is based upon the nature of Colombia's exchange policy in those years, i.e., a policy which permitted the importation of a wide range of consumer goods. The third, fourth and fifth agreements were made in a framework of tight exchange controls, lower coffee prices, and a concentration on developmental imports. In this setting, we conclude that a large part of the Title I imports did provide for an expanded development program, making possible a substantial emphasis on the purchase of capital goods, thus avoiding an increase in the amount of foreign exchange allocated to food (mostly wheat) imports.

Colombian wheat imports rose rapidly after the inception of P. L. 480. Compared with 1950-54, imports in 1955-61 averaged 131 percent higher, with virtually all of the increase attributable to P. L. 480. To stimulate local flour mills, wheat flour imports were held down and more recently, embargoed. Cotton imports, including Title I imports, declined over the period. Fats and oils, however, increased in volume by 57 percent, with only a fourth of the expansion contributed by Title I imports (see Table II-3).

TABLE II-3—Colombia: Average annual imports of P. L. 480 commodities into Colombia from all sources, 1950-54 compared with 1955-61

Commodity	Average imports		Change, 1950-54 to 1955-61		Average imports under P. L. 480, 1955-61
	1950-54	1955-61	Quantity	Percentage	
	(metric tons)	(metric tons)	(metric tons)	(percent)	(metric tons)
Wheat	40,970	94,533	+53,563	+131	49,710
Wheat flours	19,691	16,644	- 3,047	- 15	1,262
Cotton	14,880	9,300 ^(a)	- 5,580	- 38	3,365 ^(a)
Fats and oils	44,104	69,300	+25,196	+ 57	5,710 ^(b)

(a) Average of net imports of the five years from 1955 through 1959. There were net exports in 1960 and 1961.

(b) Average for the years 1955-60.

Source: (45, p. 99).

Wheat imports from the United States have increased relative to other countries by more than the expansion due to P. L. 480 (45, pp. 35-37). In other words, the United States appears to have gained market position in Colombia relative to other suppliers, but the erratic fluctuations in the source of imports introduce some doubts. The reasons for these changes are complex, involving reductions in the needs for high protein wheat as a larger proportion of the wheat used was imported and changes in import costs as quoted U. S. prices became more "competitive."

Colombia has maintained commercial wheat imports despite the drop in coffee prices and shortage of foreign exchange. In fact, Colombia has become more dependent upon wheat imports, and at some future time presumably will increase its commercial purchases. During the spring of 1963, Colombia and the United States signed a Title IV agreement (long-term dollar sales) thereby bringing Colombia one step closer to the commercial market. Commercial purchases of cotton have disappeared as Colombia became an exporter, but this cannot be attributed to P. L. 480. Fats and oils have been purchased in increasing amounts, most of the increase being in commercial imports.

Japan

Since Japan is the most economically advanced nation in Asia, it occupies an important role in the study of the dynamics of development. Moreover, instead of undergoing the usual structural changes in agriculture during the development process, Japan has retained the same small size of farms, while crop yields have increased three-fold over the past 100 years. During the postwar period, Japanese agricultural production has continued to expand, both in total and on a per acre basis. However, there were several years of short crops during the early and middle 50's (15, p. 151). The Japanese economy likewise has been growing in the postwar period. The per capita gross national product reached \$383 in 1962.

In 1954, Japan purchased \$50 million of surplus wheat and barley under Section 550 of the Mutual Security Act of 1951 as amended. In 1955 it entered into a P. L. 480 agreement for \$85 million of surplus commodities (wheat, barley, rice, cotton and tobacco). A second P. L. 480 agreement in 1956 provided for \$65.8 million of surplus commodities (wheat, barley, feed grains, cotton and tobacco). In addition Japan received wheat and dried nonfat milk solids for school lunch programs.

The procedures by which Japan developed its request for commodity aid and the operation of the agreements were examined in the U. N.—FAO report (40). The FAO appraisal is a judgment rather than a statistical statement because the quantities involved were small relative to total imports and/or domestic production, and small in relation to external assistance and to Japan's foreign exchange holdings. Japan participated in 1954 and 1955 after the poor rice crop of 1953 and relatively small wheat and naked barley crops and in a

period when its foreign exchange holdings, in the aggregate and in dollars, were seriously depleted. It appears that Japanese leaders were seriously concerned that adequate food supplies be available to keep inflationary pressures in check. Thus, it appears that imports under Section 550 of the Mutual Security Act of 1951 and the first agreement under P. L. 480, Title I represented commodity aid equivalent to dollar aid.

The second agreement in 1956 came at a time when harvests were better and food supplies more adequate. The judgment of the report suggests that the desire of the Ministry of Agriculture for yen funds to finance proposed irrigation projects was the dominant issue. Through the fiscal and monetary mechanism, surplus commodity imports expanded internal development effort—though perhaps not in the area that the Japanese Treasury and Planning Board would have given highest priority. Thus, much of the commodity aid to Japan has been an effective way of providing external assistance to development.

The procedures by which Japan estimated its import needs of Title I commodities, and the aggressive manner in which it sought to use its import trade as a stimulus to Japanese exports make it probable that P. L. 480 caused no significant disruption of trade patterns. Essentially, Japan attempted to program Title I imports to meet increased consumption needs. With respect to commercial trade, the report concludes:

... that possibly with the exception of barley and tobacco, there was no appreciably great effect, since the Japanese Government has been careful to minimize any disturbance of normal trade with the third countries (40, p. 36).

Statements such as these, unsupported by statistical tables and economic analysis, are reluctantly accepted. They are included here because the authors believe the FAO-ECAFE analysts were convinced that the quantities involved were relatively so small that if any changes occurred, they probably would not have shown up in statistical tabulations.

Pakistan

Pakistan achieved a favorable growth rate in the early half of the 1950's. The First Five Year Plan, 1955-60 was designed to prepare the way for rapid growth by building up an infrastructure; also, it aimed at increasing national income by 15 percent. In general terms, progress was less than had been anticipated. Total income increased 11 percent against the anticipated rise of 15 percent while high population growth

rates held the rise in per capita income to 3 percent during the Plan.

The poor performance of the agricultural sector was a disappointing feature of the first Plan. The government spent about 700 million rupees of its foreign exchange earnings to pay for imported food grains and the freight on imported food and commodity aid as compared with 410 million rupees allowed in the Plan.

Inflation played a key role in Pakistan's development over the 1951-59 period. The money supply almost doubled during the period. About 85 percent of this amount was linked to government borrowing from the banking system which financed about 55 percent of public development projects.

Pakistan launched its Second Five Year Plan in 1960. The Second Plan aims at self-sufficiency in food grains by 1965. The gross national product per head in Pakistan was \$62 in 1962.

A high proportion of the U. S. external assistance to Pakistan has been in the form of agricultural commodities. Total economic and technical assistance from all sources was estimated at \$496 million for the three fiscal years, 1955-58. Food grain aid (about 80 percent of the total commodity aid) was \$240 million or about 50 percent of the total for the three-year period. Therefore, it is important to examine how this important form of aid influenced the rate and pattern of development in Pakistan. The Pakistan report draws the following conclusion:

In the absence of foodgrain imports under Public Law 480 and other foodgrain aid, it would almost certainly have been necessary for Pakistan to import considerable additional quantities of foodgrains against her own foreign exchange resources. This would have had a severe impact on her balance of payments position, and thus on her program of economic development. If all foodgrain imports during the three years 1956-58 had been paid for in foreign currencies, the foreign exchange reserve would have been totally eliminated. The actual imports in the case of rice, . . . were not large enough to avoid inflation and distress in East Pakistan (41, p. 55).

This qualitative statement, however, does not resolve the question; and indeed it is difficult to resolve. Suppose that during these years, Pakistan had received an additional \$240 million of financial aid in lieu of that amount of commodity aid, and that she could have used this \$240 million to purchase exactly the same amounts of food grains that she did receive. Would Pakistan have done so? Were there other combinations of imports involving less or less costly agricultural commodities and more tools and machinery (and presumably a con-

sequent lower internal food supply) which would have brought higher rates of development? Most of the conclusions drawn in the paragraph just cited would apply even if only the first half of the food grain imports made a contribution to the development.

Other parts of the report indicate that Pakistan has had difficulty in providing food for its population, and has turned from a small net food grain exporter, 1947 to 1951, to a major food grain importer. All of the imports of rice, concessional and commercial, were additional, since there were no rice imports prior to 1956 (41, p. 62). Concessional or P. L. 480 imports from the United States dropped from 45 percent in 1956 to 19 percent in 1959 as the United States supplies of rice declined. All imports from the United States were on a concessional basis.

Wheat imports varied greatly from zero imports in 1951 and 1955 to 1.2 million long tons in 1953. For the 1956-59 period, imports averaged 0.5 million long tons annually. In the early years, Turkey, Japan, India, the USSR, Syria, the United Kingdom and Bulgaria sold wheat to Pakistan. Most of these countries are not regular wheat exporters; only the USSR (in 1956 on a grant basis) appears in later years. The United States, Canada and Australia have been more or less continuous suppliers, with France providing commercial sales in 1957 and 1958. Most of commercial sales have been by Australia; for it, a significant new market. Nearly all of the larger Canadian and United States shipments have been on an aid or grant basis (see Table II-4).

Over the period 1952-1959 Pakistan imported 2,190,857 tons of wheat from the United States, of which only 200,443 tons or 9 percent was commercial trade, and of the latter, 163,270 tons was financed by loans from the Export-Import Bank . . . Imports from Canada amounted to 586,622 tons, of which 396,277 tons were aid (under the Colombo Plan) and 190,345 tons cash sales (in 1952 and 1953 only). Australia's total was 486,068 tons, of which 55,753 tons was supplied as aid, also under the Colombo Plan (41, p. 63).

Agreements with the United States in 1957, 1958 and later have specified certain minimum quantities of commercial purchases. Thus, "normal" commercial imports are defined by negotiation and recent history. This benefits those countries which have become commercial suppliers in recent years. The report suggests the difficulties in analyzing commercial trade effects:

In view of the recent complete change in the pattern of Pakistan's foreign trade in foodgrains, it is hardly possible to speak of "normal" commercial trade . . . Likewise, it is hardly possible to assess the extent

TABLE II-4—Imports of wheat into Pakistan by country of origin, on commercial and special terms, 1951-1959
(Long tons)

Calendar year	Total imports	Imports from				
		United States	Canada	Australia	USSR	Others
1951	—	—	—	—	—	—
1952	322,952	30,150 (L)	9,144 (C)	—	65,206 (C)	218,452 (C) ¹
1953	1,189,567	38,173 (C)	172,411 (C)	87,046 (C)	78,672 (C)	45,129 (C) ²
		132,120 (L)	116,700 (A)	42,968 (A)	—	—
		476,348 (A)	—	—	—	—
1954	134,626	134,626 (G)	—	—	—	—
1955	—	—	—	—	—	—
1956	437,593	299,541 (A)	16,430 (A)	99,117 (C)	19,540 (G)	—
		—	—	2,965 (A)	—	—
1957	701,766	407,521 (A)	42,798 (A)	212,422 (C)	—	39,025 (C) ³
1958	753,525	672,378 (A)	71,089 (A)	—	—	10,058 (C) ³
1959	190,810	—	149,260 (A)	9,820 (A)	—	—
		—	—	31,730 (C)	—	—

¹Turkey 98,324; Japan 76,290; India 38,578; Syria 5,260.

²Japan 28,219; United Kingdom 8,790; Bulgaria 8,120.

³France.

Note: (C) denotes Cash Purchase.

(L) denotes Loan from U. S. Export-Import Bank.

(A) denotes Aid.

(G) denotes Gift.

Source: (41, p. 61).

and nature of the influence of Public Law 480 imports on the development of Pakistan's commercial trade in foodgrains. It seems likely that concessional or aid imports from the United States and other countries replaced a certain amount of commercial trade. But it does not follow that, in the absence of Public Law 480 opportunities, Pakistan would have been able to increase commercial purchases up to the total imports actually recorded. When East Pakistan experienced a severe shortage of rice in 1959, and the surplus available from the United States was limited, commercial imports (from Burma) were expanded only slightly [;] even though the foreign change situation was somewhat easier that year—total imports were less.

In the absence of . . . Public Law 480, Pakistan would probably have been forced to spend some additional amounts of foreign exchange on foodgrains especially wheat, and perhaps on some other agricultural products as well. Any such addition would have been at the cost of the overall economic development programme (41, pp. 65-66).

It is evident that Pakistan has been faced with serious food problems. P. L. 480 imports have provided food which she could not have imported commercially. An international loan instead of P. L. 480 would have been expended for food in considerable measure—hence, commodity aid represented real economic assistance. However, the commodity aid appears to have had its primary effect in maintaining consumption and easing internal inflationary pressures rather than in stimulating additional development. We shall examine the internal economy in later chapters.

Relation to Commercial Trade

This review of Title I programs indicates that a number of countries have been able to divert foreign exchange expenditures from Title I commodities to other agricultural and industrial products. Since Congress has indicated that these shipments should be in addition to usual commercial purchases from the United States, and since 1958, also to commercial sales of other friendly countries, it is necessary to examine these requirements in more detail.⁸

Each of the actual negotiated agreements has provisions which require the recipient country to maintain a specified level of commercial imports. This level generally is not the 1950-54 base used earlier in this chapter, and is defined partly by history and partly by negotiation between the two nations. Commercial sales are also protected as certain countries, such as Japan, develop more vigorous economies and stronger currencies, and are placed into categories not eligible for further Title I assistance.

In order to clarify the problems the USDA faces in carrying out the mandate of Congress, it is necessary to consider several alternative definitions of "additionality"—a term used by the USDA. In broad terms, additionality implies that P. L. 480 is an addition to a country's "normal" imports. Whether internal development is encouraged more by additional farm imports or by the substitution (trade diversion) of P. L. 480 imports for commercial imports is a separate question. Either may be true, depending on circumstances.

For a nation with a strong currency, stable population, no rationing of food, fiber and tobacco products, no import or exchange controls, no expansion of domestic production of food, and which did not propose to subsidize consumption, additional consumption of imports would follow Title I imports only if prices dropped. The amount of increased consumption would depend upon the price elasticity, whether there was any opportunity to reduce commercial imports, and the extent to which a decrease in local production offset the net increase in imports. Such a nation might stockpile in anticipation of a subsequent reduction in commercial purchases and a freeing of foreign exchange for other purposes. However, as experience was gained in the operation of the program, Title I agreements tended to be made only with countries that had held back on imports through exchange controls, import rationing, high food prices, or simply by shortages

⁸For a discussion of the legislative history, see Chapter VI of (30).

and inconvenience. In such a setting there are several possible concepts of "additionality."

- (1) Increases in population require more food to maintain levels of per capita consumption. This might be forthcoming through an increase in local production or imports. Thus, additional imports would provide commodities for part or all of the increase in population. For the longer run, the increased food supplies may lead to an increase in population.
- (2) The prospective recipient country may be raising per capita incomes. A part of this income would be spent on farm products, depending on the amount and distribution of the increased income, the income elasticities for farm products of those affected and possible controls on consumption—such as rationing.
- (3) An increase in income may induce some substitution effects. Wheat may substitute for rye or for rice; fruits, vegetables and animal products may substitute for wheat and potatoes. Such changes usually imply an increase in the resources represented in the food consumed. Clearly, this is the case for animal products where the final product represents one-third to one-sixth as many calories as the foodstuffs the animal consumed. Operationally, such changes might be seen as increases in feed grain imports and decreases in wheat imports. A narrow definition of additionality would not permit such shifts in imports.
- (4) Another concept of additionality is seen more clearly if examined initially for a static economy. Such a society could arrange for Title I imports, and a decrease in their price locally. There would be an increase in consumption, depending upon price elasticities; also there would be some decrease in internal production, assuming some supply elasticity exists. The result would be a somewhat greater dependence upon foreign supplies, and small increase in total consumption. In a nonstatic economy, some of these effects will be stimulated if the prices of Title I commodities lag behind all commodities or other food products.
- (5) A fifth concept of additionality applies in a projection framework. Because of expanding world production and/or a declining international market, a nation may face a decline in foreign exchange earnings. Under such circumstances, it may decide to curtail future purchases of farm products; then through P. L. 480, raise the level of projected imports. While conceptually possible, such a definition is not administratively operational.

Administratively, additionality under the Title I program has been defined in an historical concept, but with some adjustments to take account of specific country situations. It will be seen that each of the concepts, numbers (1) to (5), has had an application—the first three to some extent in Israel; the first, second, fourth (for wheat), and fifth in Colombia; the first, second, and third in Japan, and the first and probably the second in Pakistan.

Summary

The specific effects of P. L. 480 upon external assistance and commercial trade, either of the United States or of other countries, do not lend themselves to easy generalization. In each country, some of the Title I assistance has been about as good as dollar aid (ignoring problems of appropriate prices), with Israel constituting the strongest case. In substantial part, this is true because of considerable trade diversion among Israel's suppliers. Japan, on the other hand, shows little evidence of trade diversion, and substantial evidence that Title I imports directly aided welfare within an expanding development program. In both cases, the recipient countries have strong economic growth programs.

In Colombia, there is a marked contrast between wheat and cotton. Wheat imports increased sharply, while cotton imports disappeared, requiring a review of internal policies to determine why this has happened. As external assistance, the picture is also unclear—or rather varies from agreement to agreement, because of changing import and exchange policies. The third, fourth and fifth agreements provided more developmental aid than the first two agreements.

The analysis for Pakistan is overshadowed by the serious food crisis as the nation sought large supplies of imported food for its growing population.

Chapter III — Agricultural Prices and Production in Recipient Countries

THREE INTERRELATED QUESTIONS are important in examining the internal impact of Title I, P. L. 480. These are the effects on agricultural production, the induced change in consumption, and the impact upon the rate and character of the development programs. This chapter will concentrate on the first of these.

The inflow of Title I agricultural assistance may affect the agricultural sector of the recipient country in the following ways:

- (1) The recipient country, through Title I imports, is likely to have lower internal farm prices for grains and fibers than would have occurred otherwise.
- (2) Food shortages and controls over farm prices may be avoided through Title I imports.
- (3) Independent policies of the recipient government may insulate their farmers from adverse effects of Title I imports.
- (4) Title I imports and/or the spending of Title I derived local currency on agricultural projects may expand certain aspects of the agricultural sector—e.g. feed grain imports may encourage livestock production, or local currency may finance road building or irrigation projects earlier than scheduled.

In addition, the presence of P. L. 480 may increase or decrease the emphasis given to agricultural development programs in general or for specific farm products. This issue will be developed in Chapter V.

These alternative possibilities will be examined for several countries for which data and evaluations now are available, both on prices and on production responses. Farmers may respond to a variety of stimuli—such items as credit availability, technical education programs, improvement of transportation, and the availability of additional inputs such as fertilizer, may counteract or override adverse or lagging product prices.

Most countries receiving Title I commodities are beset with inflationary pressures. This may come from increases in real income, increases in money income (inflationary monetary and fiscal policy), or both. An increase in population usually contributes to an increase in demand for food. Under such conditions, one would expect food

prices to rise. Unless local agricultural production increases faster than population, by enough to equal real income increases times relevant income elasticities, food prices will tend to increase more rapidly than the general price level. These forces could be offset by similar shortages in other commodities (probably leading to serious general inflation), by formal rationing or inconvenience, or by an increase in food imports. The last could be either commercial or special program imports. An examination of local wholesale prices for Title I commodities, for other foods, and for all products will help ascertain which of these influences is dominant. They afford one measure of whether farmers have been seriously and adversely affected.

Even if wholesale prices of Title I products have lagged behind the general price level, it does not follow that farm production has been adversely affected. There are several items to consider. First, government policy may have maintained internal prices to farmers at favorable levels by various techniques. Some examples of devices which can insulate farm prices from wholesale price changes are: direct subsidies, a purchase and sale program which maintains internal prices above import prices (with government offsetting losses by profits on imports or from taxes), or mixing regulations which maintain a substantial internal market regardless of imports. Subsidized fertilizer prices may encourage increased production. Improved marketing and transportation facilities may reduce the cost of moving the product from farm to central market, and offset some or all of the wholesale price decreases. A review of price and marketing policies and farm level prices provides insights into the effectiveness of such programs.

Farmers in underdeveloped nations appear to respond significantly to *relative* price changes. If food grain prices decline, for example, land may be put into other crops (substitution of cotton for grains in India or barley for wheat in Colombia), but total agricultural output may be relatively unresponsive to changes in the average level of prices. One must keep the distinction in mind between shifts in land use in response to relative price changes and the unresponsiveness of total agricultural inputs to price changes. Even if farm prices are held down through P. L. 480 operations, this still does not imply that local farm production is discouraged, just as higher prices do not necessarily result in higher production. If the farmers are heavily self-sufficient, the small amount marketed is much more related to weather and production conditions and current needs for cash than to prices from previous

years and other commodities. True, much of the effect of higher prices may come through opportunities for capital investment made possible by higher incomes and savings. But other influences to expand production, not fully related to price, may come from aggressive policies to provide more credit, greater technical information, irrigation possibilities, better seeds, or larger quantities of nonfarm produced inputs, such as fertilizers. It is necessary to explore internal agricultural policy in some detail to verify whether one or more of these influences has prevailed.

Finally, there are adjustments which the farmers can make to offset most or all of the adverse price effects, or the lag in the rise of farm prices. They may shift to a closely competitive crop for which demand is increasing, technology advancing, and for which their land, equipment and market facilities are adapted. Of course, a significant shift would bring adverse price effects for the substitute commodity or commodities. Statistical evidence for such changes is found primarily in estimates of production and quantity of land devoted to particular crops.

The Agricultural Price and Production Record

Israel

The general price level doubled between the average of 1950-54 and the average of 1955-60.⁹ Prices and production of most agricultural commodities also increased during this period. Prices of four important P. L. 480 influenced commodities are shown in Table III-1. Prices received by farmers rose, despite imports, as the Israeli government eased price and marketing controls. "Official prices," which applied to nearly all the crop, were permitted to rise more rapidly than the general price level, while "free market" or black market prices dropped substantially as imports arrived in Israel. Prices of feed grains were virtually unchanged, despite the general price increase, obviously making the feeding of livestock more profitable.

Livestock production increased from about 8 percent to 20 percent annually, much of it in the poultry industry, with exports of eggs (partially subsidized) developing in the late 50's. Poultry represented slightly over half of total annual production, while cattle came to about 40 percent of the total.

⁹The general price level rose 28 percent from 1955 to 1960, less than occurred during the five years prior to 1955 (18, p. 394).

TABLE III-1—Israel: Farm price and production changes for selected agricultural commodities, 1950-60

	Wheat ^(a) (prutot per kg.)	Cow milk (agorot per liter)	Eggs (agorot per unit)	Feed grains (IL per ton)
<i>Average prices</i>				
1950-54	105 ^(b)	15	4	201 ^(d)
1955-60	204 ^(c)	27	8	196 ^(e)
<i>Percent change</i>				
1950-54 to 1959-60	+94	+87	+100	-2
<i>Production</i>				
	(Tons)	(1000's of liters)	(1000's of units)	(1000's of tons)
1950-54	23,750 ^(b)	117,830	379,600	80
1955-60	66,000 ^(c)	211,300	778,416	102 ^(f)
<i>Percent change</i>				
1950-54 to 1959-60	+177	+79	+105	+27 ^(f)

(a) The prices for wheat are for standard bread.

(b) Includes only 1951 and 1954.

(c) Includes only 1956, 1957 and 1960.

(d) Includes free market price November 1953, March 1955.

(e) Price data for 1953 and 1959 are official prices.

(f) The production was only 46,000 tons in the drought year 1960; if this year is eliminated the average production 1955-60 becomes 113,000 tons and the percent change +41 percent.

Source: Computed from data given in Ginor Report (18, pp. 182, 250, 253, 435, 455, 456, 459).

Title I imports were also important components of Israel's total supplies of butter, nonfat dried milk and hard cheese. Local production was small but increasing as feed grains became more available and feeding ratios encouraged livestock production.

Colombia

The first P. L. 480 agreement with Colombia was signed on June 23, 1955. A comparison of production prior to P. L. 480 with that after the program was inaugurated shows wide differences in Colombia (1954-1955 compared to 1959-1960). Wheat production remained virtually unchanged. Cotton production more than doubled. Local production of oilseeds also increased, with sesame and cottonseed being the major items. The prices of all these commodities increased during the period under consideration (1954-55 to 1960). However, wheat prices rose half as fast as the general price level, 35 percent compared with 62 percent, cotton prices increased slightly more rapidly, 72 percent, while sesame prices rose about twice as rapidly as the general price level, to 122 percent (see Table III-2).

The price and production changes are generally in the direction one would expect, though the supply response for cotton is far greater than for sesame, despite the greater price increase for the latter.

These are all important Title I imports for Colombia; yet for wheat, Colombia's import dependence has increased, for cotton Colombia became an *exporter*, while for vegetable oils both local production and commercial imports increased. The differences involve a number of factors. New, more productive wheat varieties were introduced in the middle 50's, which increased yields per acre. Similar advances were made in barley varieties, a competitive crop in the cool climate, mountain highlands. A private commodity group has an organized aggressive program to support improvements in barley production and marketing. With the support of the breweries, Colombian authorities permitted

TABLE III-2—Colombia: Farm price and production changes for selected agricultural commodities, 1950-60

	Wheat	Cotton- fiber	Barley	Sesame
<i>Average prices</i>		(pesos per metric ton)		
1950-51	615.0	2,535	332.5	588.0
1954-55	680.0	2,550	390.0	637.0
1959-60	920.0	4,400	703.0	1,412.0
<i>Percent change</i>				
1954-55 to				
1959-60	+35.3	+72.5	+80.2	+121.7
<i>Average production</i>		(thousands of metric tons)		
1950-51	116.0	7.5	53.3	9.2
1954-55	146.5	26.3	58.5	9.3
1959-60	146.7	62.5	119.0	15.5
<i>Percent change</i>				
1954-55 to				
1959-60	+0.1	+137.6	+103.4	+66.6

Sources: (5 and 6).

barley prices to increase about twice as fast as wheat prices, to 80 percent above the 1954-55 level. Since the land and machinery are equally adaptable to the two crops, some wheat cropland shifted to barley while varietal advances led to a larger per acre yield for both crops. Gross farm receipts for wheat increased by about 35 percent between 1955 and 1960, while that from barley increased by four times. The combined revenue from the two crops increased a little more rapidly than the inflation of the general economy.

Cotton producers and textile mills combined to form an aggressive organization to expand market facilities, distribute improved varieties and technical information, and to press for higher official prices for locally grown cotton. This occurred, in part, as a response to government action to eliminate or reduce the favorable exchange rates for imported cotton. The result was a substantial increase in the price for

imported cotton and favorable prices for cotton compared with corn and other competing crops. The cotton organization also supported the construction of modern gins in strategic locations, and an aggressive program of technical information to farmers. The result was a substantial expansion in cotton acreage (much of it on large commercially oriented farms). Colombia discontinued importing cotton in 1958 and became a net exporter in 1960.

In contrast, sesame seeds had even more favorable price ratios, but a far less aggressive development and promotional program. Production did expand by some 67 percent. This, together with the expansion in cottonseed production, provided large local supplies of oilseeds. The demand for vegetable oils increased even more rapidly; despite some increases in imports both commercially and from the United States (some under Title I) the supply situation remained tight.

Japan

In Japan, imports provide about two-thirds of the total supply of wheat. Section 550, MSA, and P. L. 480 provided 16 to 26 percent of wheat imports for the three marketing years 1954-55 to 1956-57, or 10 to 20 percent of total supplies (imports plus Japanese domestic production) (40, pp. 10 and 39). No other Title I commodity approaches this relative volume. The report concludes that wheat (and other) imports have had no effect upon domestic production. Acreages in wheat have been declining in Japan, but the trend antedates P. L. 480. The high domestic production costs and general world surplus situation contributed to the decline. More important for this analysis, the Japanese government controlled cereal supplies and prices, importing as needed, and insulating the farmer from the effects of imports.

Pakistan

In Pakistan, as in many underdeveloped countries, only a small percentage of the total food grain crop is marketed—20 percent for rice and 25 percent for wheat. Wheat imports were substantial during most of the years starting with 1952, and averaged nearly as much as was marketed from local production. The Pakistani Government sought to purchase domestic wheat, at controlled prices so as to assure supplies to urban areas, but obtained less than 10 percent of production. Title I imports provided the government with substantially larger supplies which could be shifted as food emergencies threatened. Procurement prices were raised in several of the years since 1954, more

TABLE III-3—Average wholesale prices of wheat and rice as compared with index number of cost of living, 1951-1959

Calendar year	General price index ^(a) (1952-53 = 100)		Wheat at Lyallpur (common variety) Index number Rupees per (1953 = 100) 83.28 lb.		Milled rice at Dacca (medium variety) Index number Rupees per (1953 = 100) 83.28 lb.	
	W. Pakistan	E. Pakistan				
1951	—	—	62	8.5	104	23.2
1952	90	104	101	14.0	115	25.8
1953	100	100	100	13.8	100	22.4
1954	87	81	77	10.6	63	14.1
1955	73	63	70	9.6	71	15.8
1956	84	86	95	13.1	96	21.4
1957	101	87	101	13.9	90	20.2
1958	98	101	93	12.9	126	28.3
1959	100	122	93	12.8 ^(b)	141	31.5 ^(b)

(a) Original base is 1951-52.

(b) Provisional.

Source: General Price Index: Institute of Development Economics, quoted in Government of Pakistan, *The Second Five-Year Plan, 1960-65*.
Average Wholesale Prices of Wheat and Rice, FAO, *Monthly Bulletin of Agricultural Economics and Statistics*, July/August, 1960.

regularly for rice than for wheat—to stimulate production. Free market prices usually were somewhat above procurement prices, yet after decontrol in 1960 there was no substantial change in wholesale prices (2, p. 75). P. L. 480 imports provided the government with means to keep food grain prices down for consumers.

Prices of wheat and rice compared with the general price level are shown in Table III-3. It will be noted that prices in any one year may be out of line with the general price index, but the trends are fairly similar. With respect to production, the FAO-ECAFE report states:

There is no evidence that the acreage under rice and wheat in Pakistan has decreased since the beginning of purchases on special terms. In fact, . . . , the average acreage under rice and wheat in 1955/56-1958/59 was larger than in 1947/48-1950/51, though only slightly so. On the other hand, yields per acre have been stagnant in the case of rice and have decreased in the case of wheat (41, pp. 47-48).

This report also points out that the acreage and yields of two cash crops—cotton and tobacco—increased during this period (41).

Beringer makes a point in discussing the impact of P. L. 480 on Pakistani agriculture. He notes that the roller flour mills in West Pakistan have been required by the government to devote about 90 percent of their capacity, and in Karachi 100 percent, to the processing of imported wheat. This has forced the Pakistan produced wheat to shift heavily to the indigenous mills, and their ability to process additional wheat is limited. Only about 1.3 percent of total domestic wheat

production in 1960-61 could be processed in roller mills, less than 5 percent of the estimated marketable surplus (2, pp. 62-63). As a result there has been sharp price breaks as the harvest begins, with consequent unfavorable prices and farm incomes from wheat. The apparent preference of the consumer for domestic wheat is not reflected in farm or wholesale prices (2). The adverse price effects are primarily felt by the large commercial producers. These comments apply to wheat in West Pakistan; there is no comparable report on rice in East Pakistan.

The next question is whether the actual agricultural price policies, production programs, and agricultural development measures would have been pushed more strongly in the absence of P. L. 480.

Pakistan officials—according to the report—maintained that special imports did not affect either the government's decision or its efforts to increase agricultural production (41). Reference is made to the assignment of highest priority to agriculture in 1959 in the second five year plan for 1961-65. Even so, Pakistan continues to depend on imports from the United States for a large part of food supplies in urban areas.

The magnitude of the food problem and the major contribution of special imports from the United States in meeting this problem made it extremely difficult to judge what policies would have been followed without P. L. 480. It seems almost inevitable that internal consumer pressures would have forced an early and continuous reappraisal of food policies. The results might have been an almost single-minded concentration on local food production or procurement, an effort to ask the United States for another special law to make food grain available (there was such a law in 1952) (30), or an emergency foreign currency loan to enable Pakistan to purchase food grains commercially, or some combination of these.

The Pakistan experience also emphasizes another effect of P. L. 480, namely that recipient countries may also be exporting countries, and feel the negative aspects of U. S. export policies (30). In this case it is a combination of the U. S. export payment on cotton and the sales under P. L. 480. The report states:

... United States subsidized exports ... have apparently affected the foreign demand for and the prices of cotton produced in other exporting countries including Pakistan. The export earnings of Pakistan cotton fell from Rs. 496 million in 1955/56 to Rs. 246 million in 1957/58. This fall was due to decreases in both export quantities and prices. As mentioned earlier, the decrease in export quantities largely reflected the growing internal consumption of cotton as a result of the expansion

of the local textile industry. However, the decline in export prices of Pakistan cotton, . . . led to lower internal prices, thus affecting domestic cotton growers adversely (41, p. 50).

There was an 11 cent drop in the export price of United States cotton from 1954/55 to 1958/59, and a 5 cent drop for Pakistan over the same period (Table III-4). However, both acreage and yield of cotton in Pakistan increased during this period.

TABLE III-4—Cotton Prices, c.i.f. Liverpool, 1954/55-1958/59
(Equivalent United States cents per pound)

Country of origin	Quality	1954/55	1955/56	1956/57	1957/58	1958/59
Pakistan	289 F Punjab S.G.	34.95	34.95	34.24	33.39	30.64
	N. T. Sind R. G.	—	32.37	31.06	30.15	27.05
United States	Texas M 15/16"	37.31	32.95	28.38	28.86	26.50
	Memphis Terr. SM 1-1/16"	40.67	39.75	33.35	35.80	32.70
	Calif. SM 1-3/32"	40.87	40.28	34.91	36.70	32.95
Mexico	Metamoras SM 1-1/32"	38.84	35.03	32.63	33.81	28.97
Egypt	Ashmouni F. G.	46.52	46.50	49.59	39.75	32.45

Source: (41, p. 50).

A General View

The most important conclusion drawn from this analysis of Title I imports upon indigenous agricultural production is that the effects vary widely from country to country and do not lead to easy generalization. The effect will vary with (1) the existence of food rationing, (2) the extent of price and quantity controls over inputs and output in agriculture, (3) the nature of government and private programs to stimulate the production of goods being imported, and (4) the willingness and/or ability of government to protect farmers from adverse effects or to permit them to benefit from favorable effects of production, consumption and development policies.

In Colombia, Title I wheat imports led to no change in aggregate wheat production, despite a varietal improvement, and a relative loss of income for wheat farmers compared with barley, dairy and other producers. However, an aggressive cotton development program led to a rapid expansion in production with a modest rise in prices.

In Israel, no negative production effects were noted, with strong positive effects as imports permitted a relaxation of controls, some rise in farm prices, and a substantial expansion in livestock production, as

feed grains became available in sure and ample amounts. In Japan, a production increase in farm products is most probable as yen funds permitted an early implementation of agricultural development projects, while imports were absorbed by relaxation of consumer controls. Thus, in both Israel and Japan, supply shortages were relaxed, without adverse price effects on agriculture.

In Pakistan, the sheer volume of shipments and the deficient internal supply mean that appraisal cannot deal with small marginal adjustments in price, production or development programs. Thus, it can be argued that in the absence of P. L. 480 there would have been either a massive change in domestic policy or a special program to provide food by Pakistani allies and friends. The latter probably would have had effects similar to P. L. 480.

Chapter IV — Consumer Expenditures, Food Prices and Dietary Patterns

THE PURPOSE OF THIS CHAPTER is to examine the impact of P. L. 480 commodity aid on consumption, food prices and dietary patterns. The chapter is divided into four parts. Part I discusses the consumption dimension of economic development with emphasis on the current state of knowledge about the composition of consumer expenditure patterns in underdeveloped nations. Part II discusses some of the implications of food output lagging behind the increase in demand stemming from increasing population and per capita incomes, and the consequent problems of inflation, rationing, and food price controls. Part III covers the impact of P. L. 480 on consumption patterns in four countries, while Part IV summarizes the chapter.

Consumption Dimension of Economic Development

The additionality concept of using surpluses for economic development requires by definition an expansion in income and consumption in order to minimize the diversionary effects of surplus shipments upon commercial imports. Though the level and composition of consumer expenditure patterns are of immediate concern in analyses of P. L. 480, surprisingly little is known about their composition in underdeveloped nations (21). Economic development plans in many countries have emphasized physical output and per capita income targets and ignored the composition of consumer goods included in these overall targets. However, two recent comprehensive consumption studies are of special value for an understanding of consumption decisions and economic development. Rosovsky and Ohkawa examined long-term consumption patterns in Japan and found that the retention of many indigenous characteristics in consumer tastes helped to lower the capital-output ratio and make possible the utilization of labor intensive techniques which produced consumer goods for the domestic market (35). Instead of Japanese consumers desiring to import western consumer durables or borrow western innovations such as housing styles, the consumption expenditure pattern remained stable. This enabled the government and private business firms to tap a share of the rising income to finance the social overhead network, to develop rapidly the private export-oriented sector, and to limit the capital needs of the consumer goods sector.

Kuznets has examined the share and structure of consumption in economic development and presents quantitative data for a wide range of non-communist and communist countries (26). An interesting aspect of this report is the significantly lower share of total consumption in communist countries during the post World War II years. This repressed consumption in the communist countries makes possible a high share of capital formation. Thus, the high postwar rates of growth in the communist countries are tied to capital formation through *repressed* consumption. In non-communist nations, there is a greater concern in providing goods for current consumption, with a consequent slower rate of capital formation. Food, of course, is a major consumption item in less-developed nations.

Population, Food Supply and Inflationary Pressures

It has been pointed out previously that growth in per capita income and population are the major variables affecting the demand for food. Kuznets has shown that, in the economic history of advanced nations over the past 100 years, a rise in the rate of growth of population has accompanied the growth in per capita income (25). Population is rising rapidly in many underdeveloped nations, in some cases exceeding 2.5 percent per year but more commonly around 2 percent annually. According to a recent U.N. study, per capita incomes of the underdeveloped nations are growing at about 1 percent per year (39). Since income elasticities for food are fairly high in those nations, a major part of the additional income is spent for food. Taking these two figures together, the demand for food expands by 2.5 to 3 percent per year. There are individual country variations since the population may be increasing at higher or lower rates, and per capita incomes perhaps not at all. The major alternatives in meeting this demand are (a) a substantial increase in the productivity of local agriculture (b) the repression of consumption via cultural stability, as in Japan, or through repression and rationing, as in communist countries, (c) imports, (d) shifts in the structure of consumption and (e) repression of consumption via regulation.

Food, as a producer good, has been discussed by Leibenstein (27) and in a recent FAO study (15). Chapter V points out that a lagging domestic agriculture which fails to send forth enough food to meet the rising demand (from population growth and economic development) can be inflationary. Inflation is a relative term, and must be considered within the historical experience of a particular nation; a

7 percent rise in prices in Chile and a 2 percent rise in prices in the United States might both be considered as mild inflation. The important issue is the effect of inflation on the development process. Since economists have noted no correlation between the rate of inflation and the rate of development in contemporary Latin American nations, most economists avoid making sweeping generalizations about the connections between inflation and development. In some countries, a price policy which favored capital accumulation through inflation has been successful while in other countries unfavorable results have appeared (10). We are concerned with inflation's impact on agriculture.

When domestic agriculture has lagged behind increases in internal demand for food, food prices have risen. Urban pressure groups frequently have induced their governments to impose price controls on the basic food products to slow down the increase in food prices. In some cases price controls have been imposed in isolation from other more general measures which need to be taken. As a result, price and other incentives to farmers are reduced and the inflationary problem is exaggerated. In Latin America, for example,

The almost universal experience . . . has been that in those countries where price controls on agricultural products have been effectively implemented, agriculture has stagnated, with a resulting aggravation of inflationary pressure (4, p. 91).

One of the effects of inflation is a change in the distribution of income. The nature and extent of this redistribution depends upon a variety of institutional factors such as price controls, provisions for periodic wage increases, investment and payment policies of retirement funds, and the tax structure. The changing income distribution affects the pattern of demand for food and other commodities, sometimes shifting demand to low cost foods (such as sweet potatoes for rice), at other times providing for a greater demand (as low income groups receive relatively higher incomes), or shifting demand towards higher cost foods (such as animal for vegetable products).

In summary, the agricultural sector can play an important role in avoiding inflation by increasing food output to accommodate increasing population and per capita incomes. If farm production lags and food prices increase, however, agriculture may be adversely affected through the imposition of price controls on food products, while other measures to control inflation and stimulate production are overlooked.

The possible role for commodity aid is defined more clearly; it can ease the pressure upon domestic food supplies, serving as a counter-

inflationary force. If population increase and income expansion are occurring, the demand expansion is likely to be permanent and to require a long-run increase in the productivity of domestic agriculture. It is for this reason that credit, tenure, market, and price incentives must be such that domestic producers seek to and do increase their production and marketings of farm products.

Impact of P. L. 480 on Consumers in Four Countries

It is difficult to develop reliable data on total or average food consumption in underdeveloped countries. The weaknesses of production data, food losses and wastes, and problems in defining food requirements make it difficult to determine the extent to which food deficiencies occur (9). It is less difficult to gain some sense of changes in food availability over time, especially as to how rapidly demand is expanding relative to production. One of the more interesting questions is the change in the structure of consumption as economic development occurs. Two structural changes are of particular interest. One of these is the possible upgrading of the diet towards a greater consumption of proteins or towards higher cost foods. The other is the possible increase in consumption levels by the lower income groups as the result of changes in the distribution of income.

Let us turn to data on consumption patterns, food prices and nutritional issues in four P. L. 480 recipient countries. The commodity composition and per capita market value of these commodities are shown in Table IV-1 for Israel, Colombia, Japan, Pakistan and India. The per capita market value of commodities received or under agreement over the July 1, 1954, to June 30, 1962, period ranged from \$87 per capita in Israel to \$1.42 per capita in Japan. Japan has not been eligible for Title I shipments since 1957. The country studies reported below covered only part of this eight-year period and hence, (except for Japan) the actual amounts received per capita in each country will be slightly less than the figures shown in Column 10.

Now let us turn to an appraisal of the impact of P. L. 480 commodities on Israeli consumption patterns and food prices.

Israel¹⁰

During the six years covered in the Israel report, 95.5 percent of Title I imports were consumed directly or indirectly as foodstuffs (including larger inventories) while the remaining 4.5 percent were

¹⁰Many of these data were taken from (18).

raw materials for processing industries. Title I imports accounted for approximately the following percentages of total supplies: wheat, 34 percent; feed grains, 50 percent; butter, 41 percent; nonfat dry milk, 36 percent; vegetable oils and fats, and rice, 17 percent; and beef, 14 percent. The diet of the Israeli people improved markedly during the six years under study. Title I commodity imports constituted 5.5 percent of total food consumption expenditure at retail prices. Real per capita food expenditures increased 26 percent or from an average of \$163 for the 1950-54 period to \$206 for the six-year period 1955-60. Title I imports accounted for 29 percent of this increase in *real* per capita food expenditures.

Turning to caloric intake, the average daily intake of calories per capita increased only slightly—from 2700 to 2800—during the six-year period. The shift in the caloric mix, however, was pronounced and rapid during this six-year period. Foreign exchange shortages in the early 1950's required that the government reduce commercial meat and fish imports and to impose rationing of these products. However, after 1954, Title I imports assisted in increasing domestic livestock production and thereby facilitated derationing, moving toward a free market and increasing animal protein intake. In fact, Title I imports directly contributed 6.5 percent to the animal protein per capita intake and indirectly 9.5 percent through feed grain imports and expanded domestic livestock production, a total of 16.5 percent of the total animal protein intake during the period.

The most dramatic shift in consumption patterns occurred in meat products as shown in Figure IV-1. Per capita meat consumption increased from 25 pounds in 1953-54 to 71 pounds in 1959-60. Of this, the principal increase was in poultry consumption which resulted from expanded domestic poultry production through Title I feed grain imports. Per capita poultry consumption climbed to 44 pounds in 1959-60 from 11.5 pounds in 1953-54. Poultry accounted for 62 percent of all meat consumption in 1959-60 compared to 46 percent in 1953-54.

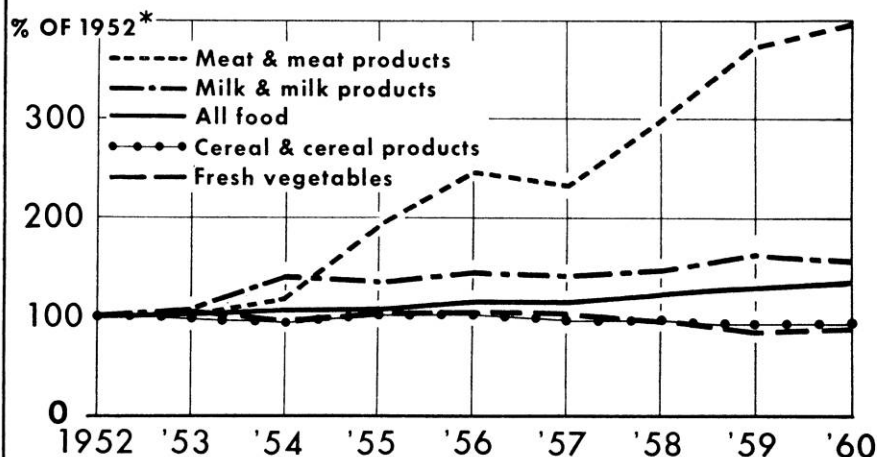
The general price level in Israel rose 28 percent over the 1955-60 period as shown in Column 1 of Table IV-2. The data in the second column reflect the change of prices in the absence of Title I by assuming that there would have been rationing, price and consumption controls, a smaller development program, and lower levels of income and employment. The last column shows that the general price level would have risen 8 percent more than it actually did. Title I imports

TABLE IV-1—Selected recipient countries, commodity composition, and per capita market value of commodities under Title I, Public Law 480 agreements signed July 1, 1954 through June 30, 1962

Country	Wheat and flour (1)	Feed grains (2)	Rice (3)	Cotton (4)	Fats and oils (5)	Other (6)	Market value (7)	Percent (8)	Popula- tion * 1962 (9)	Per capita market value of Title I commod- ities (10)	
										(millions)	(dollars)
Colombia	35.0	4.1	—	11.9	9.4	2.0	62.4	0.86	14.7	4.37	
Israel	68.8	69.8	2.0	5.6	23.8	30.2	200.2	2.77	2.3	87.04	
Japan	47.9	13.3	13.7	52.5	—	7.6	135.0	1.87	94.9	1.42	
Pakistan	571.9	23.6	78.5	50.9	175.9	25.8	926.6	12.83	96.5	9.60	
India	1630.6	35.1	165.3	184.3	1.0	13.8	2031.1	28.13	440.0	4.62	
Subtotal	2354.5	145.9	266.5	305.2	210.1	79.4	3355.3	46.48			
Other countries	1704.5	229.7	188.1	744.7	624.7	303.8	3864.5	53.52			
Total	4058.7	445.6	447.6	1049.9	834.8	383.2	7219.8	100.			
Percent	56.21	6.17	6.20	14.54	11.56	5.31	100.0				

Source: *Population data (22). Other data are from (42).

ISRAEL: CHANGES IN PER CAPITA FOOD CONSUMPTION



SOURCE: GINOR, F., ANALYSIS AND ASSESSMENT OF THE ECONOMIC EFFECT OF THE PL 480, TITLE I PROGRAM IN ISRAEL, BANK OF ISRAEL, TEL-AVIV, 1961.

*VALUES ADJUSTED TO CONSTANT PRICES.

U. S. DEPARTMENT OF AGRICULTURE

NEG. ERS 853-62(1) ECONOMIC RESEARCH SERVICE

Figure IV-1

helped stabilize the price level in two ways; first by providing various food items for current consumption in an economy in which food was in some cases rationed, and second, by providing for a significant increase in inventories which helped level out seasonal price fluctuations (18, pp. 285-289).

In summary, Title I imports aided in improving the Israeli diet directly through animal imports and indirectly through feed grains which expanded domestic livestock production and permitted deration-

TABLE IV-2—Israel: Estimate of deflationary effect of Title I program: 1955-60

Year	Index of domestic price level 1955 = 100 (Actual)	Index of domestic price level 1955 = 100 (In absence of Title I)	Difference in percentage rise (Due to Title I)
1955	100.0	102.2	2.2
1956	109.5	112.9	3.4
1957	116.5	119.3	2.8
1958	120.9	127.3	6.4
1959	124.4	128.5	4.1
1960	128.2	136.5	8.3

Source: Adapted from Table on p. 146 (18).

ing of eggs, poultry and other meat more quickly than otherwise would have occurred.

Colombia

Colombia's rapid population growth, and declining foreign exchange earnings through lower coffee prices beginning in the mid-50's stimulated the Colombia government to accept Title I food aid over the 1954-60 period.

During the 1954-60 period, the general price level rose 70 percent while the general level of food prices increased 77 percent.¹¹ Title I imports of wheat, edible oils and cotton represented 20, 11, and 9 percent, respectively, of domestic consumption during this period. Goering and Witt have estimated that P. L. 480 commodities represented about 2.4 percent of average national consumption over the 1954-60 period. Retail prices of bread, vegetable shortening, and cotton cloth increased 40, 117, and 36 percent, respectively, in the same period. Title I wheat imports played a significant role in restraining the upward pressure on bread prices. Though domestic wheat production remained almost constant during the period while per capita incomes and population were rising, the inflow of Title I wheat restrained bread price increases to 40 percent as compared to the 77 percent increase in the general level of food prices during the same period.

The data on wheat production, imports, prices, and consumption suggest that the P. L. 480 wheat inflow aided Colombian consumers. Similar data on edible oil indicates the difficulty of measuring the impact of specific types of commodity aid on consumers. Even though Title I imports of edible oils averaged 11 percent of domestic consumption, the price of edible oils increased 117 percent between 1954 and 1960. A high tariff on commercial edible oil imports, higher support prices for sesame and soybeans, and domestic oil production which did not appreciably expand output until 1959-1960 suggest that Title I imports could have been stepped up considerably during the period.

Cotton cloth prices increased only 36 percent between 1954-60 even though cotton price supports increased 92 percent and average farm prices increased 80 percent in the same period. Research to date indicates that new equipment, technical advances and smaller cost margins made possible the modest increase in retail cotton cloth prices in the midst of overall large increases in farm prices (45).

¹¹Includes 15 food items of basic importance to the Colombian diet.

The per capita market value of all Title I commodities received by Colombia over the 1954-62 period is \$4.37 as shown in Table IV-1. On a calorie basis, Title I commodities—wheat and edible oils—provided about 50 calories daily to the Colombian diet.

P. L. 480 wheat consumption has averaged about 3-7 kilograms per year per capita or about 20 percent of the total consumption. Although it is difficult to be sure of what would have happened in the absence of P. L. 480 aid, the consumption data in Table IV-3 show that P. L. 480 wheat has been an important element in the Colombian diet. Wide differences in consumption patterns occur in Colombia. Wheat and wheat products are less utilized in the low land tropics, corn is more important in the area of Medellin, and rural areas at all elevations have less access to wheat and flour. Moreover, the consumption patterns of the well-to-do were already satiated with wheat. Thus, P. L. 480 wheat imports were far more important to urban working class families and to middle income groups than to higher income groups in Colombia (45). Although Colombia might have used its dwindling foreign exchange to increase commercial wheat imports in the absence of P. L. 480 wheat receipts, instead of other capital imports, the data suggest that P. L. 480 wheat imports aided the Colombian consumers and the economy during this period of foreign exchange difficulties.

Japan

The consumption pattern in Japan has long been one which is characterized by the direct utilization of foods of plant origin (44).

TABLE IV-3—Per capita consumption of wheat in Colombia, including and excluding P. L. 480 wheat receipts, 1951-1960^(a)

Year	Wheat ^(b)	
	Excluding P. L. 480	Including P. L. 480
	(kilograms)	
1951	17.0	—
1952	16.7	—
1953	14.6	—
1954	18.4	—
1955	19.1	17.4
1956	18.7	14.5
1957	17.7	13.1
1958	18.9	16.9
1959	19.4	12.8
1960	19.6	16.3

(a) Stocks are disregarded.

(b) Includes the wheat equivalents of flour imports.

Source: Abridged from (45).

Rice is a mainstay of the diet, providing about half of the calories. Per capita rice consumption was 340 pounds before and 242 pounds immediately following World War II. The war disrupted production and trade patterns and helped induce a permanent shift in consumption patterns. The postwar rice shortage was partially met by wheat imports. Wheat consumption per capita in the early 1960's has averaged about 88 pounds per year compared to 37 pounds before the war.

In 1953, Japan experienced one of the poorest rice crops in the postwar period. Also, naked barley and wheat production were below previous years. Figure IV-2 shows that rice consumption per person was below the prewar level while wheat consumption had increased to two and one-half times the prewar level. Faced with seriously depleted foreign exchange holdings and the need to import larger quantities of food grains, Japan turned to Public Law 480 for assistance.

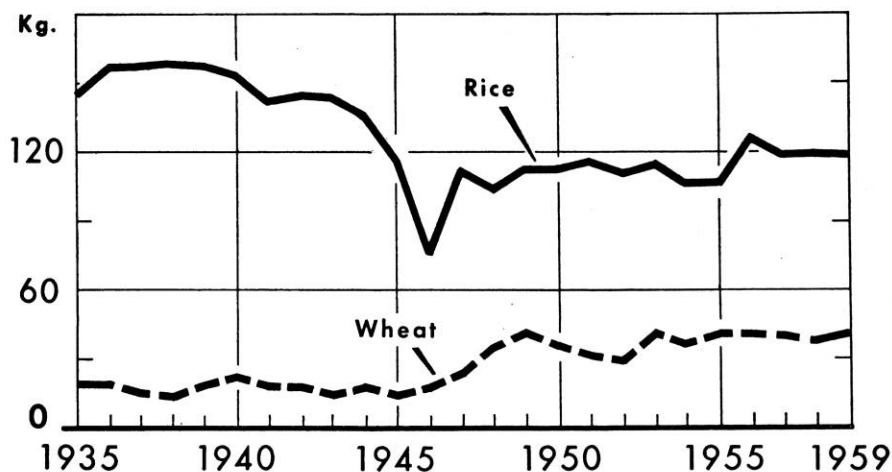
Japan decided on the amount of commodities to request under P. L. 480 by analyzing the overall demand and supply of the major commodities, the relative prices and qualities of the U. S. surplus commodities, and the possible disruptive trade effects which countries such as Canada and Australia might experience if P. L. 480 shipments were begun (40).

Indigenous demand for the staple foods and other major commodities was computed on the basis of consumption trends, population growth and the ration scheme for rice. Then production estimates were matched with consumption needs and the amount to be imported was computed by commodity and country other than the United States; the remainder was the quantity eligible to be imported from the United States. The amount of P. L. 480 commodities requested was computed as additional to the "usual commercial" ¹² imports from the United States.

As was pointed out in Table IV-1, the amount of P. L. 480 commodities Japan received per capita was a token amount of \$1.42 per capita. Hence the impact of P. L. 480 on retail food prices and indigenous consumption is almost impossible to isolate. The FAO report notes that P. L. 480 commodities represented only 3.5 percent of Japanese wheat and barley consumption in 1954-55 and 2.3 percent of rice, wheat and barley consumption in 1955-56. In short, few permanent changes in consumption can be attributed to P. L. 480

¹²Usual imports from the United States were computed on the basis of commercial imports over the previous three years.

Japan: Per Capita Annual Consumption of Wheat and Rice



U. S. DEPARTMENT OF AGRICULTURE

NEG. ERS 122-61 (4) ECONOMIC RESEARCH SERVICE

Figure IV-2

commodities; rather the commodity inflow served primarily a counter-inflationary objective.

Pakistan

Wheat constitutes about 40 percent of the total food consumption in West Pakistan while rice represents about 80 percent of the total food consumption in East Pakistan. Pakistan received both commodities through Public Law 480, as shown in Table IV-1. The amount of P. L. 480 imports was relatively small, however. Title I wheat and rice represented 2, 7, and 4 percent of total per capita food grain consumption in 1956, 1957, and 1958, respectively. Per capita wheat and rice consumption during the three years, 1955/56 - 1957/58 was about 15 ounces per person per day which was slightly less than the rate prevailing in 1950/51 and previous years.

Since the government procured and rationed food grains in deficient urban areas, the availability of food grains on special terms from the United States assisted the government in checking hoarding and rising food prices. The Pakistan report states that:

Government distribution of wheat and rice at controlled—and, in the case of imported supplies, subsidized—prices, undoubtedly helped to prevent the open market prices from soaring. The announcement of

continued food imports created the right psychological atmosphere, thus more or less discouraging the creation of artificial shortages through hoarding (41, p. 53).

In spite of this endorsement of P. L. 480, phrases such as "the right psychological atmosphere" and "more or less discouraging the creation of artificial shortages" leave much to be desired in terms of scientific appraisal of food aid in Pakistan. The Pakistan report approaches the evaluation process by appraising, in turn, narrow segments of the economy. What may have been an expedient and effective counter-inflationary policy in appeasing urban consumers, also may have checked necessary price incentives to indigenous agriculture, as discussed earlier in Chapter III. The Pakistan report has described some of the issues involved in consumer price and rationing policies, but it does not offer any logical evidence to conclude that the program's counter-inflationary impact did not thwart the needed price incentives to Pakistani agricultural producers. It was noted also in Chapter III that cotton and tobacco show production and productivity increases, while rice and wheat do not. Finally, the protein deficient Pakistani diet was not appreciably aided by the continued inflow of P. L. 480 cereal grains.

SUMMARY

The Israeli consumer was able to make major structural shifts in consumption as a result of Title I commodity imports during the 1955-60 period. In fact, the per capita consumption of meat and meat products increased from a base value of 100 in 1954 to 250 in 1958 and 334 in 1960 (18, p. 422). Approximately 16 percent of the increase in animal protein was attributed to Title I imports. In Colombia, Title I imports made a significant contribution to checking bread price increases. In Japan and Pakistan, the reports suggest that the major contribution of Title I imports to the consumers was the counter-inflationary effect. Title I commodities made little headway in solving the major nutritional deficiency—protein—in the area of greatest shortage—Asia.

Chapter V — Commodity Aid in Internal Development

THIS CHAPTER EXAMINES economic development through the absorption of surplus farm products by the recipient economy. It also examines the monetary effect of the local currency accumulation and, at least, partial disbursement. The title of the chapter emphasizes that the commodity aid is more important than the expenditure of local currency. The latter can contribute to development only under quite special circumstances. Little attention has been given to the nature of these special circumstances and to whether they occur frequently or rarely in underdeveloped countries.

Alternative Effects of Title I Imports

There are a number of ways in which Title I imports may relate to internal economic development. Commodity imports may have any of the following effects:

- (1) Title I commodity imports may merely increase the level of consumption or its composition without affecting development.
- (2) The development program of the receiving country may be expanded, thereby creating additional income.
- (3) Title I imports may provide a basis for the implementation of long-run development programs to increase agricultural productivity through the assurance of adequate food supplies in the interim.
- (4) Title I imports may contribute both to improved welfare and to expanded development, the amount of each being difficult to specify precisely, because other economic changes are also occurring.

With respect to local currency, the following alternatives exist:

- (1) The local currency may be held as an inactive account in the central bank, or, if used, counteracting deflationary actions in other areas of monetary and fiscal policy may result in a neutral monetary impact.
- (2) Title I local currency may support development activities at a time when the recipient country is giving little attention to development.
- (3) Local currency may be designated and used for particular development purposes while other development funds are curtailed by about the same amount. Consequently, the pattern of develop-

ment activities shifts toward those activities supported by P. L. 480 currency, while the total is unchanged.

- (4) Local currency may be expended for projects which constitute an addition to the development program, with a consequent addition to the internal inflationary forces during the period of construction and until the new projects begin producing.

With these alternatives in mind, it now is appropriate to examine the record in individual countries, to evaluate the commodity and local currency impacts of Title I upon the development effort.

The Record Examined

The analysis of commodity aid in internal development requires examination of the total developmental effort of the recipient nation, including an inquiry into many subtle internal relationships. Development decisions sometimes must be made in areas where there is little basis for sound judgment; political decisions sometimes override the limited evidence available on appropriate economic policy. The country studies discussed below offer the first empirical data on these issues.

The U.N. FAO studies of Japan and Pakistan are limited in this respect; on the other hand, several papers provide useful information on the effect of P. L. 480 on development in India.

Israel

The major features of the Title I impact upon Israeli development may be seen by beginning with the total investment and development program, and the Title I share thereof (18). During the years 1955-60, total gross capital formation came to IL (Israeli Pound) 5,259 million at 1959 prices. Title I investments were IL 187 million, or 3.5 percent of the total.¹³ The State Development Budget provided about 40 percent of the gross capital formation. Since all Title I investments were channeled through this agency, it is appropriate to examine its policies. Through this and other public agencies, the Israeli government has substantial influence over the investment program. Nearly all loans require that additional funds be invested by the loan recipient. Moreover, government permission to import capital goods is required; thus, few major investments are possible without the loan and import approval of the government.

¹³Actual Title I investments at current prices were IL 180.22 million (30, p. 15).

The State Development Budget allocated a third of its loans to agriculture and irrigation, with industry and mining, and transportation receiving the next largest shares. While actual Title I loans are identified, it is not appropriate to consider these loans as *the* additions to the development program. Rather they were loans for which U. S. Government approval was elicited easily. It is indicated that Title I identified loans had a small import component (18, p. 49). However, the report states that, in the absence of P. L. 480 shipments, the total development budget would have had a smaller import component. In other words, the marginal contribution of Title I loans was to expand the loans with a large import component—precisely those not identified as Title I loans. This argument is credible since changes in foreign exchange availability were induced by P. L. 480 operation.

The Ginor report also argues (18, p. 48) that the stabilizing effects of Title I imports brought an investment response. The government was willing to make additional loans which created purchasing power, since there were added commodities in the market place. It also is indicated that inflation would have been suppressed, in the absence of P. L. 480, by the continuation of rationing and price controls. With P. L. 480 imports, the inflationary pressures were substantially reduced.

The material summarized above indicates that P. L. 480 made a substantial contribution to the Israeli economy. Part of this favorable picture is due to trade diversion, contrary to the spirit of the preamble of P. L. 480 but condoned in Israel for reasons discussed in Chapter II. Another reason for the favorable effect is the excess capital and labor capacity in several industrial sectors (18, p. 304). These could be utilized once Title I commodities eased the pressures of suppressed inflation, previously kept in check by rationing and price control. The relatively large external assistance program, much of it on a grant basis, is rather unique. Perhaps because of its size and that of the P. L. 480 program, a number of adjustments were made by Israel on a per capita basis, and accepted, sometimes grudgingly by the United States, which facilitated and stimulated the growth of the Israeli economy. Among these were the growth in Israeli poultry exports, based partially on P. L. 480 feed grain imports, and probably not recognized adequately in dollar payments to the U. S., as well as the previously mentioned partial shift in commercial farm product imports to imports of industrial commodities. The Ginor report, understandably, does not really face up to these U. S. international trade policy issues.

Moreover, with respect to additionality, Kahn seems to be ambiguous; he argues on the one hand that farm products were the kind of aid Israel needed and recognizes on the other that only a third of the Title I imports were an addition to Israel's imports of these commodities.¹⁴

The Ginor report indicates that Title I increased Israeli development and internal consumption. The balance between the two was adjusted to emphasize development through substantial modifications of commercial trade patterns, and increases in development loans. However, careful reading of the report gives one the impression that too much of the economic advance is attributed to P. L. 480; or perhaps that P. L. 480 was able to make a significant contribution because other internal and external factors were also favorable for Israeli growth. In other words, if there had been less unrestricted external aid, less effective public administration, a smaller number of competent, educated immigrants, and less investment in social overhead capital, then the contribution of P. L. 480 would have been smaller.

Colombia

It is more difficult to trace the impact of the smaller program in the more populous Colombian nation than it is for Israel. The more dispersed, less coordinated nature of the development effort, and inadequate statistical information add to the evaluation problem.

During the period under study, the Colombian Government did not follow a rigorous program of suppressing inflation; price increases averaged 10 percent per year. There was no formal internal rationing of consumer goods, and price controls were administered so as to slow down the rate of price increases. Consequently, much of the development activity was via marginal adjustments in policies in the framework of rising prices, and a mixture of public and individual planning. Title I commodities assisted in slowing down the price increases in certain consumer goods, and permitted higher consumption levels than otherwise would have been possible (see Chapter IV-3).

It is probable that international lending agencies were somewhat more inclined to make loans to Colombia because of this improved environment. The Witt-Wheeler report also suggests that the absence of Title I programs would have had two effects which would have slowed industrial development (45). Without Title I wheat imports, internal pressures probably would have forced the adoption of an aggressive

¹⁴Compare pp. 582 and 590 with pp. 588 and 591 in (23).

technical assistance program and higher prices for wheat. Such a decision would have increased the amount of Colombian resources devoted to an inefficient sector—since wheat costs and prices are substantially above North American levels. Also, in the interim, Colombia probably would have been forced to use more of its export earnings to purchase wheat commercially, at the expense of machines and materials contributing to industrialization.

The use of local currency in Colombia has substantially affected the allocation of development effort. Most obvious is a 33 million peso loan made to the Corporacion Valle del Cauca, a development operation comparable with the Tennessee Valley Authority. It is claimed that this substantial Title I currency loan was impossible to finance through local banking channels, but did convert the CVC from an engineering and planning operation to an operating program. Its successful use of the local currency proceeds enabled the CVC to justify its applications for large international loans. These, in turn, have stimulated a variety of agricultural, housing and industrial activities in the vicinity of Cali (45, p. 136). The loan mentioned above was one of a large number of loans for agriculturally-related projects. An early decision by Colombia to permit the Minister of Agriculture and the manager of the agricultural credit and development bank (Caja Agraria) to use a major share of the local currency, provided a much larger fund for agricultural development than otherwise would have been available. Other loan projects, in addition to the CVC, include land clearing and drainage projects in other parts of the nation, a fertilizer plant, access roads to agricultural areas, agricultural warehouse facilities, and along with "Cooley loans," a number of investments in industries processing agricultural commodities or manufacturing agricultural inputs (20, pp. 22-27).

Some of the proceeds from imports, (profits or margins between import prices and internal prices) have increased the funds available to the Ministry of Agriculture for advancing the technical level of Colombian agriculture.

Not all of the expenditures listed above are necessarily of higher priority than industrial projects which might have been supported. In some cases, there is severe internal criticism of the cost and validity of the projects implemented. The point is, however, that in Colombia, Title I currency increased the relative proportion of developmental effort in the agricultural and agriculturally-related sectors, and at the

same time relieved the Ministry of Agriculture of the necessity of a major effort to try to expand wheat production—one of the sectors clearly lacking in comparative advantage.

On balance, Title I, P. L. 480 contributed to the total development effort in Colombia. Colombia maintained a positive growth rate between 1955 and 1960 despite declining coffee revenues, a high natural increase in population, and lagging agriculture. Had Colombia been faced with the decision either to purchase more farm products commercially or to wrestle with higher food prices, the rate of growth might have become negative in some years. While the government could have financed the CVC program, had it decided that it was a top-priority project, the actual political, financial, and institutional environment strongly suggests that the government could not have made that decision at that time. Yet the operations of the CVC have made an important contribution to development since 1958.

Local currency expenditures did shift the overall pattern of development towards agriculturally-related projects. Some of these have been criticized by Colombian economists, but there is no indication that another pattern, acceptable to Colombia, would have stimulated greater development. In fact, an increase in technical and development effort in Colombian agriculture, properly administered, probably would significantly advance the rate of general economic growth.

Japan

The yen proceeds of surplus commodity sales earmarked for economic development amounted to 7.7 and 6.8 percent of the financial resources available for government loans in the 1956 and 1957 fiscal years (40, p. 12). They are a far smaller percentage of gross capital formation, hence there is little basis for estimating the development impact of the surplus commodities, nor of the yen proceeds upon the total rate of development. The amounts involved are too small to have a clear and significant impact. However, the use of the yen proceeds appears to have raised the priorities for certain development projects, thus shifting slightly the balance of effort, and perhaps increasing somewhat the amount of effort.

The major project, 26 billion out of 39 billion yen allocated to development, has been for electric power. The total budget for this activity as of September 1957 was over 165 billion yen; surplus commodity yen were less than 18 percent of the electric power budget. Most of the other projects are more agriculturally oriented, including

the Aichi Irrigation Corporation, an agricultural land machinery corporation (which develops new land), a Settler's Fund, forest development, a beet sugar factory, central wholesale markets, carcass meat markets, meat packing, and a fertilizer project (40, pp. 33-34). Each of these is partly financed by surplus product currency and partly by government or other sources.

The Ministry of Agriculture welcomed Title I agreements because the local currency enabled them to accelerate their timetable of development projects, while the Japanese treasury and financial authorities argued that the implementation of these projects added to inflationary pressures (40, pp. 5 and 34). Local currency funds made it possible for the Ministry of Agriculture to by-pass usual fiscal controls. This, perhaps, is the best evidence that agricultural projects received more emphasis and that the total development effort was probably slightly greater. It also is probable that, had Title I sales to Japan continued, there would have been serious efforts to extend fiscal control to these projects and to make the entire effort an integral part of Japanese official policy, so as to have greater control over inflation inducing programs.

In summary, surplus sales to Japan provided a small temporary increase in electric power and agricultural development, and eliminated the need to reallocate foreign exchange from development purposes to commercial purchase of farm imports during the several poor crop years. Neither of these conclusions is certain, especially the shift in imports, which is quantitatively minor for Japan.

Pakistan

The Title I program in Pakistan is described, primarily, as a commodity program (41), i. e., its primary effect increased (urban) levels of food consumption. This is because the Pakistan Government apparently had pushed the economy beyond its resource base through deficit financing, and because food production goals were not met. Thus, Title I imports were necessary as a counter-inflationary device. Even this large import program was able to absorb less than half of the inflationary influence of the government sector.

Title I imports affected the aggregate development program, their inflow permitting the government to continue to spend in excess of income. Much of the P. L. 480 counterpart funds were permitted to accumulate, especially those earmarked for development. Had this counter-inflationary force not been present, the government would

have been forced to substantially curtail regular expenditures and/or its investments in development, probably along with a rupee devaluation and some kind of consumer rationing.

Under such circumstances, as the Pakistani report indicates (41), the use of Title I funds simply would have added fuel to the inflationary fires. Actually, there were long delays in specifying the projects to be financed and in negotiating the loan agreements. However, by 1961, about 60 percent of the accumulated funds had been disbursed by the U. S. agency, and by June 30, 1962, about 75 percent had been expended (42, p. 11 and 43, p. 19). A substantial amount of the early disbursements were for military and other nondevelopment purposes (2, p. 14). In view of the government's deficit financing of development in the early years of the program, there was little purpose in utilizing these accounts.

To answer the question whether development has been expanded by Title I arrangements one must ask what Pakistan would have done without P. L. 480. They might have curtailed expenditures, or, they might have made adjustments which contemplated more or less continued internal inflation and foreign exchange depreciation. If expenditures were curtailed, either development or regular governmental activities might have been reduced. The Pakistan report argues that it is fruitless to try to resolve this issue. The Pakistan experience does underscore the fact that internal policy and effective, well-balanced efforts are necessary to make P. L. 480 an effective development resource. With serious inflationary pressures and inadequate public administration with respect to budgeting, financing, and fiscal policy, Title I imports become largely a welfare and stabilizing influence rather than a developmental resource, even though there would have been less development in its absence.

The Beringer report (2), however, is a bit more optimistic, suggesting that Title I local currency has shifted the pattern of development activities towards those providing an infra-structure in the economy. Transportation, power development, education and research have been given support, partly because AID personnel gave such projects priority. Beringer writes:

Without such a policy on the part of AID it is likely that the share of resources committed to the intangible infra-structure (education, research, etc.) would have been even smaller (2, p. 15).

India

Since India is the largest single recipient, utilizing 25 percent of Title I shipments and also a country committed to development, it is desirable to appraise the Indian experience to date. A comprehensive review of the P. L. 480 programs in India is underway by Indian economists, as indicated in Chapter I. Meanwhile a hypothetical pilot study and several published articles on the program contribute to an understanding of how the program has functioned in India.

The earliest FAO report (17) is essentially a theoretical discussion, but based upon Indian realities of how and to what extent surplus foods might be utilized for development. It was estimated that between 30 and 50 percent of the external aid might be in agricultural surplus products. The second report, by S. R. Sen (37), looks at Title I as it has affected the planning and administrative operations of the Indian Government, and the plans of the Planning Commission. The third report, by J. G. Crawford (8), draws heavily on the program results in India, while making a general evaluation of P. L. 480.

India has 2 percent of the world's land and 14 percent of the world's population. The per capita income is around \$70 per year. Presently, approximately nine million people are unemployed and another 15 million are estimated to be seriously underemployed. The present food grain consumption is approximately 16 ounces per person per day. The per capita calorie food intake, including P. L. 480 supplies, is about back to prewar levels at around 2,000 calories per day. The population and real income per capita are growing at 2.15 percent per year and 1.3 percent per year respectively. India decided to spur the pace of development by government action in 1951 when it launched its First Five Year Plan. The central idea of planning in India is embodied in what some economists have called the "rolling plan" whereby a 15-20 year perspective plan is combined with five-year and annual plans and then these are adjusted and moved forward over time (38). Since three-quarters of the people were dependent upon agriculture, major attention was devoted to investments and services to facilitate an increase in agricultural output. Favorable weather, among other factors, enabled the major goals of the First Plan to be met or nearly met. Food grain output increased by 22 percent instead of the anticipated 14 percent.

Since India had stagnant exports and a limited capacity to import at the end of the First Plan, a decision was made to rely more heavily

on import-replacing industries which would create the maximum growth potential for the *future* rather than a model which maximized the current rate of growth. The government had made a decision to play a major role in heavy industry. Agricultural development received relatively less emphasis in the Second Plan.

Almost immediately three problems emerged which remained during the Second Plan and influenced a redirection of the Third Plan. First, small crop years brought forth a foreign exchange gap. India signed a three-year Title I, Public Law 480 contract in August, 1956; the food allowed in this agreement was imported in two years and another agreement was drawn up in June 1958. Second, the need for capital equipment imports had been underestimated and, by the second year of the plan, foreign exchange balances approached a low level. Third, population grew faster than anticipated. Instead of the estimated 1.25 percent population growth rate for the 1951-61 period, the population actually grew at 2.15 percent per year. The 1961 census reported 438 million instead of the estimated 408 million people. These three factors placed major burdens on the foreign exchange balances which thereby became a critical and limiting factor. As a result, capital equipment imports were sharply curtailed. Simple miscalculations and a poor harvest had upset the Second Plan. Actual agricultural output increased 3.8 and 2.9 percent per year, respectively, in the First and Second Plans. The experience under the Indian Second Plan dramatized how surplus foods were used to assist India in solving her foreign exchange gap and allowed her to continue her Second Plan without major disaster.

Malenbaum has wisely cautioned against looking at the economic performance of a country such as India only through the degree to which the economic performance plans are fulfilled (28). He contends that when major attention is being given to the implementation of the Plans and expansion of the public sector, important and frequently unnoticed changes take place within the private sector. Planners sometimes write off agriculture as a tradition-bound sector and likewise are skeptical of private entrepreneurs making the appropriate volume and types of investment needed at early stages of growth. It is important to point out that the performance of the Indian private sector has exceeded the planners' estimates while investment and output in the public sector have lagged behind the planners' expectations.

India launched the Third Five Year Plan (31) in 1961 while tak-

ing the higher population growth rate into consideration, and attempting to avoid the inflation which occurred when central bank borrowing was used to help finance the Second Plan. India hopes to raise per capita real income from \$69 to \$80 and to become self-sufficient in food grain production by 1966 through an increase in agricultural output of 33-40 percent or 5.9 percent per annum. India is relying on foreign economic aid to finance \$6.7 billion or about one-fourth of its Third Plan. Of this amount, approximately one-sixth will be received by India in the form of commodity aid.

At the time the Third Plan was being developed, India negotiated and obtained a \$1.3 billion, four-year commitment for Title I commodities from the United States beginning in 1960. On this basis, the Planning Commission was able to integrate these expected receipts into its Third Plan and to calculate the target level of development with these resources as an addition to those of the Indian economy (37, pp. 1033-1034). The 1960 Title I agreement included provisions for an increase in storage and other facilities to accommodate the larger supplies of imported wheat, as well as an increase in domestic fertilizer plants to expand Indian grain production.

By supporting additional development projects, India is taking steps to provide for an expansion of capital at the same time that Title I imports provide additional consumption goods. Crawford, like Rosenstein-Rodan, argues that, for India, the limiting factor on the rate of development is the capacity to import. Export earnings were insufficient to import all the consumption and capital goods needed for development. Crawford points out, however, that cereal imports represented 20 percent of the value of total imports in 1951 and had dropped to 3 percent by 1958, and later to zero. He notes that:

In a very real sense, commercial wheat exporters, in this case principally Australia, have contributed to Indian development through loss of market (8, p. 387).

The foreign exchange saved and the Title I imports financed greater nonfood imports and a larger internal development program. Crawford also suggests that Title I imports are excessive, i.e., they go beyond the point where food contributes *pari passu* to capital expansion. The high ratio of income spent on food insures that the added food is used, but development is less than if nonfood items had replaced the last 10 or 20 percent of the concessional food imports. In other words, P. L. 480 imports can and did substitute effectively for dollar aid to

a point; however, at present levels, India's development would be greater if dollars were substituted for some of the food aid.

This conclusion for the recipient country is only a partial answer, since consideration must also be given to the economic alternatives in the sending country's economy. For example, a 15 or 20 percent reduction in Title I exports to India probably would not be matched with a comparable addition in other foreign aid. If it is as costly *not* to produce a marginal hundred million bushels of wheat in the exporting country as to produce it, then the only dollar savings from a reduced program are the smaller marketing and transportation charges for the exporting country. Or, one could assume that the wheat is either produced and stored, or produced and shipped under P. L. 480. Under these alternatives it probably would cost more to store than to ship.

Thus, Title I shipments to India have:

- (1) helped keep the miscalculations of the Second Five Year Plan from leading to disaster;
- (2) been carefully programmed into the expanded development of the Third Five Year Plan;
- (3) permitted some reduction in commercial imports and diversion of foreign exchange to other imports; and
- (4) increased the welfare level of Indian consumers.

Before leaving this discussion of India it is useful to review a study by Khatkhate (24) of the monetary impact of local currency accumulation. Less than a third of the rupees paid to the U. S. had been disbursed for designated uses, as of June 30, 1962. At first, the deposits were kept in a commercial bank; in the middle of 1960 they were transferred to the Reserve Bank of India—the nation's central bank. Khatkhate, after reviewing the monetary and debt management procedures followed by the Indian government concludes:

. . . the monetary impact of the accumulation of the P. L. 480 deposits with the commercial banking system in India was neutral (24, p. 82).

In other words, the government followed procedures which increased the money supply at the same time as the internal sales of Title I commodities were absorbing money from the economy. Khatkhate continues:

. . . it seems likely that the money supply effect would operate in a reverse gear when the counterpart deposits are withdrawn for spending . . . Such an expansionary impact may be avoided if the Government redeems its debt to the Reserve Bank . . . (24, p. 82).

He also contrasts Indian policy with the Marshall Plan experience in Western Europe:

While in the West European countries, the accumulation of counter-part funds was used to control inflationary pressures through contraction in money supply, in India the contractionary impact was virtually neutralized by the Government debt policy (24, pp. 82-83).

Khatkhate's discussion indicates that P. L. 480 imports have been integrated into a comprehensive development program. At present, it is unlikely that India's use of local currency will provide an additional stimulus to development. If they were to use more of the local currency, there probably would be adjustments in debt management policy, development financing and reserve requirements to neutralize the inflationary effect of the expenditure of local currency.

The evidence of these country studies provides a basis for a number of conclusions about P. L. 480 commodity aid. These are qualified conclusions, inasmuch as they do not consider the effect upon the exports and export earnings of the recipient country; nor the effects on commercial exports of other exporting nations. These are additional problems (30, Chapter VI).

Implications of Commodity Aid for Development

Surplus farm commodities have made and can make a contribution to economic development. The additional development projects may be financed through government budgets for development, through an expansion in bank credit and/or monetary supplies, or through the use of accumulated Title I local currencies.

Similarly, surplus farm commodities have made and can make a contribution to a higher level of consumption and welfare in the recipient country. This may be done by removing rationing more quickly than otherwise would have occurred, through relatively lower food prices, and/or by increasing the gross national product, thus expanding the income available for the purchase of food.

Increases in the rate of development and in the level of human welfare are partially complementary and partially alternative uses of surplus products. The amount of each depends upon the particular circumstances of the recipient country. In both cases, the products are consumed, and in larger amounts than before the program. The important consideration is the way in which the economy has been changed so as to absorb the additional farm products. In general, a flow of products which reduces or eliminates consumer goods short-

ages implies that welfare has been emphasized relative to development. However, this must be modified, since an "acute" shortage would require the nation to reallocate resources (internal and/or foreign exchange) to provide more consumer goods. In this framework concessional imports can safeguard an existing development program by preventing adverse changes over time. The definition of an "acute" shortage, which would require a resource reallocation, is a political and value question, even though it has some quantitative connotations.

The empirical experience cited earlier indicates that one of the questions to be asked is the amount of actual increase in national resources. Concessional imports may be offset by (a) a decline (or lack of increase) in internal production, and (b) a decline (or failure to increase) in commercial imports, both relative to what they would have been in the absence of the program. Formal, theoretical considerations indicate that it is unlikely that domestic production would decline sufficiently, if at all, to offset the concessional imports (11). While arbitrage operations may permit some substitution of concessional imports for commercial imports, international agreements impose some limitation on this process. To the extent that this does occur, the internal price and production effect will be smaller.

Thus, there are several loosely related ways to examine the developmental impact. If local farm production is adversely affected, then the presumption is that there is less development. Empirically, this is much less important than implied in much of the literature. Moreover, as Fisher points out, the adverse effect usually can be offset at small cost by internal programs. Both Israel and Colombia have followed programs which offset some effects of added imports. Secondly, if commercial imports are somehow curtailed, development is enhanced, provided the exchange saved is expended for developmental imports. India and Israel are examples. Thirdly, it is necessary to inquire about the use of the net additional imports. Did they allow modest pent-up demands for goods to be expressed? Did they attend to an increase in demand stemming from additional development projects? Or, did they meet a critical food shortage which would have required emergency action adverse to development? The first of these implies little added development—Japan appears to qualify here, and Israel to some extent. The second implies a major development impact—as in India. The third also implies development but in the negative sense of preventing a decrease, instead of an increase—as Colombia, for wheat, and Pakistan, but this judgment must remain more uncertain.

Finally, a large volume of additional imports can force the internal development program to include lower priority items. Part of this may be due to port, storage, and marketing facilities to take care of additional imports—again India, and wheat to Colombia. Such shifts in priorities also may be due to the use made of local currency, to be discussed.

Development programs can be expanded through the use of P. L. 480 provided they draw on underutilized capacity and unemployed or underemployed labor. This may be done directly through food-for-work programs such as the Title II economic development projects (30, pp. 63-65). However, it is not necessary to revert to such local barter programs to implement this type of a labor intensive program. Within a complex economy, even within a comprehensive economic plan, it is possible to increase the volume of development and number of labor intensive projects, and thus, expand the rate of capital formation through utilizing unused labor resources.

The conclusion, then, is that concessional imports are likely to have both immediate welfare and developmental impacts. The balance between these two in favor of development is likely to be larger in countries with an effective public administration and a well conceived development program. It is likely to be smaller where the central government does not have strong support and/or has values which give high priority to current consumption. In such nations, the balance of decisions are likely to make it difficult to sacrifice present goods for an added flow of future goods. There are also likely to be variations in accordance with local resources and climatic conditions, nations with limited agricultural resources being more apt to use concessional imports more effectively.

Implications of Local Currency for Development

Concessional imports withdraw currency from circulation and thereby have a deflationary effect in the recipient country, to the extent that they are additional resources. Spending this currency has an inflationary effect. Neither of these effects by itself necessarily provides an addition to development. However, it is far easier to guide commodity imports into development enhancing activities than local currency. In fact, local currency is an effective tool only under very limited conditions. These circumstances are unlikely to appear in a nation with skillful monetary authorities. In a nation with sophisticated

monetary, fiscal and development authorities, with or without a central planning agency, the programming of additional food resources provides an opportunity to inaugurate new developmental activities without adding to the internal inflationary pressures, at least so far as food is concerned.

Money or credit can be created and allocated to the building of schools, roads, irrigation canals, factory buildings and many other developmental activities, knowing that a considerable part of the income created as unemployed labor is employed will be spent on additional food. P. L. 480 local currency may be used instead of expanded credit or new money, but it plays no special, strategic role. Whatever the means of financing, part of the increase in demand will be for non-P. L. 480 food items and for nonfood commodities. Title I local currency is simply an alternative means of financing development, not a development resource. Because of the interest charge and rules imposed by the U. S. government, it usually is more cumbersome than the alternative internal financing procedures.

In nations unable or unwilling to develop and follow such comprehensive programs, there may be public or semi-public agencies dedicated to development. Local currency loans to such organizations, or to regular units of government, may be the only way in which that nation's developmental activities can be expanded, in a given institutional setting. Budget authorities may approve or be indifferent to such arrangements, yet refuse to permit such development entities to have access to additional general government funds.

The use of local currency is not a new issue in U. S. foreign policy. The local currency accumulated via P. L. 480 sales, except for ownership, differ only in minor technicalities from counterpart funds accumulated in Europe under the Marshall Plan. The use of counterpart funds was discussed at considerable length in this operation, and different decisions were made in different countries. The issues argued then are similar to those now argued in local currency use.

Marshall Plan aid provided countries of Western Europe with commodities which were sold in the receiving nations. Counterpart funds derived from Marshall Plan loans, 15 percent of the total aid, were completely at the disposal of the recipient country. The other 85 percent of the aid was in the form of grants, and 95 percent of these counterpart funds were owned by the recipient country, but required U. S. approval as they were used. The remaining 5 percent was owned and utilized by the U. S. on its own initiative.

Differences of opinion developed between the U. S. and the several European countries as to the use of these funds. Great Britain used the entire amount for debt retirement, arguing that their monetary and fiscal policies were already carefully geared to the maximum recovery effort, and that any other loan or expenditure use of counterpart funds would be inflationary, requiring undesirable cutbacks in other government programs or leading to disruptive price inflation. In France and West Germany, nearly all the counterpart funds were utilized for production purposes. Private savings were inadequate and capital markets were disorganized; thus, the counterpart funds were a means of mobilizing capital resources. By allocating them to lines of production providing rapid increases in output, price stabilization efforts were enhanced. In Greece, Turkey, and Austria, about half of the counterpart funds went into debt retirement, and the remainder into production purposes. It is argued, for Greece at least, that the counterpart fund enabled the United States to resolve locally unresolvable decision (because of the left-right split), and to make a concrete contribution to recovery (3). These issues and contrasts in internal policy repeat themselves when P. L. 480 local currencies are examined.

An underdeveloped nation, embarked upon an aggressive, skillfully managed development plan, would increase economic activities to coincide with the importation of P. L. 480 commodities. It would make economic and political decisions as to how much additional effort in development is possible. As the local currency accumulates, subsequent to importation, any further increase in the development effort would be inappropriate. In fact, unless there was a continuing flow of Title I commodities, some cutbacks likely would be necessary. Israel appears to have utilized a major part of the local currency to support the general development program, foregoing the usual budgetary and monetary means of financing the addition to its development program. The interest charge on Title I currencies and the requirement of U. S. approval would induce many governments to prefer other, interest-free ways of increasing money and credit supplies. Thus, only a third of the Indian rupees have been utilized, a smaller proportion than in the other four nations examined.

On the other hand, budget and loan procedures can be earmarked for certain purposes within the country (30, pp. 43-44), and to certain national agencies. In such cases, there are internal pressures to use the funds so as to expand the relevant sectors more rapidly than would otherwise be possible. In Japan and Colombia, a number of agricul-

turally related projects received higher priority through the use of P. L. 480 local currency. This implies either (a) greater internal inflationary pressures, or (b) counteracting cutbacks in other activities. The necessity for either of these alternatives may be mitigated, however, if excess industrial capacity and under-employed labor can be utilized and if the development program had *not* been increased at the time concessional imports began to be received. This situation seems to apply to Colombia even though there was a substantial monetary inflation.

Finally, it is necessary to reemphasize that local currency is not a developmental resource. It can be used to by-pass institutional, monetary, and fiscal rigidities, but it also is a dangerous tool, capable of promoting strong inflationary forces. Inflation, by itself, can both stimulate and warp the development process. Large accumulations of foreign currency are developing in a number of countries. Such currencies, owned by the U. S. Government, are likely to pose political problems between the U. S. and the relevant country (29). The arbitrary character of these funds should be recognized; they should not be treated as if they were dollars, and in some cases should be granted back to the local government or wiped out completely.

Chapter VI — Summary and Implications for U. S. Policy

THE SHIPMENT OF AGRICULTURAL commodities under P. L. 480 and similar programs represented a fourth to a half of U. S. economic aid to less-developed nations in recent years. There has been much debate as to whether these shipments should be considered as development aid or welfare related programs—which may have negative effects on agricultural development. An examination of the program's impact in several countries indicates that farm products can provide useful economic assistance, but they do not do so automatically. The internal policies of the recipient nations can do much to compensate for or override the possible adverse price effects of additional imports. This may be done through expanding purchasing power via new development expenditures, through government guarantees of favorable or more stable prices, through other activities favorable to farm production, or perhaps by removing existing controls to permit a higher level of consumption. It is also possible that, within the framework of the individual P. L. 480 agreement, a recipient nation may find it possible to reduce commercial imports, thereby reducing the volume of additional imports and increasing the amount of industrial goods and non-surplus farm products imported.

The P. L. 480 program has persisted and grown despite its early emphasis as a temporary surplus disposal program. A substantial number of less developed nations have considered it in their interest to participate and several have signed four or more separate sales agreements. It does not necessarily follow from this that these nations consider that the programs contribute to their economic development; they simply may consider it as a low cost means of procuring food supplies for the better nutrition of their burgeoning population.

The economic events which led the United States to inaugurate this program in 1954 and to expand it in ensuing years are not necessarily limited to a desire for economic development among the poorer nations. In fact, the program became one of the ways in which the structural weakness of the national economy (not of agricultural policy alone) could be made less onerous. These events are likely to be repeated in other advanced nations.¹⁵ Several western European coun-

¹⁵The economic forces leading to growth in European agricultural production and to surpluses of some commodities are reviewed in (7), especially pp. 159-183.

tries, and the European Common Market, look upon overseas disposal as a convenient tool of policy. Subscriptions to the World Food Program reflect the same forces as those underlying the P. L. 480 program. Advances in agricultural productivity similar to those of the United States are well underway in the advanced nations—based upon reduced price uncertainty, improved technology, better management, more capital, more nonfarm produced inputs, and farm consolidation. These additional supplies move to markets where price and income elasticities are moderate and declining as economic growth pushes up individual incomes. The combination of low price elasticities and low downward supply responses threaten to provide lower farm prices and incomes. In many countries of Western Europe there is good reason to expect a political response which supports and continues price policies which bring “surpluses” into being; in some commodities, they already exist.

These countries too, have economic and humanitarian reasons to send surpluses overseas, to aid development and improve nutrition. Disposal overseas is a less costly solution to surplus problems than extended storage, or diversion to lower value uses; if the farm products can be useful to other countries, so much the better. Fundamental restructuring of internal policies (in the United States or any country) is difficult, and appropriate solutions usually require considerable time. This is particularly true in agriculture because of the age and lack of alternative opportunities for many farmers, the geographical distribution of production units, and the many political and social problems associated with an increase in rural-urban migration, or with attaining a higher rate of U. S. economic growth.

Likewise, there are structural rigidities in the recipient or potential recipient countries. Agriculture tends to lag behind population growth and economic development in many countries, and to barely keep in step in others. A substantial effort is needed in many underdeveloped countries if the agricultural sector is to permit and participate in sustained growth.

The convenient marriage which P. L. 480 represents stems from the substantial resources which developed countries must commit in order *not* to produce certain commodities, while the less-developed world hesitates to commit substantial resources to *expand* production of the same or similar commodities. If the world is short of food and prepared to ensure that adequate supplies are made available, then the resource cost of producing additional supplies may well be less, in

the short run, if produced in presently developed nations and distributed at low or zero prices where needed (7).

Whatever the merits of a temporary program, it does have both short-term and long-term difficulties. First, the possibility of P. L. 480 supplies at low cost may postpone making fundamental structural adjustments both in sending and in receiving countries. The economy of each is less strong than it might be. Second, the commodities in surplus may not be the commodities most needed for development or for better nutrition. P. L. 480 has done little to reduce the apparent substantial protein deficiencies especially prevalent in South Asia. Third, for the developed countries at least, the process of structural adjustment is in operation, and, there is no assurance that surplus commodities will be available for an indefinite period. Fourth, with the high rate of population increase in underdeveloped nations, it seems unlikely that the developed nations alone can continuously expand food production to feed them. The local country almost certainly must supply the majority of the necessary increased food needs.

Another question relevant to U. S. policy is whether P. L. 480 allocations are a net addition, a partial addition or a substitute for foreign economic assistance. This issue cannot be resolved precisely, since it requires a judgment on the nature and pattern of political decisions. Yet an evaluation of P. L. 480 as an instrument of U. S. economic assistance to less developed nations will be more favorable if it is an addition rather than a substitute for dollar assistance, both from the standpoint of the developing nations, and of those Americans who consider development abroad as an important policy goal. If P. L. 480 is a substitute for foreign aid dollars, than they must be as effective in stimulating development abroad as dollar aid (or non-surplus commodities) would have been. It is clear from the examination of individual country programs that this is not the case, or where it seems to have been true (as in Israel) it is because the agreements and/or the previous import patterns permitted trade diversion and foreign exchange savings.

If the availability of P. L. 480 shipments are largely additions to economic assistance, the criteria are less rigid. While one might hope that the farm commodities were as good as foreign aid dollars, a lower level of accomplishment still would justify continuance of the program. This is because there are many nations which are doing little more than keeping pace with population growth. For them, every small addition to growth is needed. There seems to be good reason to consider

P. L. 480 as additional U. S. economic aid in the short run. But since 1954, the program has become a continuing feature of U. S. policy. There are indications that foreign aid appropriations would fare better in Congress if part of the funds were used to purchase U. S. farm products for export. However, if there were a single foreign aid appropriation, there most probably would be efforts to earmark a substantial amount for farm products (as occurred in the early 1950's when Sections 402 and 550 were inserted). Thus it is a matter of political judgment as to whether U. S. foreign economic assistance today, exclusive of farm commodities, is larger than it would have been if appropriations had been made entirely under one authorization.

Finally, attention must be given to the question of whether P. L. 480 inhibits development through adverse effects upon agriculture. The evidence here is equivocal. Additional imported farm products have helped prevent consumer protests and permitted an expansion of industry without necessarily a concomitant, supporting expansion in internal agriculture and marketed supplies. This is development, even if it is one-sided, and may contain a fatal weakness. (Development theory is not sufficiently advanced to permit a final judgment.) In some countries agricultural development appears to have been discouraged as a consequence of P. L. 480 imports. In other countries P. L. 480 imports have either become an agricultural development resource, or have been neutralized through internal policy adjustments—thus encouraging or not discouraging the simultaneous development of local agriculture.

One of the more important functions of P. L. 480 programs has been to provide agricultural products to meet shortfalls in production caused by unfavorable weather, as in India, Japan and Pakistan. In a sense, the "unplanned" use of stocks has been as important as the "planned" use in long-range development projects. Perhaps countries should plan their agricultural development so that no imports would be required, but production in some of these countries will inevitably fall short of the goal. The U. S. as a residual supplier can then meet the emergency needs.

In summary, P. L. 480 programs should be developed, programmed and evaluated within the framework of each nation's total development program. Local administration and policy often, but not always, can make a development asset out of P. L. 480 shipments. Recipient countries can insulate their farmers from adverse effects of such ship-

ments at relatively small costs, unless the program is large relative to their resources and development program. In some cases, a substantial cutback in the program may be a means of inducing more concern with local agriculture and a stronger emphasis on and better administration of agricultural development programs. If development is to be a major feature of future P. L. 480 programs, then U. S. officials responsible for the specific country programs need to plan P. L. 480 commitments more carefully into the total development program in cooperation and consultation with development economists in the local government and in the U. S. AID teams. Only in this way can an integrated approach to development be attained. Successful development is sufficiently difficult to attain, that it must not be handicapped by partial programs and conflicting policies.

LITERATURE CITED

1. Barlow, F. D. Jr. and S. A. Libbin (February 1963). Contribution of Public Law 480 to international economic aid and development. For. Agri. Trade. Econ. Res. Ser. USDA. pp. 6-18.
2. Beringer, Christoph (February 1963). P. L. 480 and economic development: A case study of West Pakistan. Karachi: Institute of Development Economics. mimeo, 79 pp.
3. Brown, William A. and Redvers Opie (1953). *American Foreign Assistance* Washington, D. C. The Brookings Institution. pp. 186-189, 242-244.
4. Campos, Roberto De Oliveira (1961). Inflation and balanced growth, in *Economic Development for Latin America*. Howard Ellis and Henry Wallich (eds.). St. Martin's Press. New York, p. 91.
5. Colombia, Instituto de Fomento Algodonero, Departamento de Investigaciones Economicas (1961). Colombia—Algodon y Oleaginosas—Economia y Estadistica, 1960, Bogota, p. 9.
6. Colombia, Banco de la Republica, Departamento de Investigaciones Economicas (1961). Estadistica del Valor de la Produccion a Precios Corrientes de Cada Ano, 1950-1960. Bogota, unpublished.
7. Coppock, John O. (1963). *North Atlantic Policy—The Agricultural Gap*. The Twentieth Century Fund, New York, 270 pp.
8. Crawford, J. G. (1963). Using surpluses for economic development. *Proceedings of the Eleventh International Conference of Agricultural Economists*. Oxford University Press, London, pp. 377-395.
9. Farnsworth, Helen C. (1961) Defects, uses and abuses of national food supply and consumption data. Food Research Institute Studies, II: 179-201.
10. Fellner, William et. al. (1961). The problem of rising prices. OEEC, 75 pp.
11. Fisher, Franklin M. (1963). Food surplus disposal, price effects and the costs of agricultural policies in underdeveloped countries: A theoretical analysis. Report 6307, Econometric Institute, Netherlands School of Economics.
12. Food and Agriculture Organization of the United Nations (1962). Agricultural commodities—projections for 1970. Rome 189 pp.
13. _____ (1961). Development through food: A strategy for surplus utilization, Rome, 122 pp.
14. _____ (1960). Monthly Bulletin of Agricultural Economics and Statistics 9:
15. _____ (1962). Nutrition and working efficiency. Basic Study No. 5. Rome, 47 pp.
16. _____ (1961). The state of food and agriculture 1960. Rome, p. 151.
17. _____ (1955). Uses of agricultural surpluses to finance economic development in underdeveloped countries; A pilot study in India. Commodity Policy Studies No. 6. Rome, 65 pp.
18. Ginor, F. (1961). *Analysis and assessment of the economic effect of the U. S. Public Law 480 Title I Program in Israel*. Bank of Israel, Tel Aviv.

19. Goering, Theodore J. (1962). Public Law 480 in Colombia. *Journal of Farm Economics*, XLIV: 992-1004.
20. Goering, Theodore J. and Lawrence Witt (1963). United States agricultural surpluses in Colombia: A Review of Public Law 480. *Mich. Agri. Expt. Sta. Tech. Bul.* 289. 52 pp.
21. Holton, Richard (1960). Changing demand and consumption, *Labor Commitment and Social Change in Developing Areas*. Wilbert Moore and Arnold Feldman (eds.), Social Science Research Council, New York, pp. 201-216.
22. International Monetary Fund (1963). *International financial statistics*. XVI, Washington.
23. Kahn, A. E. (1962). Agricultural aid and economic development: The case of Israel. *Quarterly Journal of Economics*. LXXVI: 568-591.
24. Khatkate, D. R. (1963). Money supply impact of national currency counterpart of foreign aid: An Indian case. *The Review of Economics and Statistics*. XLV: 78-83.
25. Kuznets, Simon (1961). Economic growth and the contribution of agriculture: notes on measurement. *International Journal of Agrarian Affairs*, III: 56-75.
26. _____ (1962). Quantitative aspects of the economic growth of nations. *Economic Development and Cultural Change*. X: Part II, 92 pp.
27. Leibenstein, Harvey (1957). The theory of underemployment in backward economies. *Journal of Political Economy*. LXV: 91-104.
28. Malenbaum, Wilfred (1962). *Prospects for Indian Development*. The Free Press. New York, 328 pp.
29. Mason, Edward S. (1960). Foreign money we can't spend. *Atlantic*. CCV: 79-86.
30. Menzie, Elmer L., Lawrence W. Witt, Carl K. Eicher, and Jimmie S. Hillman (1962). Policy for United States agricultural export surplus disposal. An interregional publication for the state agricultural experiment stations. *Arizona Agri. Expt. Sta. Tech. Bul.* 150, 111 pp.
31. Reddaway, W. B. (1962). *The Development of the Indian Economy*. Richard D. Irwin, Inc., Homewood, Ill. 216 pp.
32. Rosenstein-Rodan, P. N. (1963). Professor, Massachusetts Institute of Technology, Cambridge, Massachusetts. Personal correspondence, March 19.
33. _____ (1962). Determining the need for and planning the use of external resources organization, planning and programming for economic development. U. S. Gov't Printing Office, Washington, D.C. p. 68.
34. _____ (1961). International aid for underdeveloped countries. *Review of Economics and Statistics*, XLIII: 107-138.
35. Rosovsky, Henry and Kazushi Ohkawa (1963). The indigenous components in the modern Japanese economy. *Economic Development and Cultural Change*. IX: 476-501.
36. Schultz, T. W. (1960). Value of U. S. farm surpluses to underdeveloped countries. *Journal of Farm Economics*. XLII: 1019-1030.

37. Sen, S. R. (1960). Impact and implication of foreign surplus disposal on underdeveloped economies—The Indian perspective. *Journal of Farm Economics*. XLII: 1030-1042.
38. _____ (1962). *The Strategy for Agricultural Development*. Asian Publishing House, Bombay. 244 pp.
39. United Nations (1962). The United Nations development decade. New York, 125 pp.
40. United Nations, Economic Commission for Asia and the Far East (1958). A note on the utilization of agricultural surpluses for economic development in Japan. Bangkok. mimeo, 46 pp.
41. _____ (1961). A note on the utilization of agricultural surpluses for economic development in Pakistan. Bangkok. mimeo, 66 pp.
42. U. S. Congress, House (1962). The 16th semiannual report on activities carried on under Public Law 480, 83rd Congress. 87th Congress, 2nd Session. House Document No. 526. 95 pp.
43. _____ (1963). The 17th semiannual report on activities carried on under Public Law 480, 83rd Congress. 88th Congress, 2nd House Document No. 79. 126 pp.
44. United States Department of Agriculture (1961). The Japanese agricultural economy. Washington, D. C., pp. 25-26.
45. Witt, Lawrence and Richard Wheeler (1962). Effects of Public Law 480 programs in Colombia: 1955-62. Dept. of Agri. Econ., Mich. State Univ., E. Lansing, Mich. and Dept. de Economia y Ciencias Sociales, Facultad de Agronomia, Universidad Nacional de Colombia, Medellin, Colombia. Mimeo, 166 pp.