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ECONOMIC DEVELOPMENT WITH SPECIAL REFERENCE TO AGRICULTURE

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I. Opening Remarks

Hope that this can be an informal seminar with a mutual exchange of ideas. There is much that we do not know about economic development on either side of the Pacific Ocean. Perhaps we can clarify some of these problems in seminar.

II. What is Economic Development

It is suggested that for underdeveloped countries it is appropriate to stress an increase in output relative to inputs as the basic criterion, measured of course in common prices.

An industrial development which provides imported goods at the same input cost as the agricultural products which could have been exchanged for the industrial goods through foreign trade, is not development. It may be or it may not be a desirable policy with world price instabilities and political tensions, but it does not over the long run improve levels of living.

The economic development programs to which attention should be directed are those which most effectively improve the input-output ratios. Within agriculture this means little emphasis on program to expand land area cultivated and more emphasis on increasing yields, or decreasing inputs needed to attain a particular yield.

For the United States since 1910 productivity has averaged about 3% expansion per year. Nearly half of this is due to the combination of an increase in capital and an increase in the working population. A little over half is due to a variety of items that are difficult to specify. Shorter hours decrease production by less than the decrease in hours worked. The implements and tractors now are more productive for the same cost. Public and private investments in transport and communications have paid handsome dividends to society. Specialization and division of labor increase productivity. Education provides a higher quality of labor and management. All of these together mean that we have gotten more from our inputs than we did before. This element of economic development should be stressed in contrast with capital investments which will little more than replace themselves.

III. Major Elements of Economic Development

Following this definition, or rather this concentration on one major aspect of economic development, what are the major elements to which attention should be given? In a word it emphasizes the HUMAN FACTOR. When we say this however,

there is still much left unsaid. Individuals must have knowledge, opportunities and incentives, if their inherent qualities are to be adequately stimulated and applied to the process. To these attention is now directed.

A. Specialization, exchange and division of labor.

That the appropriate division of labor increases productivity is an old and well-known principle of economics which need not be argued here. In order to permit the division of labor to occur, however, it is necessary to have:

1. A system of transportation;
2. Communication both of production and price information;
3. A commercialization of agriculture will follow if the necessary market structure for inputs and products is possible; and
4. There will be an increasing interdependence of farm and city, of farmers with each other, of agriculture and industry and of the national and international economies.

In a sense these are permissive factors, i.e. they permit efficiency to increase but do not guarantee that it will.

B. Technological advance.

Modern agriculture and industry are becoming increasingly complex. Specialization makes it possible for a farmer or factory manager to become familiar with most of the appropriate technology. To insure maximum rates of development this cannot be left to chance. Many products in a firm often mean less advanced technology.

1. Creation of new technology—which is appropriate to the culture, cost-price ratios and other economic conditions can be accomplished publicly or privately.
2. The distribution of existing and new technical information—is a major problem. Privately developed technology is often guarded. But even public information is of no use unless it is channeled effectively into both the mind and the operations of the farm operator.
3. Means must be provided—Knowledge of new seed or fertilizer uses are useless unless the seeds and fertilizer are available in places where the farmer lives and markets. He needs capital or credit which will enable him to apply the technology, without paying an interest which transfers all the resultant profit to the money lender. Capital and capital items in small amounts and well distributed appear to have a high priority, although some in the United States argue that in the South the expansion must be in fairly large jumps, thus involving moderately large amounts of capital. The scale of operations and nature of the expansion line should be explored.
4. Incentives are needed—These include prices to the farmer which encourage efficiency and technical advance, a personal attitude which values extra income as worth while and a tenure system and credit system which makes it possible for the operator to receive the fruits of his effort—an early JCRR program and of land reform programs.

C. Higher quality inputs.

This and the next item are more difficult to define, at least in detail.

1. Better and more complete training and education programs for the human factor in production. It is not just education but education appropriate to the functions to be performed, and some at least must be done after the person has made a job and occupation commitment.
2. Advancing technology in industry can provide better or cheaper tools and implements to agriculture thus expanding output per unit of capital input.
3. Specialization and good farm management can lead to a pattern of resources and operations which are more productive than earlier patterns.

D. Development of entrepreneurship.

There are many underdeveloped countries in which too few people are available capable of undertaking the management function. Here even indifferently operated plantations are more productive than small individual holdings. The modern education philosophy of "learning by doing" is suggestive but may not be sufficient in some countries. The development of entrepreneurs is a subtle and little understood phenomenon. It involves:

1. Individuals willing to take risks with their capital and family welfare.
2. An economic system that provides rewards to the risk-taker. (This does not infer that all the gains need necessarily remain with the entrepreneur.)
3. A social responsibility on the part of those who have benefitted to the society of which they are a part. Ostentation is a sure way to bring envy and often adjustments in the economic system which destroy the opportunities.

E. Conflict between current welfare and capital investment.

There are many things which can be said here. Much of it is speculation, nearly all involve political and social decisions which must be made by the individual countries. For our purposes it is sufficient to point out that higher levels of living increase the marginal efficiency of capital and reduce its supply. It argues for making capital investments go as far as possible.

F. Population problems.

Without elaboration we should mention that a high rate of population increase adds to the capital accumulation and development problems.

IV. Major Emphasis in Development

As I look at the economic development problems in this kind of setting, it appears that major emphasis should be given to the big jumps in productivity with a concentration of effort.

The dam, or fertilizer plant or irrigation project which will only pay 10 to 15 percent return per year on the capital should be put aside for projects which will pay 50, 100 and 200 percent return once they are in operation. It would appear that colleges of agriculture with practical emphasis, short courses for farmers, improved agricultural credit and tenure structures and other items which provide means and

incentives to the individual farmer should be emphasized. Similar or different items may be appropriate for the industrial sector.

With the high return items selected the upward spiral of development can more easily be stimulated and new opportunities developed.

As I close let me make clear that I realize that many items mentioned already are well under way or in full development here in Taiwan. I hope this discussion emphasizes the importance of much that you have already accomplished.