FOOD FOR WORK PROGRAMS: AN ANALYSIS OF CONTRIBUTIONS AND LIMITATIONS

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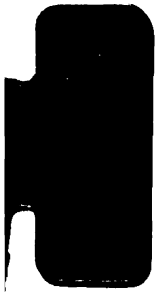

THESIS

FOOD FOR WORK PROGRAMS: AN ANALYSIS OF CONTRIBUTIONS AND LIMITATIONS

by

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FOOD FOR WORK PROGRAMS: AN ANALYSIS OF CONTRIBUTIONS AND LIMITATIONS

INTRODUCTION

The Problem at Hand

This paper focuses on one section of the Food For Peace program. Essentially, it emphasizes combining surplus labor and food in a work program to accelerate development and expand future income flows. An analysis of potential contributions and limitations of food for work programs requires raising a number of specific questions.

The problem at hand for this section of the Food For Peace program is to favorably induce: changes in consumption patterns and human welfare, improvements in human dexterity and fitness, development of physical capital, and mobility of resources. The problem for food for work programs includes uniting surplus labor and food to effectively achieve these goals.

Evaluation of potential contributions and limitations of a payment-in-kind program presents a significant challenge. Benefit-cost analysis can serve as a tool for evaluation. Because goals and values differ, an evaluation of the contribution to the development effort may appear arbitrary. But these evaluations remain useful to aid in comparing and judging food for work program results.

The Tunisian Experience

The relatively successful food for work program in Tunisia often provides particularly valuable experience to draw upon. Public Law 480 assistance to Tunisia began in April of 1958 following crop failures,

departure of French personnel, and general economic crises.[1] Tunisia's development to 1958 depended heavily upon French personnel, demand of the French market in Tunisia, and the demand of the French market in Europe for Tunisian exports. While the loss of these significant contributions decelerated growth trends, crop failures perpetuated the crisis. The works program partially filled this gap. Since water shortages occur for agriculture and household use, projects were selected to conserve and develop new water sources. Other projects included an extensive fruit tree planting program, road repair, and fire break construction.[2]

THE SETTING FOR FOOD FOR WORK PROGRAMS

A Brief History of P.L. 480

Availability of food commodities for foreign assistance programs stems from the United States' domestic price support program. Due to the international importance of United States farmers during and immediately following World Wars I and II, investments and resource allocations for domestic agricultural production exceeded domestic peace time requirements. By price supports to provide "fair" farm prices, domestic surpluses of certain agricultural products accumulated causing burdensome inventories. Prevailing social desires induced action to abate government surplus stocks by disposal to needy countries. Public Law 480 served as the tool.

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[1] Menzie, Elmer L., Lawrence W. Witt, Carl K. Eicher and Jimmye S. Hillman, Policy for United States Agricultural Export Surplus Disposal, Tech. Bul. 150, The University of Arizona, College of Agriculture, Agricultural Experiment Station, Tucson, Arizona, p. 64.

[2] Ibid.

Public Law 480 emphasized United States reduction of surplus food inventories, then gave emphasis to food aid, and to the humanitarian contribution to underdeveloped countries. The Agricultural Trade Development and Assistance Act (labeled P.L. 480) became law on July 10, 1954 as a temporary measure for export disposal of surplus food stocks. Even with surplus disposal, domestic agricultural prices and production did not approach equilibrium. Thus, the United States government accepted the P.L. 480 program as something more than temporary. Periodical extensions of P.L. 480 have occurred along with substantial increases in financial authorizations for the program. The next extension will be considered in 1966.

Public Law 480 includes four titles involving both surplus disposal and varied forms of foreign assistance.[3] Title I facilitates commodity sales at world prices to friendly countries who pay in local currency. Title II authorizes surplus commodity grants for disaster relief, special feeding programs, work projects and economic development. Food, in exchange for work, as an economic and community development technique, is set forth in Section 202 of Title II. Title III authorizes: domestic distribution; barter; and distribution of surplus commodities to foreign countries by church groups and by voluntary organizations such as CARE, UNICEF, and UNRWA. Title IV sanctions long term dollar loans at low interest rates to purchase food and fiber.

As P.L. 480 emphasis changed from surplus disposal to further concern for underdeveloped societies, the program became known as the Food For Peace program. In 1959, President Eisenhower discussed a Food For Peace program in a message to Congress and Dr. Don Paarlberg was appointed White House

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[3] Ibid., pp. 33-55.

coordinator. To this emphasis, both Presidents Kennedy and Johnson added momentum. President Kennedy, in a campaign speech at Sioux Falls, South Dakota, stated: "We must begin a new expanded Food For Peace program including a permanent food development project where our surplus food and fiber are used to supplement the agriculture of other lands, to combat hunger, to supply food reserve banks and to feed workers engaged in building roads, digging wells, and clearing land."[4] President Johnson stresses improvement of health and nutrition for recipients.

Countries accept P.L. 480 assistance for varied reasons. But the foremost reason may be that this assistance supplements limited resource supplies at minimum cost. Surplus food can serve almost as a free resource.

P.L. 480 Commodity Grants in Review

Donation programs to qualified governments are encompassed by Title II of P.L. 480. Initially this title provided emergency relief aid on a temporary basis to disaster areas. In 1960 the title was amended to include donations as partial payment to workers involved in labor intensive economic development projects. The programs under this amendment are the subject of this paper.

Governments usually receive donations for emergency relief, but ultimately the individuals in the disaster areas benefit from the program. For example, the Food For Peace effort in Algeria helped four million people who were uprooted by the long war of independence.[5] In addition, disaster relief assisted Korea, the Ryukyu Islands, the drouth-stricken

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[4]National Farmers Union, Working for Peace, Department of Education, National Farmers Union, Denver, Colorado, p. 18.

[5]McGee, Senator Gale W., Personnel Administration and Operations of Agency for International Development, Senate Document No. 57, 88th Congress, 2nd Session, November 29, 1963, p. 19.

countries in the Near East and several African countries, including the Congo, following the political upheaval.[6] These government-to-government programs also improve the diets of pregnant mothers, pre-school children and school children, and promote technological advance by emphasis on research programs.[7]

Food for work programs contribute directly to employment, capital formation and economic development. The projects include different forms of capital formation such as: clearance and construction of irrigation ditches, road construction, land reclamation, and school construction. Plans for these projects are submitted by the local government for approval. The United States then supplies, to the designated agency in the host country, a certain portion of the wage in the form of a food grant. These capital creating projects are locally administered with the recipient government paying the remainder of the wage not included in the food grant. What little capital and machinery or hand tools are necessary must be provided by the recipient government. Where underemployment and unemployment problems are serious, provisions are made for rotation of employment so that all qualified laborers receive an opportunity for program participation.

Some general development goals of recipient countries might include inducing employment opportunities, land reform, eliminating malnutrition and starvation, creating physical capital, improving human capital, producing necessary consumption items, and community development. These desires may be mutually compatible, yet they may not all be fulfilled by one program. Maximum benefits from the program would result by

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[6] Menzie, et al., op. cit., p. 48

[7] Johnson, Robert W., Operation of the P.L. 480 Program in Brazil, Development and Trade Analysis Division, Economic Research Service, USDA, ERS-Foreign 59, November 1963, pp. 9-10.

simultaneously fulfilling the greatest number of goals. Specification of goals necessitates program scale and term considerations. When capital formation is the primary goal, projects are terminated at completion of the project. While food for work programs to assist in making the transition from a rural to urban society are short run experiences for individuals and groups, these programs are often long run components of national plans.

THEORY AND EFFECTS OF FOOD FOR WORK PROGRAMS

Experience of sufficient duration to thoroughly test theory related to food for work programs is not yet available. Even so, the information to date about food for work programs does provide a beginning for the theory.

The Effects of In-Kind Wage Payment on Consumption Patterns and Consumer Welfare

Changed consumption patterns which result from food for wages programs affect both economic and social conditions. Thus, an evaluation of the program impact on consumption patterns is one way to evaluate the success of a food for work program.

To date food for work projects have included but one or two commodities, for example wheat and bulgur. It may become desirable in the future to provide other food items and nonfood nutritional supplements such as vitamins. Cultural attitudes and practices will affect the success of these efforts. Mead presents a comprehensive list of criteria, or a code to formally describe people's dietary patterns.[8] This code discusses food: 1) in physiological sensory terms; 2) in terms of its chemistry; 3) in nutrition terms; and 4) in cultural terms such as: agricultural, economic,

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[8]Mead, Margaret, Food Habits Research: Problems of the 1960's National Academy of Sciences, National Research Council, Washington, D. C., Publication 1225, p. 22.

socio-cultural, educational, food handling, and dietary patterns.

Price, income, and cross elasticities of demand reveal consumer desires. By having some idea of these elasticities, program authorities may arrange payments to fulfill program goals and consumer preferences. Income elasticities of demand for food reflect consumer desires for food versus nonfood items. Stevens states that "the income elasticity of demand for total food in most low-income nations ranges from .7 to .9, i.e., for every 10 percent increase in income there is a 7 to 9 percent increase in the value of food consumption."[9] Cross elasticities of demand reveal consumer desires for related commodities that are complements or substitutes such as rice and wheat.

Some general questions concerning consumer behavior can be asked in relation to the food-for-work program. For example, do payments in wheat coincide with normal expenditures for wheat? If they are greater than normal expenditures, two further questions arise. First, does this reduce real earnings of the worker and would his welfare position improve if a cash payment were substituted for the excess wheat? Second, how much excess wheat can be issued before the workers sell it (termed leakage)? Another issue is related to the costs which are associated with payment-in-kind operations. Are these payments cumbersome to initiate and equally cumbersome to store and use in the recipients' daily consumption activities? Several interesting phenomena relative to these questions were discovered in a sample survey of the works program near Comilla, East Pakistan:

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[9]Stevens, Robert D., "Rates of Growth in Food Requirements During Economic Development," Unpublished paper, August 19, 1965, pp. 2-3.

> Even though a majority of the laborers in the sample did not receive partial payment in wheat, all were asked whether or not they would object to part payment in wheat in the future. The bulk of them, five-sixths, stated they would be willing to work under such payment arrangements. Thus, if adequate facilities for storing and crushing wheat were available in the rural areas, greater quantities of wheat might be used for payments, if necessary.[10]

The following discussion provides an analytical technique to evaluate the utility of payment-in-kind.

The form of the wage payment consisting of the commodity-cash ratio influences worker incentives and the success of work projects. Payment techniques include all cash, all food for wages, food stamp payments or some combination of the three.

Theoretically consumer preferences with respect to payment techniques can be analyzed by using an indifference map. Southworth applied this analysis to food subsidy measures in 1945 and the following analysis draws upon his techniques.[11]

Figures I and II present food consumption, measured in an appropriate physical volume, on the horizontal axis and present income, measured in an appropriate monetary unit, on the vertical axis. The income measure is not necessarily actual money income but it can include the money value of food and nonfood items produced and consumed at home. The diagonal straight lines (aggregate price lines or income constraints) determine price by their slope while their intersection with the vertical axis determines income to be spent on either food or nonfood consumption. The indifference curves (curved lines) connect a series of points where joint consumption of food and nonfood items is considered equally desirable. Where an indifference curve is tangent to a price line, the individual attains maximum utility for that specific income. If prices are assumed constant and unchanged

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[10] Khan, Akter Hameed, Director, An Evaluation of the Rural Public Works Programme, East Pakistan, 1962-63, Pakistan Academy for Rural Development, Comilla, East Pakistan, October 1963, p. 57.

[11] Southworth, Herman M., "The Economics of Public Measures to Subsidize Food Consumption," Journal of Farm Economics, February 1945, Vol. XXVII, pp. 38-66.

Figure I. Effects of a flexible work program payment on consumption of one family

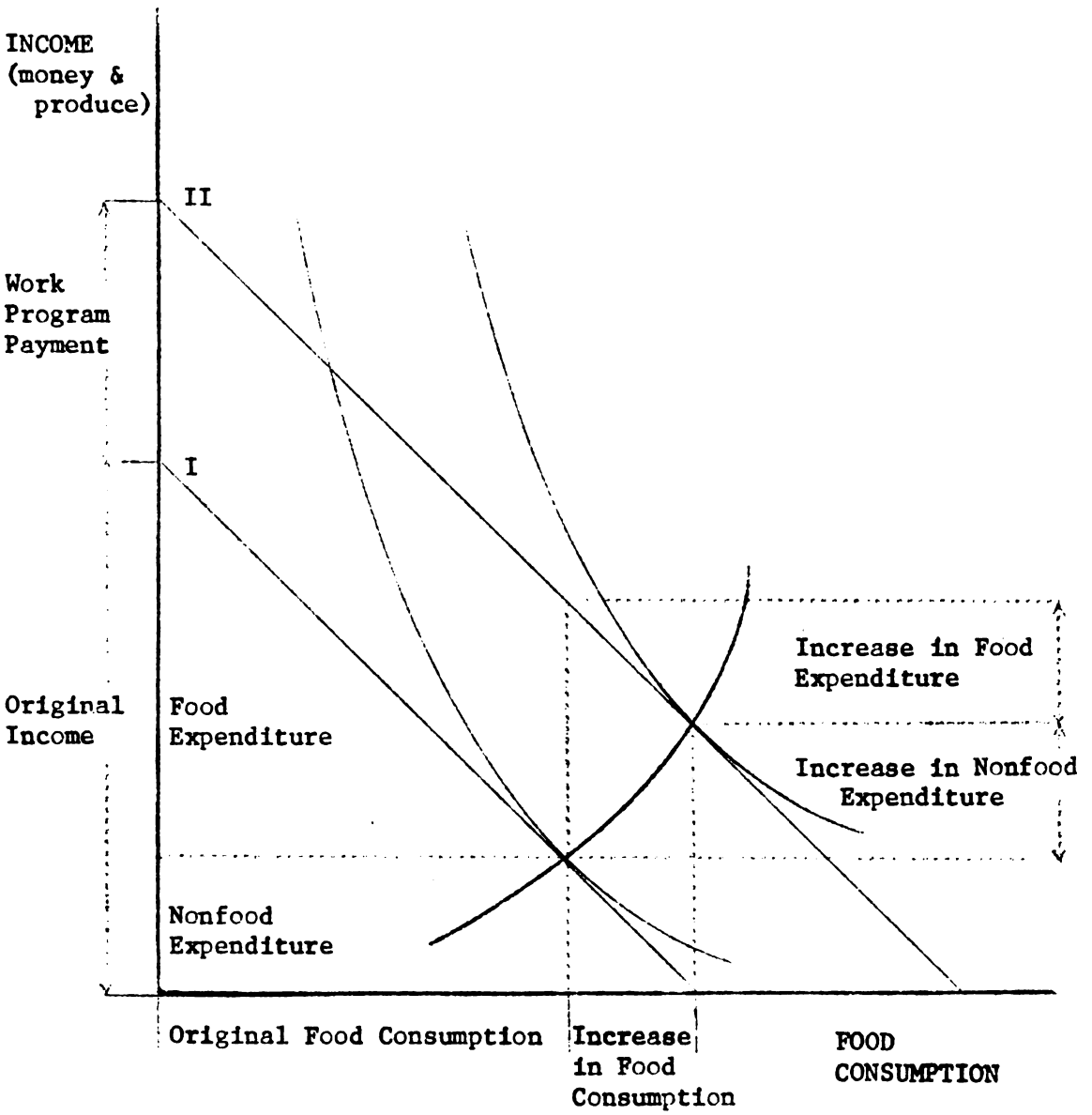
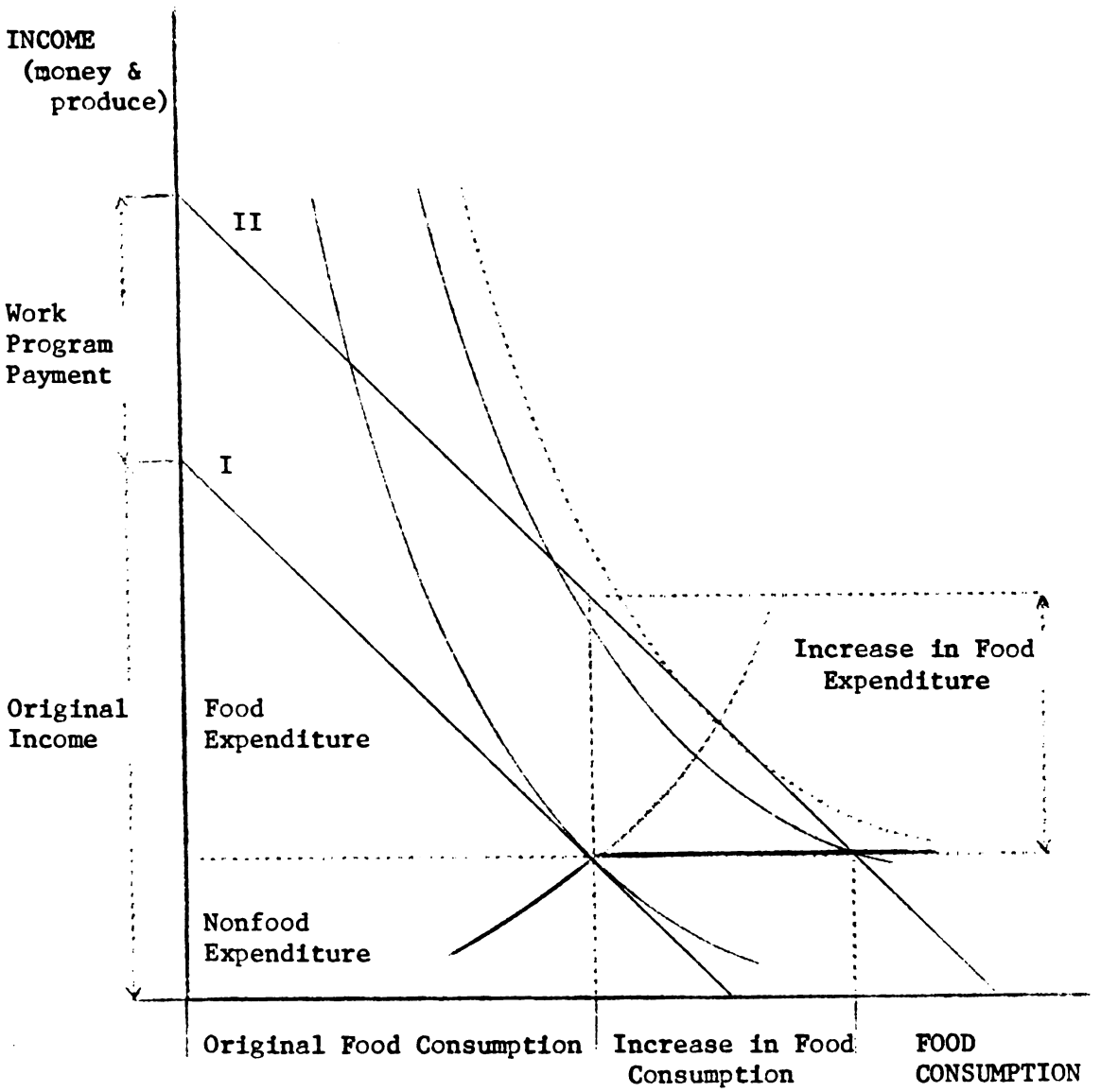


Figure II. Effects of a nonnegotiable food payment on consumption of one family



by the works project, price line II, resulting from an increase in recipient income due to the works project, will be parallel to price line I. Also assume that the work project payment amounts to the same increase in income whether the payment is by cash, payment-in-kind, food stamp or some combination of the three.

Food and nonfood expenditures as a portion of original income are measured on the vertical axis. The relative position of the indifference curves with respect to the axes determines the allocation of income to food and nonfood expenditures. Thus in low per capita income economies, nonfood consumption is found to be substantially less than food consumption, as indicated by the relatively low position of the indifference curves on the indifference map.

An income-food consumption path drawn through the tangency points, provides a measure of the income elasticity of demand for food. Increases in slope of this path indicate that income elasticity of demand for food declines as income increases. There is nothing unique about this graphical presentation, however, the general characteristics probably are valid. For simplicity it has been assumed that three-fourths of the original income is spent on food while one-half of the additional income is spent on food. The additional income due to the work program payment represents a 50 percent increase in income. After this program payment and with freedom to spend income as the recipient desires, as in Figure I, food expenditures represent two-thirds of total income.

This static analytical model can be extended to determine how much food consumption increases because of the food for work project. For a cash payment (Figure I) both food and nonfood expenditures increase. Where production does not expand to meet this increased demand, prices will rise

causing income and substitution effects.[12] P.L. 480 commodities may partially fulfill this increased demand for food, but there is no assurance that the food purchased will be P.L. 480 commodities. Likewise, if payment is in kind and recipients either exchange the food for other food and nonfood items or sell the food, the analysis will be similar. Again the recipient's increased food consumption will not necessarily consist of the P.L. 480 commodity but the commodity does flow through the market to other consumers.

Stringent control by food stamps or by not allowing trade or resale of payment-in-kind commodities will yield the conditions in Figure II. For the immediate period assume that food and nonfood purchases, as a proportion of the original income, remain the same. The entire wage consists either of P.L. 480 food or stamps designated for that purpose to assure that the recipients will in some way consume the P.L. 480 commodity. But maximum consumer welfare does not result because the highest possible indifference curve is not attained. A less than optimal income expansion path results which forces a higher proportion of consumption to be in the form of food.

Work project payments have functioned between the above theoretical extremes to assure increased food consumption as well as surplus disposal. For a specific discussion of payment techniques for the works program in Tunisia, Dr. Witt writes:

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[12]For further exposition on income and substitution effects see: Leftwich, Richard H., The Price System and Resource Allocation, Holt, Rinehart and Winston, New York, 1961, pp. 92-94.

> The early program consisted of a daily wage of four kilos of American hard red winter wheat supplied under Title II of Public Law 480 and 100 milliemes in cash supplied by the Tunisian government. This wage amounted to about 71 cents per day, with about one-third paid in cash and the remainder in wheat. This payment was equal to the basic wage in rural areas. Since the Tunisian national dish, "couscous" was made best from duram wheat, which was ground into a coarse meal called semolina, the American hard winter wheat was unsuitable for direct use by the Tunisian peasant. Therefore, approval was secured to permit the exchange of American hard wheat on a local value basis for semolina which was made from local duram wheat. The ratio of semolina to cash was changed several times, and in January, 1960, the workers were paid a daily wage of 68 cents of which two-thirds was in cash.[13]

The flexibility of this payment program to meet social desires and economic fluctuations accounts for part of the success in Tunisia. This payment technique may approach the desired allocation of wage income found in Figure I. The one-third cash payment may account for part of the portion labeled nonfood income while the exchange of wheat for semolina frees income for purchase of other food or nonfood items. An important phenomenon, evident in the Tunisian experience, is that food can be used as a resource for community and economic development if the transfer procedures and payment techniques are congruent with recipient consumption preferences.

A Source of Employment

While unemployment restrains development for emerging nations, underemployment and problems related thereto may be even more serious. If the size of the subsistence labor force, which is primarily agricultural, is known and if withdrawal of laborers from this force for other employment does not decrease total output appreciably, then underemployment prevails. Structural underemployment reflects a lack of individual desire to work at the prevailing wage rate because, where employment opportunities occur,

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[13] Witt, Lawrence W., "Development Through Food Grants and Concessional Sales," in Agriculture in Economic Development, edited by Carl Eicher and Lawrence Witt, McGraw-Hill Book Company, 1964, p. 353.

the wage rate may not exceed subsistence income by enough to adjust for the insecurity and uncertainty of the alternative employment.

P.L. 480 work projects can ameliorate some employment problems. In certain geographical regions seasonal unemployment plagues agriculture. A work project can employ both the seasonally unemployed and the chronically underemployed farm laborers. In Tunisia farm laborers were employed on work projects in the off-season months. Based once again on the sample survey of the Works Program in East Pakistan, employment did increase as indicated by comparing two successive years:

> Those able to find employment in 1961-62 worked an average of 75 days each in that year. In 1962-63 the laborers in the sample worked an average of about 91 days. Not all those in the sample increased their days of employment, of course, but the combination of works programme and other employment in 1962-63 did result, on the average, in a little over two weeks additional employment for the laborers interviewed. The average man in the sample worked 37 days on the works projects in 1962-63.[14]

Cyclical unemployment, resulting from decreased external demand for primary products, is less calculable and more difficult to solve by a works program than seasonal unemployment. Yet in the long run the works program may provide a source of income stability for farmers producing primary goods for export. Another form of unemployment, as a structural problem, occurs when complementary capital fails to expand as rapidly as the labor supply. Certain forms of capital formation, such as social overhead capital, are particularly conducive to work project activity to aid in solving unbalanced growth problems such as providing transportation facilities for marketing both industrial and agricultural products.

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[14] Khan, op.cit., pp. 53-54.

Ultimate success or failure of a work project as a source of employment depends upon several phenomena. A P.L. 480 work project not only creates capital without taxing recipient government savings, but also provides additional food for families migrating to work project employment. Additional food is necessary because food production per capita does not accelerate immediately due to rapid population growth, lack of technological innovation and other restraining factors. Those families remaining in agriculture expand consumption to utilize part of the food previously consumed by the migrating families. Likewise, work project employees need and desire more food than was necessary for subsistence. P.L. 480 food, as a resource for development, can complement excess labor supplies and induce labor mobility by partially assuring freedom from hunger and by improving health and nutrition conditions.

Human Development and Physical Capital Formation

Physical capital creation, as a necessary component of economic development, results from either internal investment or external investment. Internal saving provides an important source for growth capital whether by political controls, bonds, voluntary saving, taxation, inflation, or other means. The importance of resource allocation and investment decisions for achieving economic growth is explicitly emphasized by Menzie, et al., in the following statement: "A development plan is essentially an investment plan."[15]

A savings gap in underdeveloped countries restrains resource mobility and capital formation. Many conditions contribute to this problem. All

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[15]Menzie, et al., op. cit., p. 59.

too often the social elite find domestic investments unattractive and uncertain, while the peasants, even when willing to save, are faced with incomes so low that little remains for saving after consumption. Often the few citizens with sufficient wealth to invest prefer other worldly pleasures. These conditions do not always prevail. Japanese social elite have been praised for reinvesting profits in local community development measures at a critical period in Japan's drive to maturity.

Thus, to mobilize and stimulate domestic saving and investment represents a primary problem for the emerging nations. Food for work projects are suggested as a means of favorably inducing investment by combining surplus labor with surplus food. Work projects are particularly helpful where financial resources are limited and where high labor intensity investment projects can be utilized such as in the formation of social overhead capital.

But capital formation must extend beyond physical capital for improvements in human resources. Schultz emphasizes human development when he writes:

> The traditional view is that expenditures to improve the labor force have low priority. Increases in the stock of conventional capital have been rated much higher. ...the abundance of modern agriculture and industry is not to be had by a people who are predominantly illiterate and unskilled. Education and knowledge are indeed an important variable in the rate of economic growth that low income countries can achieve.[16]

A comparison of the Marshall Plan and P.L. 480 reveals the importance of human capabilities. The Marshall Plan provided loans and grants to war-torn Western European countries and successfully enhanced rapid reconstruction and rehabilitation. Similar desires are expressed for P.L. 480. But most recipients of P.L. 480 development assistance, unlike

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[16] Schultz, Theodore W., "U. S. Endeavors to Assist Low-Income Countries Improve Economic Capabilities of Their People," Journal of Farm Economics, Vol. XLIII, No. 5, December 1961, p. 1071.

Marshall Plan recipients, do not contain an educated and skilled labor force. Work projects do, however, develop minor skills and initiative in the labor force. Also work projects, as opposed to direct food grants which are not a condition of work, do not contribute to individual dependence upon the program to the detriment of personal effort.

Even when both capital and human resources are sufficient for development, problems may still remain. Difficulties in mobilizing local resources stem from the limited capacity of national and local governments to administer development assistance programs. The flow of funds through government is often limited which stimulates several penetrating questions. Are fund allocation decisions effectively implemented? Do personnel shortages and inadequate personnel training facilities impede fund distribution and program implementation? Do the funds flow to local areas to stimulate desired local resource mobility? These questions apply to both the recipient government and to the P.L. 480 administrators.

Often trained personnel shortages prevail in developing countries. Development assistance programs may compete with domestic government programs for qualified personnel. Training programs both in the recipient country and in other countries assist in solving this dilemma. Peace Corps volunteers, AID personnel and other foreign government programs as well as private institutions provide some personnel training in the developing countries. Other programs provide out-of-country training as indicated by McGee: "AID is responsible for an international training operation under which about 6,500 foreign nationals come to the United States for specific technical training and another 2,500 go to a third country to receive this training to support technical assistance projects."[17]

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[17]McGee, op. cit., p. 15.

In terms of required personnel resources for development assistance programs, some general criteria can be drawn from the literature. These criteria are as follows:[18]

(1) Participation in works program coordination and implementation by local authorities and even individual recipients is desirable as some assurance of acceptability and success.

(2) A qualified staff should be available for sustained work throughout the duration of the project and sufficient consideration should be given to their transfer upon termination of the project.

(3) It may be necessary to require that those persons receiving training at the expense of either the donor or recipient government accept works program employment for a certain period to recoup these expenses.

(4) Rapport between personnel and the recipients must be established by understanding cultural desires and applying proper communication techniques.

These four criteria are not inclusive of all possible issues. But they may indicate that personnel and administration is an important resource when mobilizing conventional capital and labor for development assistance by a works program.

The Impact of Works Programs on Inflation

Inflation can be detrimental to economic growth of low-income countries. Benedict and Bauer express concern about the impact of development assistance programs on inflation by stating that "an ever-present question is that of whether the actions taken will contribute to inflation and thus nullify gains that might otherwise be made."[19]

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[18] These criteria were developed from reading Emil J. Sady, "Improvement of Local Government and Administration for Development Purposes," Journal of Local Administration Overseas, July 1962, pp. 135-148.

[19] Benedict, Murray R. and Elizabeth K. Bauer, Farm Surpluses: U. S. Burden or World Asset?, University of California, Division of Agricultural Sciences, 1960, p. 155.

Both wage and price inflation threaten development. Labor mobility from low-income agriculture to nonagricultural employment often stimulates an increase in aggregate demand for food. This will cause food price inflation if increased agricultural productivity or some external source of food do not fulfill the excess demand. If the labor resource displays high levels of unemployment, inflated wages probably will not result from the works program. But where prices for goods and services rise because of the additional income created by the program, average real earnings could decline and cause income problems for those persons not associated with the works program. One purpose of P.L. 480 food payments for work is to dampen inflationary stimuli caused by labor mobility from subsistence agriculture to nonfarm employment.

When evaluating inflationary impacts of food for work programs, several issues arise such as: differences in degree of inflation, if there are any, for payment by wages-in-kind, food stamps, and cash; detrimental aspects of inflation to the particular country; and whether inflation is necessary for growth, or possibly an inevitable circumstance due to physical production bottlenecks causing sharp price fluctuations stimulated by the inelastic supply of agricultural products. Along with inflationary sources stemming from the form of P.L. 480 wage payments and possible leakages of payment commodities into market channels, other sources include the origin of the cash wage and the flow of income created by the newly employed laborers. For example, are the inflationary impacts of long term loans, local currency allocations, and government deficit finance measures as possible sources for cash wage payments significantly different? Where work projects provide new investments and products to increase the supply of consumption goods, an increased aggregate demand may be partially offset by supply shifts permitting minimal price inflation.

The effects of inflation are detrimental where, for example: it encourages otherwise domestic investors to invest abroad, it distorts investments, and it seriously limits consumption. But possibly without inflation and bottlenecks, development will not proceed at a pace necessary to create advancement for underdeveloped countries. With respect to this issue and P.L. 480 programs, Benedict and Bauer state:

> While the tendency toward inflation is an ever present danger in many of the underdeveloped countries, the forces that bring it about are usually more pervasive and powerful than those here under discussion. Investments likely to be made under a program of this kind probably will not be large enough to cause serious disturbances in the recipient countries. Also, it should be recognized that any change that increases employment and stimulates a sluggish economy has some inflationary effect. A moderately inflationary tendency may in fact be a necessary element in achieving a more active and prosperous economy. So long as the inflation contributes to more activity and higher real incomes, it may be helpful rather than harmful. Nevertheless, it is a sharp edged tool that may be handled with care.[20]

Several studies indicate that P.L. 480 has caused both deflationary effects and price stability. In Brazil, Johnson stated P.L. 480 "had an important stabilizing effect on domestic food price increases that would otherwise have resulted from food shortages."[21] Menzie, et al., also mention the deflationary issue in the following statement:

> The inflow of P.L. 480 commodities to Colombia in 1955 coincided with a sharp drop in world coffee prices. With P.L. 480 wheat, the Colombian government was able to avoid the difficult decision of reducing capital imports which would have slowed down the pace of development. Moreover, the inflow of wheat acted as a counter-inflationary force.[22]

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[20] Ibid., pp. 155-156.

[21] Johnson, op. cit., p. 10.

[22] Menzie, et al., op. cit., p. 66.

While these discussions refer to P.L. 480 in general, similar issues coincide for work programs. A works program increases future agricultural output and distribution by improving or instigating irrigation, drainage, fertilization, and road construction, to mention a few benefits. This too can act as a counter-inflationary force.

PROJECT AND PROGRAM EVALUATION: BENEFIT-COST ANALYSIS

Benefit-cost analysis, although not extremely refined, emphasizes economic efficiency in resource allocation.[23] Yet economic and social phenomena are linked in work project evaluation. If recipient country interests include both sustaining adequate health and nutrition as well as economic growth and community development, then the value of particular programs for goal attainment must be specified. One difficulty involves determining a reasonable quantitative approach to evaluating individual, community and national beliefs and values with respect to benefits and costs. Because of this, benefit-cost analysis is generally used to measure goals expressed in economic terms, but this does not imply that economic goals remain free of social phenomena. The program may contribute to a lessening of social unrest which cannot readily be put in monetary terms.

Theoretical Economic Phenomena

Irrigation and drainage projects often have been evaluated in benefit-cost terms. The Federal Inter-Agency River Basin Committee developed some basic criteria for measuring economic attributes of water projects which also apply to general economic analysis of work projects. These attributes are:

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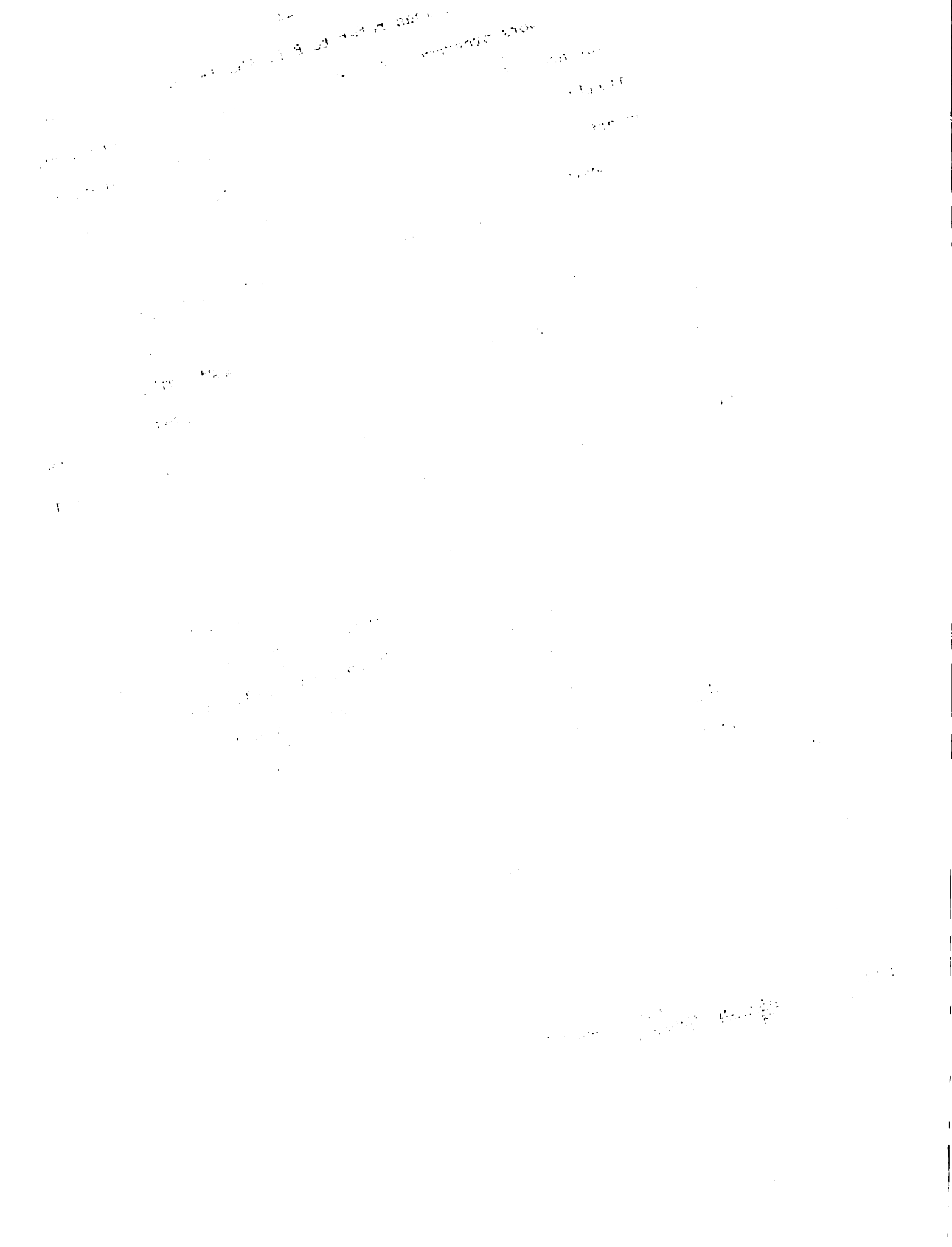
[23] For further information about benefit-cost analysis as a general theory see: Barlowe, Raleigh, Land Resource Economics, The Political Economy of Rural and Urban Land Resource Use, Prentice-Hall, Inc., Englewood Cliffs, N. J., 1958, pp. 484-492.



(1) Demand for goods and services of the project should exist.

(2) Optimum effective resource use will be attained where benefits exceed costs by the greatest amount instead of at the maximum benefit-cost ratio.

(3) The project as well as any separable segment or increment thereof selected to accomplish a given purpose should be more economical than any other actual or potential available means, public or private, of accomplishing that specific purpose. Comparisons between projects are indispensible to maximize the benefit to the community even when and especially when funds are spent on projects which are not fully rentable in the economic sense but must invoke amenity values or "national values" to justify themselves.

(4) Following from this discussion, the order in which a number of projects should be undertaken should be based on their relative efficiency in use of economic resources.[24]

Cotner presents the following long term considerations as economic aspects of project evaluation: determining physical benefit relationships, determining improvement techniques and costs, discounting physical benefit streams, selecting the right year for improvement, selecting the right improvement technique, and determining economic efficiency.[25] While each issue presents analytical problems, a widely discussed enigma is that of pricing benefits and costs. Disagreements prevail about pricing project inputs and outputs and whether pricing can be accomplished by the market. Hammond feels the market is inadequate:

> Even if the market were "perfect," that is to say, afforded a true measure of the esteem in which these resources were held at the moment of their withdrawal from the market for use on the project, it would still afford no guide to the future benefits they might have produced if employed otherwise. In short, one cannot use the market to foretell the future but only to discount it; costs are not future benefits foregone, but simply costs.[26]

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[24] Federal Inter-Agency River Basin Committee, Proposed Practices for Economic Analysis of River Basin Projects, 1950, p. 5.

[25] Cotner, Melvin L., "Optimum Timing of Long-Term Resource Improvements," Journal of Farm Economics, Vol. 45, No. 4, November 1963, p. 733.

[26] Hammond, R. J., Benefit-Cost Analysis and Water Pollution Control, Stanford, California, Food Research Institute, Misc. Pub. 13, 1960, p. 25.

This implies that even if the market did make an optimal allocation today, the solution might be inadequate later on. Even when market prices are used as indicators, work projects based on benefit-cost analysis must account for seasonal and cyclical price fluctuations to provide reliable prices. Often the necessary indicators are not readily available in developing countries.

Using the opportunity cost doctrine for determining the comparative advantage of a project, or resources used therein to other projects or future projects is not completely accepted. According to Hammond, the pricing system would fail so costs could not be accurately determined. But some believe that "the concept of 'alternative use value' is fundamental to project evaluation, whether the costs of the project 'input' is measured by market prices or some other basis."[27]

Assigning values to benefits and costs in work project evaluation could be summarized by two statements. First, price indicators are not available for that portion of benefits and costs which we might term "extra-market" components. These are aesthetic values incapable of definite monetary measure. Second, in most cases the price indicators available are not all received by the decision making unit but by individuals. In economic theory terminology, these problems can be termed "external economies and diseconomies" while in project evaluation terminology they are "offsite" and "indirect" benefits and costs.

Some Analytical Results and Problems

Sometimes indirect benefits last longer than direct program benefits, but unfortunately costs contain the same potential. Davis gives two indirect

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[27]Federal Inter-Agency River Basin Committee, op. cit., p. 9.

benefits of Title I for the recipient nation:

> It bolsters the outside credit and investment potential of a participating country--particularly in terms of productivity and rate of growth. P.L. 480 also provides a mechanism for amassing funds that are supplemental to the regular budget of the country.[28]

The first effect can also be true for Title II work projects. Instead of the second effect, indirect benefits may free currency for the government to invest in other necessary development measures or may represent a net addition to governmental programs. Wage payments in food also free local currency that might be used to further complement the works projects. But this happens only if the projects are not new. If they are new, there is a budget cost for the money wage payment and possibilities of inflation through expanded government expenditures.

Another issue, previously discussed but not in benefit-cost terms, is capital improvement. If the works program frees recipient government currency, it can be reinvested in physical and "human" capital improvement. The maximum net contribution by newly created or improved capital will be the maximum difference between monetary costs of the investment and the gross product return on that investment.

Because Title II food serves as a free resource, projects under P.L. 480 jurisdiction have a cost advantage over domestic projects. If officials do not consider this issue, intractible resource malallocations may result. Long run resource allocation issues are at stake and comparative procedures must account for the anticipated phasing out period of a program. Phase-out of food aid may change the relative efficiency of alternative resource allocations. This can result when food aid is not a calculated project cost. In this sense, long run costs may result.

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[28] Davis, John H., "Surplus Disposal as a Tool for World Development, Objectives and Accomplishments," Journal of Farm Economics, Vol. VI, No. 2, August 1958, p. 1486.

Various social benefits and costs accrue to works programs besides economic characteristics. Some of the indirect effects might be: enchancing work attitudes, improving worker skills, improving worker and family educational abilities, improving health and nutrition, developing favorable attitudes toward the donor countries while preserving integrity by exchanging food for personal effort, creating self-esteem and reducing apathy, creating responsible citizens, and providing education about and dissemination of family planning information. These consequences may be latent qualities of the program, only some of which become reality. Some may not be attributes, such as: the tasks may be considered too difficult causing negative attitudes toward work, attitudes may not be favorable toward the donor country because the commodity payment may be cumbersome or possibly unuseful, and the payment-in-kind technique is regressive for a desired movement away from barter.

The discussion has centered on project evaluation assuming that benefits and costs can be recognized and distinguished as either benefits or costs. But for national planning, the desired attributes of a project, if achieved, may be benefits while secondary effects may be either costs or benefits. Results may be benefits for society but costs for the individual or vice versa. Stating that specific benefits and costs accrue to particular projects is misleading. Skilled administrators can capitalize on benefits of other phenomena not caused by works programs. On the other hand, works programs may become saddled with responsibility for adverse impacts for which they were not responsible. In planning it becomes easy to overestimate benefits and underestimate costs because of enthusiasm for the project. And one may tend to overlook possible long run impacts that will be extremely significant for future growth and development.

To sum up, the general objective of project evaluation is to maximize net returns and human satisfactions from resources used in a project while considering optimal long run investment allocations. Project evaluators recognize the need for consistent evaluation but techniques of measuring must become more precise and refined. Barlowe emphasizes the importance of benefit-cost analysis when he writes, "The benefit-cost approach is still relatively new. It has evolved as a means of giving economic justification to water-resource developments. But its potentialities are such that it should not be limited to this one type of resource development."[29]

WORK PROJECTS AND ECONOMIC DEVELOPMENT: SUMMARY AND CONCLUSIONS

Food grants for developing countries began as a temporary means of export disposal of food surpluses, yet continue as a promising resource for development, particularly when applied to "self-help" work programs. The real challenge is not using food as an end, but as a means to an end. Certain conditions in emerging nations are particularly conducive to development assistance by using food surpluses as payment-in-kind for work project employment. Blau summarizes these necessary conditions as follows:

(1) the presence, in the recipient country, of unemployed or underemployed workers,

(2) the lack of financial resources, or in other words, consumer goods to pay these workers if they were employed on otherwise feasible projects,

(3) poverty of the unemployed, implying that additional income will be spent on staple food rather than other consumer goods, and

(4) high labor intensity of investment projects financed by surplus food.[30]

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[29] Barlowe, op. cit., p. 491.

[30] Blau, Gerda, Functions of a World Food Reserve, Scope and Limitations, F.A.O., Rome, Commodity Policy Studies 10.

These conditions are necessary but not sufficient for food aid to yield positive changes in economic development. Other issues include social, cultural, administrative, and political phenomena with respect to acceptance and application of work programs.

For social acceptance of a work project, authorities often indicate that an immediate impact should be realized by the recipients. This problem relates to the specific characteristics of the program as perceived by local administrators and recipients. Diffusion studies offer characteristics of innovations which influence acceptance of new ideas including work projects. Rogers discusses five of these characteristics including relative advantage, compatibility, complexity, divisibility, and communicability.[31]

Relative advantage expresses the degree of superiority of a work project to conditions it supersedes. A crisis emphasizes the relative advantage of the program as indicated by the Tunisian experience. Viner questions the relative advantage of payment-in-kind techniques when he writes:

> It is a sad footnote...that under the Food For Peace program it is planned to pay workers on development projects in part in American surplus food instead of money. It may be that several millennia after the introduction of the use of money as a medium of exchange, we have found this to have been a mistake. But it does seem... paradoxical that in our economic development activities abroad we should help laborers who have probably in many cases but recently emerged from a near-barter economy to return to it.[32]

The successful programs thus far have not reimbursed workers solely with food and this sector has not reverted to near-barter. Even so, if food is but one-half or one-third of the wage bill, some regression does occur. The question remains: are the benefits, or is the relative advantage of payment-in-kind sufficiently greater than this regression and other costs to justify the payment technique?

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[31] Rogers, Everett M., Diffusion of Innovations, The Free Press of Glencoe, A Division of the MacMillan Company, 1964, pp. 124-133.

[32] Viner, Jacob, "Economic Policy on the New Frontier," Foreign Affairs,

Compatibility expresses the degree to which work projects are consistent with existing values and past experiences of the recipients. Rogers cites an interesting example of compatibility in southern Germany where farms were fragmented into about 75 plots because of land inheritance customs. A governmental redistribution program prescribed one large plot per farm. But mechanization and efficiency did not result on every consolidated farm because some farmers divided the unit into 75 small plots.

Complexity expresses the degree to which work projects are difficult to understand by recipients and difficult to implement by donors and recipient government officials. Trained personnel can overcome barriers caused by complexity. Successful personnel performance engenders good administration as emphasized by Salter: "The heart of economic development is the reform and creation of an administrative system capable of carrying it out."[33]

Divisibility is the degree to which a works project may be implemented on a limited basis. This is an important planning approach because pilot programs similar to the one in East Pakistan can save costly economic and social errors.[34]

Finally, communicability is the degree to which results and attitudes of previous work projects and development assistance programs can be diffused to others. In developing countries communicability is usually facilitated by inter-personal contacts because mass media techniques are limited. The political process often is not conducive to mass communication techniques. Deutsch writes that "in the developing countries..., the political process usually does not include the mass of isolated, subsistence-farming, tradition-bound and politically apathetic villagers, but it does

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[33]Salter, Sir Arthur, The Development of Iraq: A Plan for Action, Caxton Press, London, 1965, p. 96.

[34]Kahn, op. cit.

include increasingly the growing numbers of city dwellers, market farmers, users of money, wage earners, radio listeners and literates in town and country."[35] Improved communicability, of specific ideas such as work projects and other modern ideas can stimulate social mobilization and political, social and economic development.

To select from an array of potential projects the ones most likely to initiate or stimulate political social and economic development for emerging nations presents difficulties. Even where alternative projects are complementary to each other, limited resources often permit selection of but one project. Often the choice becomes one of long term growth and expansion versus short term measures to reduce immediate problems. This choice, however, is not necessarily mutually exclusive because some projects lessen immediate problems as well as complement long term development plans. Short term resource allocations, possibly fixing capital investments, may lead to a lower growth rate than longer term investments. But the long term route may cause short term sacrifices due to scarce resources. A question to be asked of the food-for-work concept is whether work projects perpetuate or diminuate selection problems. Are resource allocations more nearly optimal in terms of development goals when a works program is available to the developing country? Or does the works program contribute to malallocation problems resulting in inefficient industries and over emphasis on the industrial sector as opposed to the primary products sector? These issues require research and reflection.

The value of work projects for economic development is even more basic with in-kind wage payments. Essentially the question is: Will food payments for work project employment contribute to optimal and balanced long run economic development or will cash wage payments be both more

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[35] Deutsch, Karl W., "Social Mobilization and Political Development," The American Political Science Review, Vol. LV, No. 3, September 1961, p. 498.

useful to employees and facilitate efficient resource allocations? This issue remains unresolved and the solution differs depending upon the recipient country under consideration. The success of food for work programs depends upon the economic issue of future as well as present inter-country and intra-country comparative advantages relative to resource allocations.

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