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ESSENTIALS FOR ACCELERATING AGRICULTURE AND RURAL DEVELOPMENT
IN LESS DEVELOPED COUNTRIES

Introduction

Few less developed countries (LDCs) possess the essentials needed, in minimum quantity or quality, to accelerate agriculture and rural development more rapidly than current rates of population growth.¹ Food production per capita is stable or decreasing. Population and unemployment are increasing, with few visible prospects of reversing either trend in the foreseeable future. Large proportions of land in farms are under-utilized, and the costs experienced in reclaiming or developing and settling arable public lands are excessive. Diffusion of agricultural technology lags, and effective organization of resources for development has progressed little in recent decades.

Furthermore, the increased disparity in rates of economic growth and the widening gap in income per capita between agricultural and non-agricultural sectors suggests possible mounting internal crises - political, economic and social - in many LDCs.

International assistance agencies and host governments support or conduct a wide range of uncoordinated programs and projects directed toward segments of agricultural production, education, health, public works or public administration in rural areas. These piecemeal efforts are undertaken without reference to a clear knowledge or understanding of problems of the rural situation as a whole, or the interrelationship of essentials for agriculture and rural development. A close reading of

¹ Rural areas refer to villages and surrounding open-country territory with fewer than 2,000 population.

a Five-Year Plan for any LDC reveals clearly how limited the concept and objectives of agriculture and rural development really are, and how limited are planned means for attainment. Furthermore, rural people, with traditional, conservative attitudes and values, are apathetic or unfavorable to any changes which they perceive as threats to basic security.

Finally, governments in most LDCs neither are oriented nor geared to accelerate agriculture and rural development. They ignore or neglect rural areas, withholding needed services and capital to get agriculture moving. They defer to large landholders who generally oppose taxes, land reform, local government, education, and interference in their own local controls which amount to economic, social and political oppression. Consequently, second-class, underprivileged rural citizens suffer frustration and pervasive fatalism, aided and abetted by grinding poverty, social immobility, illiteracy and cultural isolation.

This paper outlines briefly the essentials of agriculture and rural development with reference to LDCs. It is based upon Arthur T. Mosher's Getting Agriculture Moving, other selected literature on economic development, and overseas working experiences of AID personnel. Major attention is given to pinpointing deficiencies for which provision of the essentials should help to overcome. The "facts" presented are estimates or generalized statements based upon data or information drawn from a wide search of literature relating to LDCs.

"Essentials" in this paper refer to elements which have been indispensable in accelerating agriculture and rural development of developed countries. Some essentials may be more important than others, some can be fully instituted at later stages of development, and some can be initiated at relatively low cost

to government. The thesis is that accelerated agriculture and rural development in LDCs depends upon more adequate provision of essential elements.

"Development" in this paper refers to the increasing capability of a population to use its material and human resources for the satisfaction of cumulative wants and needs. As a process, it requires (1) changes in the attitudes, values and other behavior of rural people, economically, socially and politically; (2) changes in material resources and technology; and (3) changes in organization - ownership or control - of resources. These changes are interdependent: one change must lead to, or accompany, other changes, hopefully in the direction of, or contributing to, development.

Essential Elements

1. Land Tenure

Widespread ownership of farm land by cultivators is an essential element of highest priority in accelerating agriculture and rural development.

Facts

- a. Possibly two-thirds or more of all male workers in agriculture of LDCs are landless, and land ownership is highly concentrated in several LDCs;
- b. Probably a majority of all farmers operate farms with less than five acres;
- c. Large holdings are under-utilized: relative to family-size farms, they are characterized by more extensive farming; lower investment per hectare; lower crop yields; and lower man-land ratios;
- d. Large holdings tend to be operated by absentee owners;

- e. Savings from profits on large holdings tend to be invested heavily in non-farm economic activities;
- f. Legislation on farm tenancy, farm wages and usury is unenforced, resulting in grossly inequitable distribution of farm income, lack of production incentives, and a subordinate economic, social and political status for landless workers resembling serfdom;
- g. The decision-making of landless workers with respect to farming operations is routine and minimal; and
- h. Recent land reform programs, with few exceptions, have been narrow in scope, often unrealistic, and limited in effect.

Discussion

In most of Latin America, the Philippines, South Vietnam and possibly other countries, wide-scale land reform is essential. Without it, no government in these countries is likely to create an environment conducive to accelerated development of agriculture and rural areas.

2. Farm Credit, Farm Supplies and Markets

Farm credit (short-, intermediate- and long-term), farm supplies, and markets are primary essentials.

Facts

- a. In most LDCs, adequate farm credit is available principally to large- or medium-scale farmers or landlords;
- b. The chief sources of credit accessible to operators of family-size or smaller farms are landlords, moneylenders and merchants, whose lending operations are not regulated;

- c. The costs of farm credit generally are excessive and act as an economic disincentive;
- d. Short-term production credit is used chiefly for family consumption rather than farm inputs;
- e. The demand for farm supplies--improved seeds, fertilizers, pesticides and farm machinery-- is limited due to shortages of credit and knowledge for their use;
- f. Most farmers work manually with hoe, axe and machete; others own or rent workstock, plows or other equipment;
- g. Probably less than 30 percent of the total agricultural production, excluding that paid as rent, enters commercial markets; and
- h. Markets are available for most crops and livestock sold, but subject to monopoly rather than competitive prices.

Discussion

Supervised credit provided through farmers' multipurpose cooperatives or private suppliers may be solutions for the ages-old credit, supply and marketing problems of farmers. However, agreements between the cooperatives and members, or private suppliers and farmers, must be fulfilled by both, which requires large inputs of education on the meaning and purpose of cooperatives. The FA-CO-MAs in the Philippines failed from corruption of both management and borrowers. As farmers' production and income increase, the demand for farm and family goods and services will expand, and should be met by competitive private enterprise.

3. Land Improvement and Use

Advancing farm technology and its application relating to soils, water climate, crops livestock, forests and fish; pests and diseases; and farm

management are essential to efficient utilization of land and its improvement.

Facts

- a. Farmers continue to use traditional methods of farming chiefly because they lack knowledge, means, or incentives to use better methods;²
- b. Ratios of livestock to population are sharply lower than in developed countries;
- c. Traditional conservation practices followed are to maintain rather than increase productivity of land;
- d. Improved farming practices are found more often on farms producing crops for export than for food;
- e. Arrogation of water rights by large landowners hinders agricultural production in many countries;
- f. Farm management as a science and instrument for more efficient farming is practically non-existent;
- g. The comparative rate investment in agriculture is less than three times the rate of population growth, or possibly not more than five percent of GDP originating in agriculture; and
- h. The absence or relative shortage of other essentials in the total situation, for which government is directly responsible, impedes individual or group action in land improvement and use.

²"- the central fact about the traditional society was that a ceiling existed on the level of attainable output per head. This ceiling resulted from the fact that the potentialities which flow from modern science and technology were either not available or not regularly and systematically applied." W.W. Rostow, The Stages of Economic Growth, Cambridge University Press, Cambridge, 1962, p.4.

Discussion

The quantity or quality of land may be a limiting factor in the development of some LDCs. Of far more importance is the man-made organization (institutions) of available labor and capital to use land. Labor certainly is not scarce, though knowledge and skills are. Capital may be limited, but the allocation for its use is much more crucial. In most LDCs, the rate investment in agriculture and rural development may be about half that in non-agricultural sectors. Labor - despite overpopulation and unemployment - probably contributes the most to agricultural production, and receives the lowest economic return relatively among the factors of production.³ If this is true, then the underlying economic and political rationale for the situation requires drastic change which governments seem unwilling or unable to do.

4. Rural Education and Research

Education, based heavily on research in agriculture and the social sciences, is an essential requisite for economic, social and political growth of rural areas.

Facts

- a. More children are provided primary-school education than ever before, but the United Nations estimates that only one-third of those of primary-school age receive such training. In areas of rapid population growth, many schools operate on a half-time, "double shift" basis;

3

A country is considered overpopulated if annual rates of population growth substantially exceed annual rates of increase in employment of the labor force over a period of several years.

- b. An overwhelming majority of rural youth receive no formal education beyond primary school;
- c. Probably more than half the rural population 15 years old and ^{is} over/functionally illiterate;
- d. The quantity the quality of rural schools relatively are inferior to urban schools;
- e. Instruction in science and scientific method is exceptional below the university level;
- f. Agricultural extension education, to be effective, may require one trained worker for every 400 to 500 farmers. The ratio now in LDCs may be about one worker (frequently untrained) for every 5,000 farmers! Few agricultural officers in LDCs know how to use farm demonstration techniques;
- g. Possibly ten percent of rural households have access to radio or daily newspapers;
- h. Research is given meager support in LDCs. Actually, indigenous scientific knowledge of agriculture, health and other fields barely provides a minimum cultural base for rural education, especially in highland and tropical regions; and
- i. Professionals and technicians in agriculture often lack competence; agricultural schools do not attract persons of highest intelligence due to low salaries and low prestige offered.

Discussion

Gross deficiencies of education and research in LDCs will be a formidable obstacle to progress for decades. Potentials of mass education-

radio, television, cinema and press - for rural areas have received scant consideration in cost/benefit terms. Adult education through mass media offers a challenging shortcut for reducing the gap between folklore and science which, in rural areas, has narrowed little in the past century.

5. Transportation

A network of roads, railways or water routes and fast transport are essential for rapid development in every country. Roads enable rural people to produce and market more commodities, and to benefit from increased trade and services.

Facts

- a. Probably less than half the villages in LDCs are connected with vehicle roads to main highways. As of 1962, 43 percent of 458 sample villages in Turkey were situated on roads and 44 percent were ten kilometers or more from the nearest road over which buses and trucks passed regularly. One-third of Philippine villages were located on roads in 1955;
- b. Manual carrying remains the most common form of transport to and from most villages, followed by animal-drawn carriages, carts or lorries and small boats; and
- c. The lack of roads accounts for much of the geographical and cultural isolation of villagers and for low rates of daily movement or permanent migration from one place to another.

Discussion

Village-to-market dirt roads can be constructed at low cost by the villagers themselves, as in India, the Philippines and other countries.

Commercial buses and trucks can handle traffic on principal highways and roads. Any large break-through in village road building depends heavily on rapid increases in rural productivity.

6. Health, Housing and Family Planning

Favorable conditions of physical and mental health are essential for development of agriculture and rural areas, including health facilities, housing, water supply, nutrition, sanitation and family planning.

Facts

- a. Improvement in the health status of rural populations is shown clearly by declining death rates, generally improved morbidity rates for malaria and tuberculosis, and increased length of life;
- b. Rural health facilities are limited though improving. However, in 1962, two-thirds of the sample villages in Turkey were 15 kilometers or more from the nearest clinic, dispensary or hospital, and no village of less than 2,000 population had a trained doctor;
- c. Rivers, lakes and springs constitute the principal source of domestic water supply (three-fourths of 458 sample villages in Turkey in 1962);
- d. Probably 90 percent of all babies born in rural areas are delivered by untrained midwives;
- e. Malnutrition or under-nutrition probably affects one-third or more of the rural population;
- f. Widespread incidence of intestinal parasites tends to debilitate rural people;

- g. Improvements in rural housing/^{lag}behind population growth; over-crowded dwellings aggravate conditions unfavorable to physical and mental well-being;
- h. Perhaps 10 percent of rural households have privies; and
- i. Most rural areas have annual rates of population growth in excess of 2.5 percent. Rural populations are youthful, with high and increasing proportions under 20 years of age, which portend even higher rates of population growth unless counteracted by family planning.

Discussion

Overpopulation prevails in most LDCs if judged in terms of existing employment opportunities. This situation will worsen rather than improve during the next decade or so at least, because governments, religious authorities, and families, even if favorably disposed, simply lack the know-how or means to control population growth. Until family planning can be adopted widely, increased proportions of agricultural production must be consumed just to maintain expanding populations at the same, or possibly decreasing, levels of living which already are deplorably low. Possibilities for accumulating more capital needed for nation-building, including improvements of rural health, education and housing as well as agriculture, are extremely limited.

7. Trade, Manufacturing and Services in Rural Areas

It is essential to encourage trade, manufacturing, and services in rural areas as means of full-time or part-time employment and primary or supplemental income.

Facts

- a. Substantial proportions of rural workers engage in a wide range of low-skill, low-income activities outside agriculture;⁴
- b. Unemployment and under-employment are increasing in rural areas, and absolute numbers of rural population probably will continue to increase despite rural-urban migration;
- c. Home handicraft products primarily serve domestic markets. Government efforts in India, Jamaica and elsewhere to up-grade design, standards of quality and to purchase nearly all goods offered, frequently result in glutted markets.

Discussion

The growing labor force and shortage of employment opportunities may force governments to re-double their funds and efforts to devise new, and improve existing, skills and job opportunities in rural areas. Training in more remunerative activities such as food production and processing, mechanics, nursing, or other vocations is desirable. In some countries, Food for Peace and the World Food Programme provide stop-gap resources for such training. The Youth Training Centers in Jamaica are models of innovation in vocational training.

⁴Rural non-farm workers include for example, school teachers; merchants; millers; moneylenders; eating and refreshment place operators; peddlers; blacksmiths; weavers; wood carvers; tailors; dressmakers; beauticians; barbers; bakers; pottery; charcoal; candle or rope makers; shoe makers and repairers; buggy drivers; carpenters; stonemasons; laundresses; gardeners; herb doctors; midwives; civil guards; musicians; holy men; beverage makers; water haulers; cooks and house servants.

8. Local Government and Rural Organizations

Local government and rural organizations are essential links between central government and citizens at village, district, province or regional levels.

Facts

- a. Most LDCs lack local government with sufficient delegated powers, including taxation, which enable local citizens to act collectively, or through elected representatives, in solving local problems and conducting local affairs;
- b. Rural people commonly are treated as second-class citizens by denying them (1) government services commensurate with those provided urban citizens and (2) enforcement of laws designed to protect their equal rights;
- c. Government and large landholders discourage and often prohibit landless workers from participating in farmers' associations, labor unions and political groups;
- d. Rural citizens rarely are involved in decision-making and planning of local projects for their benefit;
- e. Although property taxes are low in rural areas, other forms of taxation (commodity, sales, market fees, fishing licenses, etc.) are highly regressive;
- f. Rural citizens generally view government officials with fear, apathy, distrust or hostility; and
- g. Local governments as now constituted are neither responsible to local citizens nor responsive to their felt needs.

Discussion

Political leaders in LDCs who persist in assuming that rural people are inferior and deny to them equal rights and opportunities economically, socially and politically serve the interests of a select few, but not of the nation. With encouragement and minimal support from government, rural people can plan, mobilize community resources and carry out many collective activities for their own benefit such as constructing roads, schools and simple irrigation systems; digging water wells; combating pests; improving crops; and learning better ways of doing and living. Furthermore, representative village committees can help to enforce laws pertaining to farm tenancy and labor. These steps can generate group initiative, action, solidarity, loyalty and pride of achievement - the wellsprings of human dignity, self-reliance and democracy.

To strengthen effective administration of government in rural areas, increased numbers of trained personnel in agriculture, education and health are needed. These change agents require transport and other equipment to reach and work directly with villagers.

9. Production Incentives

Production incentives are vitally essential in motivating farmers to shift from production for subsistence to production for market. These may include, for example, more favorable cost-price relationships, subsidies, crop insurance and fair treatment.

Facts

- a. The difference between prices paid and received by farmers in goods and services exchanged, generally is unfavorable;

- b. Farmers generally resist expending more funds and labor on yield-increasing items such as better seeds, fertilizers and pesticides if they must bear all risks of unfavorable responses to these inputs;
- c. Subsidies to farmers, unless carefully devised, often prove to be welfare grants rather than production incentives;
- d. Discriminatory freight or hauling rates may act as a disincentive to farmers; and
- e. The principle of "equal treatment of unequals" is flagrantly disregarded in the frequent, unsavory relationships of agricultural workers vis-a-vis landlords, employers, moneylenders, merchant or government officials. Subordinate agricultural workers are subject to orders that must be obeyed, not challenged.

Discussion

The obstacles which impede agriculture and rural development can hardly be solved by production incentives alone. These incentives can play an important role in combination with other essentials to create a favorable environment conducive to development.

10. Planning

Planning is an integral function of government operations. The need for more of it in villages, districts, provinces and regions is glaringly obvious, because so little is apparent at these levels.

Facts

- a. Central government planning for rural areas is ineffective generally, because local citizens lack: (1) understanding of objectives, (2) adequate knowledge of procedures and their personal roles, (3) required resources, or (4) involvement in the planning process;

- b. Too much planning is performed without adequate analysis of the problem situation, appropriate alternatives, and means for effective solutions.⁵ In other words, it is opportunistic or expedient, not scientific; and
- c. Most planning is uncoordinated and oblivious to important horizontal linkages (technical and administrative) of all agencies involved and of vertical linkages from central government down to rural citizens.

Discussion

Development planning can hardly be converted into effective action without somehow involving all the actors in both processes. The assumption that rural people will carry out central government plans (planned for them and not with them) is fallacious. Of course, planning is done primarily through elected representatives or civil servants, but citizens in developed countries have some means of protection (open discussion, legal action, or election process) against unwise or unacceptable planning. Rural citizens in LDCs reject plans by apathy or passive resistance which accounts for ineffectiveness or failure.

Development planning by individuals, business government or any other social entity is essential. Each rationalizes, in the context of time, place and circumstances, what seems to be the best combination (organization) of material resources, labor and methods to attain the desired objective. Human success or failure, more often than not, hinges upon planning.

⁵This also applies to the planning of many advisors of international assistance agencies.

Opposition to the Essential Elements

The essentials of agriculture and rural development are more nearly optimumly present in developed than in less developed countries. Although few developed countries acquired all the essentials within a century, scarcely any of them were confronted with the man-made problems and deficiencies which now plague LDCs. If LDCs are to overcome the imbalance between population and other resources, the time span to provide substantively the essentials should be within two or three decades rather than a century. If the recent past foreshadows the future, prospects for this transformation are less/encouraging than

As a group, leaders (political, religious, educational, business) in LDCs seem to lack the pragmatism, self-reliance and liberalism which might enable them to guide their countries more rapidly from traditional, subsistence agriculture toward a more modern agro-industrial economy.⁶

Essentially, many LDCs still are pre-scientific, pre-market and semifeudalistic in agricultural orientation and outlook. Non-agricultural sectors have progressed remarkably in recent decades due to infusions of foreign capital and technology. Many governments look to industrialization as the shortest road to national progress. What they overlook is that masses of agriculturists with low productivity and purchasing power offer a limited effective demand for products of industry.

Also, LDCs basically are two-class societies with no appreciable, dynamic middle class to check excesses of the haves and have-nots. Lack of consensus

6

Paul A. Baran, "On the Political Economy of Backwardness", in A. N. Agarwala and S. P. Singh (Editors) The Economics of Underdevelopment, Oxford University Press, New York, 1963, pp. 90-91.

(values, norms, rules) between and within social classes poses a further divisive element retarding national development.

The LDCs waste their most abundant resource, human talent, due to shortages of education and visible employment opportunities. Unutilized land resources remain ample, and technology of developed countries is available if LDCs will borrow and adapt it to their use.

Even the population explosion is viewed with apathy or tolerance in LDCs. National leaders offer formidable arguments against family planning: (1) existence of large areas of arable land suitable for agriculture, (2) equation of population growth with economic progress, (3) contraceptives as instruments for murder, (4) desirability of large families as social security, etc.

Resistance to broad social changes such as those outlined in this paper, becomes more pronounced when leaders in LDCs perceive them as threats to their security and purses. Few leaders will accept the idea that more democratic institutions in rural areas are essential to development. Extension education, research and communication which could help overcome rural ignorance and superstition have low priority, or are viewed negatively, by national decision-makers. Land reform and settlement of frontiers generally are opposed as communistic, costly or non-essential. Even farm credit or production incentives, particularly for the benefit of family-size farms, require too much capital and trained manpower which are in short supply.

Most LDCs strongly resist any interference in the conduct of their affairs. Sensitive to criticism, they want the capital but not the technical know-how

of developed countries if the latter requires disturbing changes in the status quo. For better or worse, international assistance agencies have extended large amounts of economic and technical assistance to LDCs without much impact on per-capita productivity, income and living conditions, especially in rural areas. This generosity may not continue indefinitely unless recipient countries themselves begin to provide the essential environment which is more conducive to over-all development. The donor countries, in adhering to the "no interference" doctrine, have overestimated the absorptive capacity/contains too few of the essential elements for accelerating agriculture and rural development.

Conclusions

If LDCs are scaled hypothetically along a ten-point (100 percent) continuum for each of the ten essential elements presented in this paper, the "modal capability" to accelerate agriculture and rural development probably would average between 20 and 30 percent.⁷ Israel might score relatively high, Mexico and Taiwan much lower. Nearly all other LDCs would score well under 40 percent. Yeman, Laos and several African countries might not average 20 percent.

If these observations are valid, the chances for sustained success from "crash" or "package" programs in agriculture and rural development seem remote. However, if such programs are predicated upon initiation by LDCs of broader programs aimed at providing more of the essential elements,

7

By analogy, LDCs generally are in the first (traditional society) or second (pre-take-off) stages of economic growth. See W. W. Rostow, Op. cit.