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The Role of Agriculture in Integrated Rural Development Projects. The Experience of the World Bank

During the last decade, the World Bank has made a substantial adjustment in the scale and direction of its assistance for agriculture and rural activities. The Bank is at present the largest single source of external funds for investment in the rural sector, contributing some five percent of the annual investment by the public sector in the agriculture of its client countries. Since 1946, when its lending operations began, the Bank has lent nearly $8 billion for agriculture and rural development. In as much as each dollar invested by the Bank is generally matched by an equivalent investment from domestic resources, the Bank has in the past 30 years contributed to and participated in the financing of some $16 billion in project-oriented programs in agriculture and rural development. Although this is a substantial sum, it represents only a marginal contribution to the total investment in agriculture that was made during those years. The contribution of the Bank has increased substantially in recent years, however, rising from an average of $120 million a year in the mid-1960s to more than $1·6 billion a year in the mid-1970s.

Through the years the Bank's approach to the rural sector has changed, as have the nature and design of Bank-financed projects, reflecting the significant changes which have taken place in thinking about and attitudes toward agricultural and rural development in particular and economic development in general. In the early 1950s the Bank made few loans for agricultural development, because the development process was assumed to revolve around the transfer of real resources from rich nations to poor nations, with emphasis on closing the foreign-exchange gap; it was presumed that investment in the modern, capital-intensive sector was what would bring about rapid growth. Few investment opportunities were recognized in agriculture except in the export sector, and the capital requirements for agriculture were believed to be small in any event. Further, agriculture was given a low priority because a lack of demand was assumed to be the major constraint upon increased agricultural output; it was reasoned that increased investment in the nonagricultural sector would be required to generate higher nonagricultural incomes,

* The World Bank. The views expressed in this paper are those of the author and do not necessarily represent the views of the World Bank.

which in turn would increase demand in the agricultural sector, thereby stimulating underemployed capacity to greater output.

Subsequently, agricultural growth was recognized as a necessary, though not sufficient, condition for economic development. At the same time, there was a growing awareness of shortage of capital in the rural sector. New technological advances made it clear that there was scope for high-yielding investments in agriculture. The Bank responded to these new views by increasing both the volume of its investments in agriculture and the share of its total investments that went into agriculture. Lending for agriculture rose from a total of $451 million during the period 1948–63 to $621 million during the period 1964–68, or from 8·5 percent to 12·3 percent of all lending. The emphasis, though, continued to be on closing the resource gap, with consequent stress on investments in capital-intensive projects; thus 75 percent of all investment was allocated to large-scale irrigation projects.

It soon became apparent that capital works, however well engineered, did not in themselves lead to increased output. Agricultural development necessitated complementary changes at the farm level, and the promotion of agriculture required dealing with complex systems both within and outside the rural sector. The Bank therefore broadened its lending, shifting its direction toward the encouragement of technological change at the farm level. Its program now included the financing of research, extension services, training facilities, marketing, credit, rural transportation, and small-scale irrigation.

The emphasis was thus shifted from lending for "off-farm" infrastructure (such as irrigation projects) to rural credit as a means by which farmers could obtain capital to finance "on-farm" investment. In most instances loans were channelled through specialized agricultural development banks or established commerical banks. Ideally such projects fulfilled three related aims: they transferred resources, they led to increased production, and they contributed to the overall growth of the economy.

These loans also had their limitations. A sample of five loans made during this period for livestock development indicates that the average loan per farmer was in excess of $25,000. The loans were accompanied, however, by insignificant employment effects, the average number of beneficiaries being only one or two families from each sub-loan. Concern with issues related to employment contributed to the next stage in the evolution of lending by the Bank in the rural sector, which was a shift in emphasis toward rural development. This shift was influenced greatly by the work of social scientists – many of whom are here today – who pointed out that while economic growth had taken place in most countries, large groups of persons, particularly in rural areas, were not sharing in the benefits of that growth. Rural poverty appeared not to be diminishing but rather to be increasing. Demographers and labor economists made it clear that the developing countries of today could not in the short or medium term repeat the pattern of development that most of the developed world had followed – namely, that of increasing the intensity of capital investment in agriculture, thereby contributing to the displacement of labor. Capital was too short and alternative employment opportunities were too limited for the developing countries to follow such a pattern.

Analyses of the distribution of capital expenditures for social services and facilities indicated that – in all countries – the rural areas were far less well endowed than urban areas, according to the usual indicators of social welfare. Rural areas had fewer schools, hospitals, teachers, and doctors per capita than did urban areas. Despite migration, furthermore, rapid increases in population, combined with low levels of both on-farm and off-farm investment in rural areas, were bringing about greater underemployment, and substantial numbers of unemployed, landless laborers were emerging, especially in Asia.

Fortunately, at the time these studies were undertaken, there was a growing literature by agricultural economists on the theory of small-farm production and its relation to national development. The analyses of these economists showed that small farms were both labor-intensive and productive. All this led to a call for a new approach to agricultural and rural development. The new approach would have to be focused on the traditional sector and on ways of providing the credit and the technical and material inputs which would make rural labor more productive. New high-yielding varieties of such staples as rice and wheat seemed to provide a technological basis for this change, since they could be used by the small farmer both for his subsistence and for the generation of cash income. The traditional, small-farm sector would have to become the producer of an agricultural surplus rather than the provider of surplus labor, as it had been in the past.

The Bank thus adopted a new approach to one aspect of the problem of rural poverty to guide its lending in the rural sector. The emphasis was shifted from efforts aimed at promoting simple growth to an attempt to improve the output of the small farmer, principally by increasing those investments that would benefit lower-income groups in the rural areas. This effort has become the main focus of the present approach of the Bank to rural development, although loans are still made for larger, more capital-intensive agricultural undertakings when they can be justified on the basis of other criteria development.

The Bank's present approach to rural development has a sound economic basis: recognition of the fact that the mechanism implied by the traditional labor-surplus, two-sector model is incapable of solving the problems of the rural sector in the short-to-medium term. The problems of poverty in rural areas cannot, of course, be solved in the rural areas alone; a dynamic, expanding non-agricultural sector is essential for providing employment opportunities for an increasing population. So long as the small farmers and low-income groups in the rural areas are unproductive, however, they can contribute little toward solving problems of malnutrition or inadequate food production, in either rural areas or the towns – and according to our estimates there are more than 100 million holders of less than five hectares of land and close to a billion rural inhabitants with average per capita incomes of less than $100. This is why increasing the on-farm productivity of small-holders remains a central – though not the exclusive – element in the Bank's lending program in the rural sector.

1. THE CONCEPT OF INTEGRATED RURAL DEVELOPMENT

Most of those who live in rural areas are still to varying degrees dependent on agriculture for their livelihood. Consequently, any approach to development in the rural areas has to be concerned largely with agriculture. Rural development on the other hand, means more than just agricultural development; exactly what it does mean, though, has been the subject of much debate and little agreement – a fact that can be illustrated by recent experience within the United Nations.

A recent study made for the UN indicated that five of the ten principal agencies of the United Nations concerned with various aspects of economic and social development had no practical definition of rural development. Only two of these ten agencies had any means of monitoring the percentage of their activities that might be classified as "rural development" or of assessing the results of those activities. It was clear that the term "rural development" has different meanings in different institutions; the study indicated that the term tends to evoke involuntary responses that vary widely from institution to institution and even among individuals within the same institution. This finding applies with even greater force when the adjective "integrated" is appended to rural development. The word "integration" seems to be subject to interpretations that range from broad philosophical concepts to micro-economic issues of linkages within projects.

The World Bank has devoted a great deal of thought to the concept and meaning of rural development, as is reflected in the policy paper on rural development prepared in 1974. In the course of the preparation of that paper, and in subsequent discussions, it was agreed – in the light of the analysis mentioned earlier and of subsequent research – that any approach to rural development must be addressed to the most urgent problem in the rural areas, the problem of rural poverty. It was therefore agreed that concentrated attention to projects which directly and in very large measure aid the rural poor must be a common element of all approaches to rural development. In its policy paper the Bank defined the rural poor – the target group to be aided – as those placed by their annual incomes in the lowest income groups defined on the basis of a mixture of absolute and relative poverty criteria, according to the special circumstances of each country. How one defines and approaches the rural poor varies greatly from institution to institution, but in the present-day vocabulary of international institutions the term "rural development" now implies, among other things, a focus on poverty. Thus we have an interesting phenomenon in that the definition of a functional subject centers around an income criterion.

The Bank's rural development policy paper included another concept which has gained broad acceptance, namely that the rural poor represent a reservoir of untapped talent which has been left out of the mainstream of development. In order for this group to contribute to the development process, they have to be more productive than they have been in the past; increased productivity and higher incomes for the target group are implicit in the rural development program. By the same token, rural development also implies giving the target group the opportunity to enjoy the benefits of development: improved education, health, and nutrition, among other things.

The notion of "integrated" rural development adds a further dimension to the focus on poverty. In a broad sense the process of rural development must integrate the rural poor into the social, political, and economic life of a country. Our concern here, however, is rather with the project-oriented concept of integration. A mix of components in rural development projects is usually justified on the grounds that a mix of investments in any given project produces a synergistic effect – the old idea that the whole is greater than the sum of its parts. Perhaps this can best be illustrated in technical terms within agriculture. The use of improved seed, fertilizer, and controlled water supply have an established relationship to plant production. It is easily demonstrated that the simultaneous use of these three inputs can produce an output greater than, let us say, the sum of the outputs that would result from using each input separately, or from using two of the inputs but not the third. In general, agricultural projects financed by the Bank have a holistic cast; increasingly they include research, extension, and provision of credit and other inputs to farmers, each component reinforcing another.

Rural development projects extend beyond agriculture, for they include such nonagricultural components as potable water supplies, shelter, rural electricity, health and educational services, and roads. A rural development project can involve only a single sector – transport, education, or agriculture, for example – or they can be multisectoral, but in either case the key features are explicit and direct orientation toward the target group. Any holistic effects of a multisectoral approach to investment would presumably arise from the interaction between investments in human capital and those having the purpose of raising rural incomes, primarily by means of increased agricultural production. The case to be made is not that healthier, better educated people use productive opportunities more effectively than would less healthy, less well educated people; it is rather that a particular pattern of investments represents a wiser use of resouces than would some different mix of investments and that part of the test has to do with the benefits realized from the interaction of the components.

Most multi-sectoral rural development projects involve a package of investments to be made within a defined area; there is a methodology derived from our theoretical considerations for providing the underpinning of the economic allocation of resources to maximize the benefits of integration. It is difficult though, to calculate any benefits of integration because of the problems of measuring any contribution of integration and attributing benefits to the various project components. This applies with special force when the mix of investments includes those that can increase output in the short run as well as those intended to improve human capital in the long run.

A close analysis of the components of integrated projects reveals a further problem in developing criteria for a optimal mix. Most integrated projects usually consist of two sets of components chosen on the basis of two different sets of criteria. The first component, which might be called the directly productive element, is intended to raise incomes in the short and medium term.

This component usually includes such items as land clearance, minor irrigation, credit to finance technological improvements in farm operation, and so forth. In practice, the other project-related components are usually included on an entirely different basis largely because of the difficulties of measuring the contribution of each component within a project. Thus, multisectoral projects which include supplying potable water or health and educational facilities tend to include these investments in a program, on the basis of providing services to reach some standard established in relation to the resources available either nationally or regionally. This standard is usually based on a "minimum need" criterion. These projects, then, are not fully integrated in the narrow sense of the term, especially since the components are included on the basis of more than one set of criteria.

Once the criteria of need are seen to be part of a multisectoral project, there is little merit in using arbitrary international guidelines in developing the most appropriate mix of components within such a project. The mix between production and social overhead in a project can well vary according to national levels of income. Some countries have developed much lower cost methods of delivering services, such as health, than others so that some poorer countries have been able to provide a high level of services at a lower cost than some of the wealthier countries. Nonetheless, richer countries will, in general, be able to aim for a much more favorable achievement as registered by social indicators than will poor countries – a larger number of doctors or schools per region, for example. This disparity is further compounded by the extent and availability of skilled and semi-skilled persons and by the existing rural infrastructure. The experience of the Bank has indicated clearly that the mix of components in a country such as Malaysia should differ considerably from that in a country such as Mali; in Malaysia social infrastructure and a relatively high standard of rural housing services are emphasized; in Mali the emphasis is on functional literacy and increased farm production. The simple fact is that the poorer countries must be more concerned than other countries with providing basic necessities for their peoples and allocating resources to those activities in the rural areas which are immediately productive.

A further project-related difficulty is that comprehensive, or multisectoral, rural development projects are more difficult to design and to administer than single-sector projects. Our experience also indicates that they are more difficult to implement. Most government departments are organized along functional lines, such as agriculture, forestry, fisheries, health, public works, education, and small-scale industry. Few governments have operational responsibilities for multisectoral rural development. Consequently, projects that deal with rural development tend to require some horizontal integration of administrative effort, thus necessitating a break with traditional patterns, in many instances, and generating conflict between line departments that provide sectoral services and those that are interested in promoting intersectoral coordination at the project level.

Clearly there are conceptual qualitative and administrative problems which tend to conflict with the idea that an integrated multisectoral project leads to a more efficient use of resources by virtue of a holistic effect. These problems should not be allowed to obscure the value of a comprehensive approach to development of the rural areas. Such an approach, though, would presumably be in the form of a national or regional plan or program with a mix of soundly oriented investments not based exclusively on criteria related to any presumed short-run effect on production. There should be no need to rely on the presumed gains from integration of components for justification of an investment the purpose of which is to raise the level of living in a backward or poor area. These investments should be justified on other grounds, such as the meeting of acceptable minimum needs or the removal of a particular obstacle to increased production, and should be based on an integrated approach. Undoubtedly, a multifaceted or multisectoral approach has the merit of quickening the pace of change, which is the essence of rural development, but the gains from integration do not by themselves seem to justify such an approach.

To summarize the Bank's approach to rural development, it is a process intended to raise the output and incomes of the rural poor. It extends beyond agriculture, and it has the purpose of bringing the benefits of development to the rural areas, with emphasis, once more, on aiding the low-income groups or those who have been passed by in the growth process. While the Bank supports multisectoral projects, some uncertainty remains about justifying such an approach solely on the grounds that a mix of components will lead to better results because of the effects of integration on the use of resources. In our view, a well-designed rural development project should reach large numbers of low-income producers; should be able to raise the incomes of this group; and should be replicable, especially with regard to the costs involved. It should be comprehensive in scope where it is clear that the nonagricultural components are consistent with national, regional, and sectoral guidelines.

2. BANK EXPERIENCE

2.1. *The General Environment*

The World Bank, like many other international agencies, is a relative newcomer to the field of rural development. Other external donors, notably some of the bilateral agencies, have had much wider experience in this general area than the Bank has had. Many governments, such as those of India, Tanzania, Mexico, and Korea, were active in providing poverty-oriented comprehensive rural development for many years before the Bank took any special interest in doing so. As latecomers we have been able to learn from the experience of others. Perhaps the most important lesson that we have learned is the importance of including productivity and opportunities for raising incomes in projects as a means of ensuring their viability and gaining popular support for them. We have also learned from our own experience in some projects. While it is too soon to assess their full impact, we believe that we have gained from them some insights into problems of rural development, especially problems of raising the incomes of small-scale producers, which are the focus of the following discussion.

Our experience so far indicates that projects seldom bring the desired results if the environment is not conducive to success. The environment is conditioned by a host of social, economic, physical and cultural factors. I would like to emphasize two of these factors; the first is related to the low-income farm sector, and the second influences the entire agricultural process.

The first and most significant factor influencing the general environment for rural development is political (and hence national) commitment to a policy of making the rural sectors more productive and, especially, of involving small farmers in development. One indication of the degree of such commitment is the amount of the budgetary allocations for rural development – though it is difficult to isolate these allocations when looking at budget documents. It appears, though, that most governments fall into one of three categories: those that are committed to assisting low-income groups in the rural areas; those that are receptive to the idea of doing something but are not in a position to mount a program; and those that deny that there is any need of special assistance for the low-income groups. An analysis of budget allocations in the principal developing countries suggests that perhaps half the governments are increasing their investments in rural development.

Another element of commitment that affects the environment of a project is the attitude of the local bureaucracy. This is a vital factor in most rural development projects, since they usually involve local action through community participation. Most programs and projects involve decentralized decision-making and administrative functions. Consequently, a great deal of agricultural and operational responsibility tends to devolve upon bureaucrats at the field level. There is ample experience to indicate how significant the attitudes of local officials are in influencing the course of rural development projects. Such officials usually have responsibility for initiating activities, for organizing and mobilizing local resources, and for helping in the management of operations. One mark of the commitment of governments to rural development is, or course, the extent to which they assign capable officials to work on rural development and give them adequate support in the form of attractive terms of service – something that only a few governments, notably those of Mexico, Korea, and India, do. Thailand, to give another example, gives special allowances to field-level personnel of its Institute for Rubber Replanting.

Our experience indicates clearly that economic incentives determined by the terms of trade for agriculture and related price and fiscal policies constitute another factor in the outcome of all agricultural projects including rural development projects. The best-organised projects have encountered difficulties when the structure of costs and prices has not provided adequate incentive to producers, both large and small, to increase their output. This is true in both centrally planned and free-market economies. There is some evidence that an increasing number of governments, especially in Asia, are adopting price policies that are more favorable to all agriculture (and rural development). Nonetheless, there are still many governments, both in Latin America and Africa, where the prevailing price policies are creating a poor environment for agriculture and rural development of any kind.

2.2. *The Project Approach*

Much of the effort in rural development projects of the Bank has been directed towards increasing the output and incomes of low-income producers, often by means of the introduction and expansion of technological change at the farm level. The assumption underlying this effort is that three basic conditions must be met if changes are to be brought about: producers must know how to increase their output, they must have access to the means of increasing their output, and they must have the incentive to make the effort and accept the risk associated with increasing their output. Agriculture is atomistic in the sense that there are many producers, each with little influence over the prices they receive (though improved marketing techniques can often raise prices at the farm gate). Consequently, most projects tend to be focused on cost-effective ways and means of delivering to farmers the goods and services that they need. These include the inputs that investment in infrastructure, such as water and transport, will provide.

Most programs and projects designed to help farmers depend to a large extent on support services provided by institutions away from the farm – institutions that provide information, credit, technical inputs, and marketing and transport services, for example. In many countries – indeed in most countries – these institutions are organized in such a way that they serve large-scale producers primarily. Frequently this is a politically determined matter of policy; also the larger farmers and the suppliers of agricultural inputs often have common interests. Sometimes an institutional bias towards larger producers exists simply because management finds it to be easier, safer, less costly, and less troublesome to have a clientele of larger producers. Be that as it may, the poorer producers with small holdings are seldom the primary beneficiaries of programs designed to aid farmers in becoming more productive. Thus the heart of any program aimed at helping small farmers to be more productive must be the creation of institutions that will undertake those tasks which are of assistance to small producers.

The Bank expects to increase substantially the volume of funds committed to projects designed to strengthen critical rural support services, thereby breaking the contraints on production and, in many circumstances, permitting more effective use of physical infrastructure which is already in place. The attention given by the Bank to command area development in already irrigated areas is part of this effort. Gains in production from such programs could be substantial. In India possibly as many as 15 to 20 million hectares of irrigated lands are producing at only half their potential of perhaps two tons per hectare. In large parts of the rainfed grain-producing areas of West Africa, an increase in output of less than one percent a year, attainable with known technology but requiring stronger support services to farmers than they now receive, would permit increased self-sufficiency in a wider range of crops which can be produced locally.

Programs and projects intended to help low-income producers must be designed and implemented with that end in view. A first requirement for any such program is that there be a clear understanding and identification of the target group. It is relatively easy to establish an objective measure of a poverty datum line; those measures that have been used range from refined estimates based on the critical level of consumption and minimum nutritional requirements of a family to crude estimates, such as half the average family income. Once a poverty datum has been determined, it can be translated into some appropriate yardstick – the size of a holding under various conditions, for instance which can generate a size-of-holding criterion for the minimum income level of the target group. Other criteria which might be used are: a measure of a farmer's assets or the number of laborers employed. Whatever criterion is used will provide the upper limit of income of the target group and permit a complete enumeration of the group in the project area.

In some situations structural change may be a necessary precondition for rural development. The most important kind of structural change in the rural sector is the redistribution of land. It may be necessary to change the land-based power structure in a society before much can be done about political commitment to rural development and the scope for local participation in it. From a more limited perspective, there are also situations in which the redistribution of land can bring idle land into production by making it available to underemployed rural laborers. While our experience indicates that substantial rural development projects can be undertaken to the benefit of large numbers in the target group even in situations in which the distribution of land is skewed, the Bank encourages and supports the efforts of borrowers to improve tenurial arrangements.

Experience confirms the fact that tenurial arrangements in the project area have an important bearing on the success of projects. The reason is that all projects alter the distribution of gains from the land; unless there are adequate safeguards built into the project the weakest landholders are invariably at a disadvantage. A project which is in an area of smallholders who own and operate their own land or who have secure rights to land tends to benefit the producers. In areas of absentee ownership, however, in which the land is operated by sharecroppers or by tenants who do not have security, the benefits from increased investments and higher output are not necessarily realized by the producer. Experience has shown that when projects have provided profitable opportunities, tenants without secure leases have been evicted and replaced by day labor or machines. Some projects in neighboring Ethiopia provide examples of this phenomenon. Also, the introduction of new technologies under standard crop-sharing arrangements which are based on profit-sharing or fixed proportional crop shares has often – though not always – led to a disproportionate increase in returns to the landowners.

If there is support for the objectives of rural development, however, it is possible to design projects that will benefit smallholders (substantially if not exclusively) without the necessity of substantial structural change. This is especially true in situations in which land is being newly developed and resettled. Examples of such projects include:

Irrigation projects. In recent years, increasing attention has been given to designing irrigation projects in such a way that large numbers of smallholders can benefit. Many governments now specify limits on the amount of land that can be held by a producer who stands to benefit from the irrigation system.

The public costs of these projects tend to be higher because of the necessity of providing a more elaborate and extensive distribution system for carrying the water to a large number of small farms.

Smallholders schemes. The Bank has participated in the design and implementation of projects for the production by smallholders of crops which were formerly grown almost exclusively under the plantation systems; these include rubber, tea, sugar, and oil palm. The focal point of many of these projects is the processing plant, which requires a guaranteed supply of raw materials for full utilization of its capacity and realization of economies of scale. Many had come to believe that only large plantations could ensure a steady flow of raw materials to these plants, but it has been demonstrated through experience in many projects – including the Kenya Tea Development Authority and the Malaysian Federal Land Development Authority – that smallholders can produce quality products that were formerly considered the province of centrally managed estates.

Land settlement projects. The Bank has financed a fairly large number of settlement projects, principally in Malaysia and South America. Settlers from low-income groups have benefited from these projects, many of which provide all the infrastructure, such as housing, roads, and social facilities that the settlers need. The cost per beneficiary family varies from US$850 to US$28,000 (in 1975 dollars); the cost per hectare is 56 times greater in the most expensive project than in the least expensive.

As a general rule, though, these projects do not reach large numbers of rural people. Functional projects and area developments are the most widely used among projects of the general type with the cost ranging from $1,000 to $33,000 per family, averaging around $1,300. A *functional project* is one which provides an input or technical package to the target group. A program to provide credit either in kind or in cash to producers is an example of a functional project. In this instance, the target group is usually defined by size of holdings or fixed assets and income (often expressed in multiples of the minimum wage). In the case of *area development projects* the target group as such is not specified. Instead, these projects are for the purpose of developing large areas, which are chosen because per capita incomes are below average and the rating by social indicators is low. The underlying assumption of the area approach, which is typified by the introduction of infrastructure and rural services, is that most of the benefits (though not all) will go to the target group. In the main, most people who live in areas in which average incomes are low and which are generally deprived of social infrastructure tend to be poor themselves.

One of the most ambitious national programs that is directed towards rural poverty areas and supported by the Bank is the $1·2 billion effort now underway in Mexico. The program of the Government is to channel additional investments into microregions by improving the administrative operations of its existing planning and execution system through the establishment of coordinating machinery in the Ministry of the Presidency. The approach is three-fold:

(1) Increase investments and services of existing agencies and direct

them towards selected poor rural microregions with productive potential;

(2) Decentralize planning and, especially, execution so that both are performed at state and local levels; and

(3) encourage participation in the planning and execution process at the village and *ejido* level.

To this end, a new system of planning and delivery has been developed that embraces existing government agencies. Through this system, extra resources are allocated to agencies in poverty areas – areas which have traditionally been bypassed by the "nominal" programs of these agencies. The basic unit of these selected poor areas is defined, for purposes of investment programming, as a microregion comprising from two to seven contiguous municipalities within a single state. The average microregion contains about 50,000 persons living in three municipalities.

The experience of the Bank with the range of projects in which we have participated has led us to several conclusions. The first is that it is possible to design projects that will assist large numbers of rural poor to expand production and increase their incomes; there are significant qualifications however:

(1) Farmers and producers of all kinds will use new technology only when it is profitable for them to do so. The new high-yielding varieties of rice, maize, and wheat give high returns when they are used with fertilizer and water; many small producers have therefore adopted this technology with gratifying results. We have become very much aware, however, that no such technology is available in many ecological zones of the world, especially in the rainfed areas which contain most of the world's farmers and where less common cereals and root crops are important. Furthermore, technologies developed for a specific location require adaption before they can be employed elsewhere, even when environmental differences may not appear significant. Many Bank-supported projects involve "stabilizing" agriculture by persuading producers to change from shifting cultivation to sedentary agriculture. Much of this is being done under conditions in which considerable risk is involved because of the limitation of the available technology. It is thus important that there be no diminution of efforts to develop high-yielding technologies for commodities grown in the rainfed areas. Appropriate technologies for dealing with problems such as soil depletion also need to be developed.

(2) Many of the poor farmers of the world live in areas in which the resource base has been eroded by deforestation and overexploitation. There is little in the existing array of technologies that can deal with this problem effectively.

(3) It is extremely difficult to develop and sustain low-cost delivery systems for agricultural support services. Some progress is being made, however, in the organization of extension services, for example. One approach which we consider to be promising and which is now embodied in some 15 Bank-assisted projects, involves close links between research and extension, careful selection of high-yielding agricultural practices, concentration of efforts in favorably situated agricultural areas, precise work programming of field-level staff, and regular meetings with selected contact farmers.

(4) Much more thought and effort is needed in order to find cost-effective ways of delivering goods and services to large numbers of low-income producers. Low-cost, effective credit programs are urgently needed. Lending to large-scale producers is in general less costly than lending to small-scale producers; the unit cost of the loans may be the same but the return is much higher on a large loan than on a smaller one. It is estimated that the administrative costs of loans to large producers are often in the neighborhood of 3 or 4 percent of outstanding loans; administrative costs of loans that pass from the government through such groups as cooperatives to small producers tend to range from 10 to 20 percent. These costs do not include any charge for the use of capital, so an interest rate for small farmers that would cover both capital and administrative costs could be as high as 30 percent.

Despite all efforts, including the shifting of the administrative burden at the local level to cooperatives, there seems little prospect that costs can be reduced to levels comparable to those of handling loans to larger farmers. Thus, governments (and bankers) interested in helping small farmers through credit schemes will have to reconcile themselves to subsidizing the administrative costs of these schemes if they continue to lend through systems designed to help large-scale producers.

Many innovations have been made in the effort to reduce administrative costs by taking account of the fact that the major clients will be small-scale producers. Some banks have eased their requirements for small borrowers, basing creditworthiness on reputation rather than requiring collateral with the associated costs of recording titles. Other lending institutions are providing credit to villages as units; the villages then take responsibility collectively for the repayment of loans. Our experience is that costs can be reduced when there are especially tailored procedures to facilitate lending to small producers.

Another issue is that of local participation. In practice villagers are rarely consulted. Commitments to rural development are initiated at central levels. Budgets are centrally determined. Decisions are made by central planners. Obtaining full participation, not only by villagers but also by local and state bodies, often means reversing trends toward centralization. There are some signs that these trends are being reversed in a growing number of countries. In our view local participation is essential if a project is to have the support of the community and if the benefits of the project are to be realized by those for whom they are intended. Local participation in decision-making is often the principal safeguard against leakage of funds; in the final analysis, though, once funds have been committed, who has control over the use of them frequently depends on the nature of the local power structure. This in turn brings me back to the importance of involving the local bureaucracy in all matters relating to rural development.

A further point is that rural development projects have the purpose of providing opportunities for the target group to become productive. Most projects are designed with the assumption that the numbers of those who will avail themselves of opportunities to raise their incomes will increase steadily. This has not always been the case. The difference in response to the opportunities that have been provided is one of the more interesting and puzzling aspects of the implementation of rural development projects. In some situations the opportunities are seized by 20 percent of the producers in the first year and by 10 percent more in each of the next four or five years. In other situations, the pattern to be observed is the familiar one of a slow beginning followed by a rapid acceleration of adoption of new technology. In still other situations there is a slow but steady increase, with roughly the same number of additional producers taking up the new technology each year.

The rate of take-up and the associated issue of risk and uncertainty in decision-making are interesting in themselves. Clearly the element of risk in varying situations in rural development projects needs to be analyzed and understood better than it is now. The rate of take-up, moreover, has a bearing on the rate of increase in output and incomes. This in turn influences the rate of return on a project. Thus, in many respects this aspect of rural development is the crucial one. It is also the aspect about which the least seems to be known It is therefore appropriate that the question of the way in which decisions are made in agriculture is the topic of this conference.

Finally we must consider the fiscal impact of projects. Few governments embarking on large-scale rural development programs are aware of the long-term budgetary effects of their programs. In many cases, major portions of the initial investment are from external sources. But detailed forecasts for financing and administering the operation and maintenance of such investments are rarely made, and no resources are allocated for maintenance. Thus canal systems silt up, rural roads wash out, water pumps break down, health clinics are not staffed, extension vehicles break down, and deliveries of fertilizer are not sustained. Our experience is that if fiscal and administrative problems are to be overcome, rural development programs must from the outset be designed to maximize the local financing and maintenance of rural development investments. By way of illustration, in several countries local committees for the collection of fees for the operation and maintenance of the water supply, hire a local villager and pay him to maintain the pumps and reticulation system. When he needs to he can call upon the staff of the central water-supply agency for technical help, but the principle of local operation and maintenance is nonetheless established.

In conclusion, I would like to review three major themes of this paper and to mention some areas in which we think that additional research and attention to policy is needed.

The Bank's lending for agriculture has shifted in emphasis and is now focused on lending for small farmers. This is part of the Bank's policy for promoting rural development where rural development is defined as having an antipoverty focus.

It is necessary that there be a suitably encouraging environment before there can be successful rural development. Such an environment requires that both political and economic conditions be favorable. Given a suitable environment it is possible to design and implement projects which will fulfil the objectives of raising the output and incomes of low-income producers. These projects include irrigation schemes, programs for smallholders, settlement schemes, and functional and area projects with the more general provision of rural credit and infrastructure.

The Bank's experience indicates we need to examine very critically the notion that a multi-sectoral project generates gains to the rural community above those which would arise from an integrated approach of single sector projects. We need to find practicable methods to measure what happens to rural welfare when we alter the relative sizes of individual project components; we also need to examine the proposition that local participation during the project identification stage both reduces project preparation costs and results in a better project mix.

The experience of the Bank so far indicates that there is still a need for the development of suitable yield-increasing technology for agriculture in many parts of the world and that there are few opportunities for lowering the costs of delivery systems when these costs are built upon systems intended to help large producers. We need to study alternative systems and to learn which are the most cost effective among the array of systems now being tested in many different projects. We also need to know much more about the principles and patterns of behavior of small-scale producers and what influences the rate at which they accept innovations.

Rural development is a slow process and we need to learn from our experience. To do this we need to develop mechanisms for monitoring and evaluation which can provide guidance for effective implementation of projects and can help all of us learn more about what constitutes a viable rural development project. We are finding that the whole subject of designing suitable project monitoring systems is a challenge to us and to the academic community at large.

DISCUSSION OPENING – A. A. Abdullah, *Bangladesh*

The title of Dr. Yudelman's paper is somewhat misleading. It is too unassuming for it comes close, in fact, to being an exposition of a theory of rural development. It is also misleading in that it gives rather little space to the problems of defining, formulating and implementing an integrated programme.

A selective reconstruction of Dr. Yudelman's central themes might be as follows.

He starts by identifying a double shift in the Bank's development philosophy – first, from industry to agriculture, and second, within agriculture, from projects concerned solely with output growth to projects specifically directed to the alleviation of the poverty of some defined target group. This target group is defined in terms of income, as the "rural poor". In his words "Any approach to rural development must be addressed to the most urgent problem in the rural sector – the problem of rural poverty".

By "integrated" programmes the author seems to understand programmes which have components that cannot be directly justified in terms of their contribution to output growth. Thus to justify these components one has to resort to arguments based on indirect productivity effects – good drinking water prevents manhour losses and lowered efficiency through disease – or one has to base oneself on minimum-need welfare criteria. In the author's opinion the second course is preferable as being more honest and more logical.

Dr. Yudelman recognizes that under certain circumstances the power structure at the local as well as national level may obstruct the implementation of such a development policy, and that substantial restructuring of society – involving, in particular, land reforms – may be a prerequisite for meaningful development effort.

One must thus identify the following major theme in Dr. Yudelman's exposition

(a) rejection of the ideas of industry as the "engine of growth";
(b) rejection of a commitment to output expansion that does not explicitly address itself to the problems of the rural poor;
(c) identifying a "target group" in terms of income levels and designing all programmes so as to have a direct impact on this group's well-being;
(d) integrated programmes as tools of social welfare; and
(e) the role of local and, perhaps, national power structures in blocking and distorting developments efforts.

In the following I shall discuss each of the above in turn.

The primacy of agriculture

The industry versus agriculture controversy is an old one and has appeared already in this conference. It was the pivot, for example, of the Soviet industrialization debate. Dr. Yudelman treats this debate as essentially resolved in favour of agriculture, at least for the purposes of short and medium-term policy formulation. I do not think it is a meaningless compromise formula to speak of an integrated approach to development, in this respect, also one that would stress equally both industry and agriculture, and stress in particular the linkages between them. While industrialization can be brought up short by an agricultural sector that refuses to get moving, there is also the possibility that agriculture will stagnate if faced with a stagnant industry, unless agriculture becomes essentially world-market orientated, thus giving rise to what Samir Amin has called "disarticulated development".

From output expansion to poverty eradication

An affirmation of the human content of development, is certainly welcome – a better life for people is what development is all about. However, on this point there is a certain ambiguity in Dr. Yudelman's exposition. He seems to be talking about two different things, but believing that he is talking about the same thing. The two things are:

(a) a shift from an "elite farmer strategy" to one based on the small farmer, and

(b) a shift from a pure growth strategy to an anti-poverty strategy.

It appears indeed that for the author, and one presumes for the Bank also, the action consequences of (b) are exhausted by (a). Now, as has been pointed out, the small farmers are poor, but they are not the poorest. A true concern with poverty should lead one to concentrate, not on the small farmer, but on the landless wage-labourer – a growing multitude in most poor countries. True, there is not much that the Bank can do to initiate projects that will help this class – but this is equally true of small farmer programmes.

My own belief is that the shift to the small farmer strategy comes, not so much from an increasing concern with the rural poor, as from a growing realization that the elite farmer strategy would succeed in raising output and producitivity only in very limited areas where conditions were already propitious for the emergence of a robust capitalist sector in agriculture. Given the small average size of holdings and the fragmented nature of holdings, and also, perhaps, a tendency among well-off farmers to satisfice rather than maximize, the base for a take-off via the elite farmer strategy simply did not exist in most poor countries. In any case, what is relevant is not the question of motives, but of workability. Is the small farmer strategy going to produce growth at an acceptable social cost?

The "target group"

I have reservations about this notion of "target groups", particularly when it is produced to define the group by a minimum income criterion. I think Dr. Yudelman is wrong when he says, "It is relatively easy to establish an objective measure of a poverty datum line." (p. 452) I would suggest that all poverty lines are arbitrary. One can, of course, easily name an income level so low that anyone earning less than that must be poor, and another level such that anyone having a higher income cannot be poor. We would have these two coincided, but in most cases there will be a very large gap between them.

More fundamentally, defining a class of "rural poor" represents an act of illegitimate aggregation – illegitimate from the viewpoint of social theory and analysis. The small farmer may be as poor as – or even poorer than an agricultural labourer, or the artisan, petty trader, school teacher, and so on. To lump them together in one category will not help to illuminate social reality but to obscure it. It may be quite legitimate for short-term relief or welfare measures, but not for the planning of rural development. To plan for rural change we must first understand the laws of motion of the particular rural society we want to plan for. For this we need well elaborated social theory.

Integrated programmes

The idea of an integrated programme has several aspects as spelt out or implied by Dr. Yudelman. The following may be identified:-

(a) integrating – that is putting under one co-ordinated programme the supply of inputs and services needed by the small farmer to achieve higher productivity;

(b) integrating production-orientated projects with welfare projects;
(c) integrating agricultural with non-agricultural activities; and
(d) "In a broad sense, the process of rural development must integrate the rural poor into the social, political, and economic life of a country." (p. 448).

Clearly a somewhat protean concept, to be used with care. In practice "integrated" has mostly referred to sense (a).

Item (d) represents a noble wish – one with which we can all agree – but it remains, however, a wish. Whether and under what conditions it can be fulfilled remains problematic. Perhaps we should all be more sparing of our use of the verbs "must" and "should".

Social Structures as barriers

The recognition of the role of power, vested by certain social structures in certain classes of people, in inhibiting or furthering development processes is a relatively recent phenomenon among economists. Dr. Yudelman suggests that land reform may be needed in many areas precisely to deprive certain classes of their power.

To close the circuit we should add that in situations where landed interests are an important inhibiting factor, they are also quite likely to be well represented in the government – or at least they may have the power to hold the government hostage. This is a vicious circle whose breach may involve some unpleasantness. Well-meaning pleas for reform are likely to fall on deliberately deafened ears. This happened, for example, in Bangladesh at the time when the first Five Year Plan was being drafted. Clearly there is nothing here for the World Bank to do – except perhaps to refuse to finance projects whose benefits are likely to be preempted by such entrenched landed classes. This would probably involve closer monitoring, than recipient governments are likely to welcome.

Clearly, development economics has come a long way since the days when it was believed that if you took care of industry, agriculture will take care of itself. This progress is reflected in bank terminology and to some extent, as Dr. Yudelman shows, in Bank policy. We can only hope that the process will be a continuous one.

DISCUSSION OPENING – A. Brun, *France*

Yudelman's paper is particularly welcomed for its retrospective look at the way the World Bank has modified its objectives to keep pace with thinking on economic development.

Three points are made with reference to research in agricultural economics:

(a) what is meant by an "integrated" development model? (in the context of the integrated development project) – if "integrated" means "global", what modifications are made to fit the model to a micro-region (with its problems of social change), and what direct and indirect immediate and long-term results can be expected from the alternative institutions (i.e. forms of control) set up? The data on which macro-economic models applied to a whole economy are based (social accounts, input-output model, global equilibrium relationships, etc.) are not suitable for the micro-region, particularly in terms of income distribution. Systems analysis could be used to advantage to examine the decision-making process, and local institutions, and would be worth further discussion.

(b) Two preconditions need to be fulfilled before implementing such macro-economic and micro-regional models.

(i) Consider the human element: those for whom the projects are designed. Not only are the rural poor in the developing world a reservoir of unexploited talents. There is a pool of underutilized knowledge, particularly of relevant sociological factors, which it is difficult to make the best use of. However, some work has been done in France on individual projects which is relevant to the integrated project question.[1]

(ii) interdisciplinary co-operation, since other disciplines have worked at the micro-regional level (biologists, ecologists, etc.) e.g. the research on the Vosges region in France, the main motivation for which, and results, came from an agronomist. This approach may require the economist to develop some degree of intellectual humility. His ideas and recommendations should be shared both with those for whom they are intended, and with colleagues in other disciplines. The risks involved are still less than those taken by poor farmers.[2]

(c) On evaluation and control of development projects, adequate criteria for evaluation and feedback between evaluation and the fundamental aims of the project are needed. It is too tempting to evaluate the obvious and immediate; the less tangible may be more difficult to evaluate, but also more important.

Those implementing projects may be tempted to go for results in quantity rather than quality, partly in order to justify the costs involved. This may be self-defeating, since lack of popular consultation and participation may create conditions in which these goals cannot be attained.

Finally, there is a common basis to the problems of developing countries and those of rural development in developed countries. The very existence of rural poor in the latter shows how inadequately we have achieved at home what we are promoting elsewhere. Progress to be made in analyzing and implementing rural development policy is similar in both cases. Perhaps this common element may encourage a better understanding of the relations between production and the distribution of wealth.

1. Equipe INRA-ENSSAA. *Conditions du choix de techniques de production et evolution des exploitations agricoles.* INRA-SEI 1976.
2. BRUN, A. La participation des agriculteurs au développment. *Bullétin Technique d'Information* June 1976.

Report of the general discussion

Discussion and questions centered on two main subject areas. First there were various contributions stemming from the factual content of the paper rather than its conceptual implications, mostly reinforcing the picture of the changed aims described. However, it was also stated that some countries saw a different path, with agriculture regarded as a way of life in rural areas and the question was asked how the Bank would evaluate integrated rural development projects that fell within that alternative approach.

The Bank – and other national and international agencies – were still seen as often lending too much towards capital intensive projects; probably more bottom-heavy organisations were needed to handle such projects. Emphasis on land as security, stemming from Bank operations, barred many farmers from access to credit who appeared to be in target groups. The Bank's continued insistence on conventional criteria for judging rate of return was stated to make for difficulties in application to small, subsistence farmers. Learning by doing is acceptable for "infant industries" – why not for the small farm group? Considering the contribution of livestock to income improvement, both for subsistence owners and the landless, they got too little attention from the Bank.

However, though the emphasis was given in the paper to the problems of the rural poor and the elimination of rural poverty, it was held that the main emphasis was towards smaller problems, leaving the landless labourer unaided unless employment opportunities happened to result from farmer-focussed programmes. Would there be a fourth stage of the Bank's evolution which would give emphasis to solution of the problems of the landless labourer?

Some unease about operating effectiveness seemed innate in several comments and questions. Currently the Bank's monitoring of projects did not match its control in project preparation. Thus a project designed to assist small farmers might come to be operated for the benefit of larger ones because they could meet credit-worthiness criteria. Looking forward to emphasis on the landless labourer Dr. Yudelman was asked whether he felt that the Bank could adjust its style, staffing, planning and monitoring to handle a programme focussed on his problems. Considerable satisfaction was expressed that for once the "learning process" – usually so ill-documented – had been so well described for the World Bank case.

The theme which contributors came back to again and again was the central place of the household in decision-making. The almost uniquely integrated character of the farm household was stressed and the grave lack of information abouts its operations.

The second area of emphasis was on investigational work which was judged to be needed. The main subjects were – the farm household, the role of women, inter – and intra socio-economic strata decision-making – and indeed social areas generally were particularly mentioned, again with special attention on the landless labourer. More information on the socio-economic differentiation of the rural households was asked for in order to support classification systems which would allow target groups to be effectively defined. Target groups might differ greatly from area to area. Since any rural development process implied social change – and we know all too little about social change – this was clearly seen as an important facet of research in this area.

Though the points were posed in various ways it would probably be reasonable to say that research in aspects of organisation was still seen to be needed. For example, in the way by which the diversity of organisations, some very powerful within their field, can coordinate effectively. A plea was also made that the large volume of critically valuable data in World Bank files might be made available for research purposes.*

Participants in the discussion included: H. Albrecht, *Fred. Rep. of Germany*; S. Biggs, *U.K.*; E. D. Brandao, *Brazil*; P. L. de las Casas, *Peru*; I. Hasain, *Pakistan*; K. Ohkawa, *Japan*; M. Petit, *France*; T. W. Schultz, *U.S.A.*; C. J. van der Vaeren, *Belgium*.

* This discussion was continued in Special Group No. I but no report of the further discussion was made.