

II. CONCLUSIONS AND RECOMMENDATIONS ON CAPACITY-BUILDING AREAS

The selection of industries on which to focus development primarily depends upon the resource endowment of the country concerned. Globalization has permitted countries to reach beyond the limits of their natural boundaries in order to obtain these resources. However, to draw resources from abroad will always have a price tag: the question will be whether to be paid in financial terms or through the transfer of technology or otherwise. This is why many developing countries do not have many opportunities to draw resources from anywhere but from their own natural resource endowments; in this regard, many countries in the ESCAP region may be well suited to the development and the promotion of agro-based industries.

Agro-industries are a simultaneous remedy for alleviating rural poverty by bringing rural-urban migration flows closer towards an equilibrium through the employment created and the development of rural areas.

However, the existing environment for the development of agro-industries in developing countries is not favourable. In some countries basic infrastructure requirements such as roads, electricity and water are not in place; in other countries the lack of legal and regulatory frameworks pose a constraint. In still other cases it simply may not be possible to mobilize sufficient financial or technical resources. In each country there are many areas for further improvement to facilitate the development of agro-industries into a diversified and competitive sector.

In sum, many of the capacity-building issues discussed below have a strong interrelationship; thus, their governing strategy in this age of rapid globalization should encompass all the areas enumerated below.

A. Policy capacity-building

The majority of the developing countries in the Asian and Pacific region have introduced liberal economic policies in the 1980s and early 1990s and by now almost all have liberalized their economies to a greater extent. However, the degree of openness varies from country to country. Even though liberal economic policies are conducive to reaping the benefits of globalization, the liberalization process should be synchronized with the capacity-building process of a country.

1. General

In countries where agro-based industries play an important role, it is useful to refer to agro-based industries as a separate group of industries. This can enhance the ease with which their development can be considered in different policy areas in the planning stage. In the stage of policy formulation agro-industries can be targeted easily by the different national policies without ambiguity in its definition.

Many Governments have already mentioned the promotion of agro-industries in their development policy plans. In some countries such as China, where most industrialization has been of a rural nature in contrast to the classical patterns of industrialization, no specific

mention is made of agro-industries since they are so well integrated within the industrialization process as a whole. Similarly, in countries such as the Republic of Korea and Japan, there is no mention of agro-based industries, although for different reasons. Diversifying into agro-processing would be a move towards activities lower on the value chain than their high value-added industries. They may use the promotion of agro-industries, however, as an incentive to reduce rural-urban disparities and to protect rural lifestyles. ASEAN members and other countries which are relatively dependent upon a largely rural workforce, all mention the promotion of agro-industries in their trade, investment, industrial and agricultural policies.

2. Science and technology policies

It is generally advisable to promote the development or adaptation of technologies required by industry, including agro-industry. Restrictions on importing and exporting technological machinery and equipment should be minimized, as they have a harmful effect on the development and spread of technology within a country.

Until now, one of the most prominent comparative advantages of countries in the Asian and Pacific region was their low labour and production costs. However, this is commonly recognized as not being a sustainable advantage. Therefore, such countries should consider agro-based industries as the vehicle of their development by diversifying into products higher up in the value chain. Competitive advantage should shift from low labour costs to specialization in high value-added agro-processing activities.

Policies that encourage such a shift can be, for example, science and technology policies that encourage R and D in agro-industrial processing, or biotechnology application research. With regard to the latter, many countries wish to develop competencies in biotechnology, since it has the potential to increase agro-industrial output extensively. Hence, we often see science and technology policies influenced by agro-industries.

3. Environment policy

Many developing countries in the region have comparative advantages in agro-based industries owing to their abundant natural resources. Simply depleting natural resources would not be a sustainable means of enhancing competitiveness. However, environmental policies that pursue soil protection by promoting the transfer of techniques such as crop-rotation, dual-cropping, intercropping, reforestation and biodiversity preservation measures, all protect the natural environment¹⁷ and simultaneously contribute to the diversification of agro-based industries.

B. Institutional capacity-building

Each country would benefit from identifying the gap between the needs of the rural population with regard to developing competencies in agro-industries and what the existing institutions offer them. The gap should be filled by restructuring or expanding existing institutions and strengthening them as needed. This requires extensive planning and investment, especially in human resources development and training, and model examples

¹⁷ Goletti, op. cit., indicates that sometimes in rural areas ecological hazards or deterioration trigger a drive towards diversifying agricultural activities.

from various countries should be reviewed in order to gain inspiration from the systems they use. However, priority should be given to incorporate the demand for services, as defined by the local population. As a prerequisite, a strong legal/regulatory governing institution should also be provided to enforce and to maintain law and order.

1. Support services institutions

Support services should be provided to the rural private sector. Four main branches of assistance will be described in the next subsection on private sector development. While doing so, the needs of the rural localities should be reflected, providing demand-driven services to back up the fostering of agro-industries at the local level.

The support service institutions should be empowered by equipping them with space (laboratory/workshop), specialized and well-trained staff, communications equipment, computers, etc., and by decentralizing to a certain degree direct authority to local institutions, so that they could be quick and flexible in responding to local needs in the agro-industries.

Because the service institutions or extension services should work on a demand-driven basis, monitoring and evaluation dimensions should be incorporated into their ongoing activities so that the service continuously provided could be synchronized with the demand of the local population and matched with their state of development. With respect to fully functioning support service-providing institutions, outreach is a matter of great concern. In some cases the institutions are centred in urban areas, which may be quite accessible but still far away for many who are most in need of their services. In such instances, the institutions do not reach those whom they are intended to serve.

One option is to upgrade agricultural extension services, which used to promote the transfer of agricultural technology so that they would encompass a much wider scope of services. Besides technology, extension services could be used to build capacity among the rural private sector in terms of management, problem-solving and entrepreneurship (entrepreneurial spirit will be needed to initiate the diversification from primary agricultural products). Extension may further be used as a gateway for market information, contact with financial institutions, etc. In such a manner, the traditional role of extension services is being broadened to become a holistic, integrated, rural development function. This actually represents a shift which agricultural extension is going through in many countries already.¹⁸ In the majority of countries in the Asian and Pacific region though, sparse financial resources are allocated to agricultural extension; often the result is an incompetent or poorly motivated workforce.

An alternative to transforming extension services is to establish resource centres in rural areas, where the rural private sector can come for advice, training or technology transfer, or to use communications equipment and computers. If countries recognize and agree on the potential of rural industrialization and diversification for a wide range of agro-based products, they will need to invest in building sound institutions to regulate and administer (agro-industrial) enterprises and to provide facilitation to the rural private sector. The competency and capacity of the human resources employed at these institutions are a prerequisite to these support institutions.

¹⁸ M. Kalim Qamar, "Global trends in agricultural extension: Challenges facing Asia and the Pacific region", keynote paper presented at the FAO Regional Expert Consultation on Agricultural Extension, Research-Extension-Farmer Interface and Technology Transfer, Bangkok, 16-18 July 2002.

2. Financial institutions

Financial institutions should be willing and able to support agro-industries, or the government agencies concerned should provide strong incentives for the existing financial institutions for financing agro-based industries. Many examples of micro- and rural credit extension have been well documented and can serve as lessons when drafting a national plan.

C. Private sector development and facilitation

In market economies the main players in the economic arena are the enterprises constituting the private sector. The public sector mainly facilitates the functioning of the market by providing a reliable framework in which economic activity can take place.

Many countries with economies in transition in the Asian and Pacific region have recently made the transition from a centrally planned to a market economy, while others have adopted a hybrid type of market economy with ample room for government intervention.

1. Community-building in rural areas

For rural economies the thinly spread nature of resources is often an issue when it comes to approaching global markets or even national markets. Attaining economies of scale is easier when drawing from a pool of resources. Local communities may organize themselves and initiate agro-industrial initiatives on a community basis, which decreases individual risk and increases the chance of being able to stand increased competition. Possible structures and administrative procedures for community-building can be offered or initiated by the support institutions to facilitate and accelerate the process and to safeguard its stability in the early stages.

2. Entrepreneurship development

From a national perspective, policy can have a great impact on motivating the private sector. Investment and industrial policies, which traditionally provide financial incentives, broadly direct the course of development for a nation.¹⁹ Often it is the entrepreneurial layers of society that will react to these policy initiatives. In general, entrepreneurs can be characterized by their creativity and proactive approach; they do not need much facilitation as long as the basic infrastructure (institutional and physical) is provided. In many developing countries though, this layer is not so extensive, and the majority need more assistance. In principle, there are four main classifications for the assistance that is to be provided to the local private sector, if the aim is to enable them to create and operate enterprises (including agro-enterprises), namely, (a) access to financial resources; (b) training in enterprise management and production/technical skills; (c) access to information and networks; and (d) provision of physical facilities.

¹⁹ These can be incentives such as tax holidays, concessionary credit and tax rebates.

3. International production networks

Private sector capacity-building can also be pursued by initiating support from service institutions. They can provide initial contacts or information/databases to find partners for establishing production linkages between domestic agro-based industries and food industries of developed countries (engagement in international production networks).

D. Investment promotion for agro-based industries

Investment and capital formation are fundamental to the growth of the industrial sector, including the agro-industrial sector. Various countries of the Asian and Pacific region have introduced different measures to mobilize savings and promote the participation of the private sector in industrial development through investment opportunities.

1. Domestic investment

With regard to financial services, many microcredit programmes and agricultural banks are currently available to borrowers in rural areas. Every country has its own failure and success stories concerning its experience in providing credit to rural borrowers. To promote domestic investment in agro-based industries, social mobilization programmes (savings groups, finance cooperatives, etc.) should be considered for generating and mobilizing local savings for investment capital at the community level. Furthermore, it may be advisable to invest in the capacity-building of rural communities in terms of human resources and access to services, so that they could eventually compete in the global economy. In this respect, it would also be advisable to coordinate rural-urban production linkages.

2. Foreign direct investment

FDI can be attracted by providing (a) a climate conducive to economic development and regulations and (b) procedures which are favourable to and convenient for foreign investors. The global growth of GDP in some countries has brought with it widening inequality of FDI distribution; in this regard rural populations usually find themselves at the unfavourable end of the spectrum. Hence, investment policies should be aimed at a more equal distribution by promoting an equal share of investment in rural areas. The profitability of investments in rural areas should be complemented by supplementary non-financial investments. The boards of investment and investment promotion agencies at the national level can, for example, promote agro-industries by making obvious their local market and export potential. Governments can further assist in the quality testing of agricultural products and International Organization for Standardization (ISO) certification facilitation, which increases export competitiveness. The Government also can turn to development aid in the form of technical assistance for the development and promotion of agro-based industries.

Finally, opportunities should be explored for the promotion of joint ventures or production linkages between the domestic agro-based industries of developing countries and the food industries of developed countries.

E. Technological capacity-building in rural areas

Technology is regarded as one of the crucial means to improve the competitiveness of industries. In micro- or small-scale agro-industries the introduction of some minor technological changes can make a big difference. For instance, a simple shift from manual fruit pulping to using blenders can enhance productivity and quality in terms of hygiene.

Most technological applications for agro-industries require electricity and water, especially the ones which are appropriate for production on a medium or large scale. Furthermore, some knowledge about the product and the entire production process as well as about the use of machinery and maintenance is required.

1. Appropriate technology

Technologies used in developing countries are usually imported or adapted from technologies from abroad. Technologies should be selected on the basis of their appropriateness for the local conditions, or they should be adapted to them. However, especially in agro-industries, there is usually a valuable base of local knowledge about processing of the primary agricultural products, which are produced in the area. It is essential that such indigenous knowledge not be lost with the importation of new technologies.

Foreign and local technologies should be scrutinized objectively to see how they can be blended into a new “appropriate technology”, utilizing the best of both worlds. Not only should advanced technologies be adapted to local needs, but also the potential of local technologies should be upgraded.

2. Research and development

It would be useful to have linkages between rural industries and institutions with the capacity to undertake R and D, such as universities, laboratories and business incubators. R and D output ought to be closely linked with industrial requirements in order to develop appropriate technologies for application in agro-industries, taking into account the latest international developments in technology, as well as the indigenous knowledge available in the locality concerned.

Incentives for private sector R and D activities may also be adopted in view of the objectives of commercialization and market considerations.

3. Human resources development

In the knowledge-based economy, human resources are the major determinant of competitiveness. The more developed and educated is the human resource base of a country, the easier it is for the respective country to adopt high technologies with the greatest value added.

In many countries access to education is still a problem. Where the quality of education is poor and access is limited, these factors comprise the primary obstacle to the development of a skilled labour force, especially in the rural areas where the majority of agro-based industries are located. Educational policies aimed at promoting the concentration of educational activities in rural areas may be necessary to solve such an imbalance.

As educational standards are usually lower in rural areas and a greater proportion of enrolment in the developing countries is in the social sciences rather than in technology-related subjects, training efforts may take more time and energy than they would in urban areas.²⁰

If agro-industries are to be promoted, so should education be upgraded for the professions needed by agro-industries. In general, a traditional method to promote a certain field of study in general is the provision of scholarships or job guarantees for technology students. A method to gear the students' perspective more towards rural economic development would be to incorporate some entrepreneurship development courses in the curriculum, so that students would be better able to start a business by themselves after completion of their studies.

Finally, tailor-made training packages may be one of the most pragmatic solutions to train the existing workforce pool. Training specifically for industry or even agro-processing should be given to upgrade the competency and productivity of the labour force in the rural areas of the developing economies of the region.

²⁰ UNESCO, *EFA Global Monitoring report 2003/4* (Paris, 2003) and UNESCO, *Global Education Digest 2003*, UNESCO Institute for Statistics (Montreal, 2003).