

discussion paper

No 07

Agricultural Commercialization, Value Chains, and Poverty Reduction

January 2005

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1. INTRODUCTION *

1. An increasing number of developing countries have achieved food self-sufficiency or food security for the majority of their population. This has been the case in several Asian countries, including the most populated ones such as China, India, Bangladesh, and Indonesia, and other smaller countries such as Viet Nam, Cambodia, and Sri Lanka. These countries share some common features such as a large rural population, a large share of the labor force employed in agriculture, a vast majority of smallholder farms, and a declining share of agriculture in GDP. All of these countries have benefited from adoption of new high yielding varieties of food grains.

2. The success of policies targeted to increase agricultural productivity for staple grains (commonly referred as to as the Green Revolution) has created its own problems. Declining real commodity prices have benefited consumers and contributed to higher real wages. As a result, the income prospects of smallholder farmers are not promising. It is increasingly difficult for farmers with smaller and smaller landholdings to keep up with the growth of the rest of the economy; the income gap between rural and urban areas is increasing; agriculture is not capable of absorbing an increasing labor force; and the possibility of major migration to already congested major urban areas raises the prospects of slums and urban poverty. Global trends in the agrifood industry suggest the continuation of the decline in commodity prices, a more competitive world trade environment, and the emergence of global value chains that are able to respond to the increasing demands of world-wide consumers for safer, higher quality, and more convenient food products. Un-organized and frequently insufficiently educated smallholder farmers face the prospects of remaining isolated from these global trends.

3. The broad process of structural transformation of an economy in which an increasing proportion of economic output and employment are generated by sectors other than agriculture is well known in economic history. Related to this structural transformation is the process of agricultural transformation by which individual farms shift from highly diversified, subsistence-oriented production towards more specialized production oriented towards the market or other systems of exchange (e.g., long-term contracts). The process involves a greater reliance on input and output delivery systems and increased integration of agriculture with other sectors of the domestic and international economies.

4. Less known is the strategy to facilitate the process of agricultural transformation. During any process of change there will be winners and losers. The process of agricultural transformation is no different. Commercialization might increase the pressure on a fragile eco-system; it might lead to concentration of assets; it will lead to a demise of traditional farming systems and a more intensive use of technology and formal processes that will be reflected in different power relations within the households, the village, and society; it might lead to loss of biodiversity and pollution; it might be promoting cultural attitudes that go against social norms and restrictions; it might promote new roles for women that are not accepted by society. These are some examples of negative effects or conflicts that

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accompany the process of agricultural transformation. Conversely, there are examples of positive effects, such as higher income, more employment for the poor, greater consumer satisfaction, and recognition of women's role in agriculture and improvement of their access to assets, information and decision-making. It is important to realize who will gain and who will lose in this process, and mitigate the negative impacts.

5. Current strategies for agricultural development are informed by what this paper refers to as the *Conventional View of Agricultural Development (CVAD)*. This view regards agricultural productivity growth for food staples (within the context of Asia this refers primarily to rice and wheat) as the engine of growth. It emphasizes the role of smallholder farmers in adopting productivity enhancing technologies that will increase grain production, generate a surplus that could be reinvested in other sectors and contribute to poverty reduction through lower food prices and absorption of rural labor. The CVAD stresses the role of technology and smallholder producers. It argues that strong linkages of agriculture with other sectors of the economy will set in motion the process of transformation of agriculture and the economy. The view has been articulated since the days of the Green Revolution and is still the major conceptual framework informing agricultural policies in most developing countries in Asia.

6. Unfortunately, the conventional view of agricultural development is no longer useful in tackling the current problems and issue facing the agricultural sector in the countries where basic food needs of the population are met and the pressure of global trends does not promise well for smallholder farmers engaged in grain production and with increasingly smaller landholdings.

7. This paper views agricultural development from the perspective of a value chain approach that centers on (i) the role of facilitating linkage providers to accelerate the process of structural transformation of rural areas and (ii) on rural enterprises as the key actors in promoting growth and reducing poverty.

8. Contrary to the conventional view of agricultural development that considers increases in food staples agricultural productivity as the engine of growth and primary factor in poverty reduction in poor developing countries the paper argues that a *consumer-oriented approach* in agricultural development has the advantage of structuring transactions in a manner that improves efficiency and incentives throughout the rural economy. A re-orientation towards the consumer requires the development of rural business enterprises and commercial structures that can sufficiently organize marketing channels in a manner that meets consumer demands.

9. Such a strategic shift has significant implications on the poor, with the poor benefiting as producers, entrepreneurs, wage earners, and consumers. While it will entail a shift out of agriculture for many rural households, improved commercialization will promote the creation of new opportunities that can stimulate growth in the non-farm sector. This approach also has positive non-economic effects for the poor, such as improved health arising from higher food safety standards, improved access to information from better communication technologies, and more sustainable agricultural practices arising from compliance with increasing environment consumer concerns.

10. This paper examines three issues:

- Global trends in agriculture and rural areas
- The implications of the global trends for farmers and the poor in developing countries
- The implications of the global trends for a strategy of agricultural development

11. The paper is organized into 8 sections. Section 2 describes the main feature of the conventional view of agricultural development. Section 3 shows the limitations of the conventional view in the current context arising from the success of the Green Revolution and the global changes in the agrifood system. Section 4 presents some elements towards a new view of agricultural development. Section 5 describes the value chain approach key concepts that underlie a new view of agricultural development centered on increasing off-farm activities. Section 6 provides some models to operationalize the key concepts of the value chain approach. Section 7 describes the implications of the value chain approach for agriculture and rural development. Section 8 concludes the paper.

2. THE CONVENTIONAL VIEW OF AGRICULTURAL DEVELOPMENT

12. The conventional view of agricultural development (CVAD) sees agriculture as the primary engine of growth and poverty reduction in poor countries. The view emphasizes small farm agriculture growing modern variety cereal staples in relatively high potential and well-connected areas, with both water control options and access to markets. The CVAD has received great support by the success of the Green Revolution in improving food security for large populations, particularly in Asia. The Green Revolution has not been successful in other regions, including most of Africa and marginal areas in developing countries.

13. The conventional view implies a set of prescriptions (see Maxwell 2004) that include land reforms to promote small farms; investment in research and extension to develop and spread new varieties; provision of irrigation, market, and transport infrastructure; interventions to compensate for missing or imperfect input and output markets; and procurement and public food distribution systems to stabilize prices and improve the access of food to the poor.

14. Over the years, the CVAD has seen various modifications including the recognition of:
- The contribution of cash crops to farm incomes and growth linkages;
 - The importance to address the needs of resource-poor farmers in lower potential or weakly connected areas;
 - The idea of linking relief and development;
 - The role of markets in discussion about food security and more widely;
 - The stifling effect of rich country agricultural subsidies; and
 - The importance of diversification into non-agricultural enterprises.

15. In spite of these modifications, the basic ideas of the CVAD have not changed, particularly the idea that agricultural development has to be based on increasing productivity of smallholder producers of staple food. In the CVAD there is no mention of consumer preferences for characteristics such as variety, safety, quality, and convenience of food. The main preoccupation is with smallholders producing higher quantity of food

through higher yields made possible by modern varieties of grains and through labor intensive methods. This approach would generate sufficient food for the countries to feed themselves, employ sufficient labor to keep above poverty level, and provide a surplus for investment in non-farm activities thus contributing to overall growth through non-agricultural linkages.

16. Given the large share of agriculture in the rural economy, any increase of growth in agriculture would have larger increases in the non-agricultural share of rural economy because of strong linkages between agriculture and other sectors. The overarching focus on producers and smallholders has left little space to the attention to the role that enterprises play in the development of an agrifood system that goes beyond the production aspects.

3. LIMITATIONS OF THE CONVENTIONAL VIEW

17. There are several global trends that imply a rethinking of the conventional view of agricultural development and its associated prescriptions. The global trends are related to:

- Declining agricultural commodity prices
- Changing patterns of food demand
- Increasing gaps between farmer prices and consumer prices
- Changing global agrifood system
- Increasing connectivity of rural areas
- Competing demands for public expenditures
- Increasing importance of the private sector

18. The following sections elaborate on each of these aspects and show why they represent limitations of the CVAD.

3.1 Declining agricultural commodity prices

19. Real prices for most agricultural commodities have decreased during the course of last century, as the result of food supplies growing faster than demand. The supply shift has been the result of increase in factors of production (land, labor, agricultural inputs), but mostly of technological change. The decline in prices (see (FAO 2000)) has spread to most of the developing world (with the exception of Africa and marginal areas) with the advent of the Green Revolution in the 1960s; since then, agricultural prices of major food staples have halved in real terms¹.

20. The decline in agricultural commodity prices has affected different commodities differently. It has affected both staple food and other commodities. Attempts at slowing down the rate of decline have resulted either in massive accumulation of foodgrain stock, mounting fiscal deficits, or collapse of international commodity agreements.

21. Over the last two decades of the 20th century considerable changes have affected global commodity markets, particularly tropical commodities. The seven main tropical

¹ This has little to do with rich country subsidies, but quite a lot to do with the interaction between a supply curve shifting quickly to the right and a relatively inelastic demand curve shifting much more slowly in response to growing population and rising income.

agro-commodities (coffee, tobacco, cotton, sugar, rubber, tea, and cocoa) still accounted for 61.8 percent of the total agricultural exports of all tropical countries during the period 1996-99 according to FAO statistics (Gibbon 2003) Tropical commodities still remain a major link between smallholder farmers in developing countries and global markets.

22. The outcomes of these changes in commodity markets can be summarized as follows:

- Declining commodity prices
- More instability in prices
- A higher proportion of the income generated in the chain retained in consuming countries
- Declining level of producer-held stocks
- Break-down of quality control measures, research and extension, and promotional activities in producing countries

23. There have been four basic responses by farmers to decreases in real prices. First, farmers and agricultural workers have left the farm sector and migrated to either urban areas or the industrial and service sector in rural areas. Second, farmers have increased their scale of operations, thus improving their ability to generate acceptable level of income in the face of declining prices². Third, farmers have obtained off-farm employment in order to achieve acceptable total household incomes. Fourth, farmers have developed strategies to avoid being price takers and escaping the trend of decreasing real prices: niche markets, organic production, branding, risk management, contracts, and vertical coordination.

24. Future prospects suggest that the trends in declining agricultural commodity prices will continue. The four key responses of farmers (leave farms, increase farm scale, diversify income, and develop strategies to avoid being price takers) are not consistent with the CVAD based on staple growing small farmers. Either the food staples growing farmers have to grow in scale to escape poverty, or they have to be organized according to strategies (such as pursuing niches, establishing contracts for high value products, being integrated with value chains) that are not well suited to undifferentiated commodities such as staples.

3.2 Changing Patterns of Food Demand

25. The CVAD was predicated on the need to provide food staples to a large population that was experiencing severe food problems and hunger. Since the Green Revolution, in several Asian countries such as India, China, Viet Nam, Cambodia, and Bangladesh, food availability (and production) per capita has increased considerably, putting the specter of hunger and famines in the past. The experience of the Great Bengal Famine of 1942, the Bangladesh Famine of 1974, and the Famine in China in 1959-1960 have haunted policy makers for decades and help focusing on food production as the main requirement for agricultural development. This was so, in spite of many analyses showing that most of

² For example, a one ha farm of irrigated rice producing two crops per year of 5 tons of paddy would imply a \$1,000 income to a household of 5 persons, effectively keeping the housing below the poverty level of \$1 per person per day. If the same household were to own 4 ha, then the income of \$4,000 per year would be above the \$2 per day per person.

these famine experiences were not necessarily the result of low availability of food, but the result of policies and external situations that restricted access to food and functioning of markets (Sen 1981).

26. At the same time, as income and urbanization have increased, the demand for food has also changed from one that is mainly based on grains to a more diversified diet including meat and dairy products, fruits, and vegetables. The change in demand has implied not only a change in the diet composition (away from staples towards non-staples) but also a change in the preferences for food characteristics, including an increasing demand for features such as safety, quality, convenience, organic, and processed foods.

27. Different types of organization of the agrifood system are required to accommodate the changing demand for food. Rather than a food distribution based mainly on the production, storage, processing, and distribution of durable grains, of largely undifferentiated quality, the challenge for the agricultural system is increasingly related to perishable products, differentiated products, safety issues, postharvest problems, and the emergence of a more sophisticated retail system.

3.3 Increasing gaps between farm-prices and consumer-prices

28. The difference between farmer prices and consumer prices is a reflection of various factors including the efficiency and competitiveness of the marketing system, the extent of value-adding operations that have been introduced in the supply chain, and policy interventions.

29. Farmers often complain about receiving low prices while the other actors in the supply chains (traders, processors, retailers, transporters, storage facilities owners, etc.) appropriate most of the value paid by the consumer. However, the large difference between farmer and consumer price might as well be the reflection of an inefficient marketing system as the reflection of exploitative behavior. In the presence of a long marketing chain which includes multiple intermediaries, repeated handling, and smallholder farmers lacking organized structures, the marketing margins are indeed high and, in the absence of policy regulations, the margins will be captured by marketing agents, who hardly make a contribution to value addition of the product.

30. When value-adding operations are limited, as the result of weak postharvest systems and underdeveloped agro-industry, and in the absence of policy interventions (e.g. taxes) the marketing margin should not be too high if a relatively efficient marketing system is in place. However, when various value-adding operations are introduced in the supply chain, the gap between farmer and consumer prices is going to increase substantially. The more dynamic the entrepreneurs in the value chain, the more forms of adding value will be found after production and, as consequence the gap between farm and consumer prices will increase.

31. The gap between farm-prices and consumer-prices is widening because more affluent and discerning consumers require an increasing number of services and attributes. As long as producers are unable to meet these requirements their share of the total value added will remain low and declining. Initiatives such as International Commodity Agreements or price supports to farmers could put a temporary halt to the major trend and could certainly benefit a number of countries and producers of agricultural commodities.

The chances for this to happen however are not very high in the short term. It would be equally important for countries and producers to start reorienting their effort towards improving quality and high value. This will require the concerted effort of several actors and the improved integration with value chains.

3.4 Supermarkets as Global Players

32. Over the latter half of the 20th century in OECD countries, supermarkets have become the dominant form of retailing grocery products. For most of this period, however, supermarkets were not a major form of retail in most developing countries, and, where they existed, were confined to niche markets for higher income consumers in major cities. During the 1990s a dramatic change has seen the emergence of supermarkets as a major form of retailing in a number of developing countries, starting from Latin America, where supermarkets in 2000 represented about 50-60% of food retail sales, moving rapidly in developing Asia (Southeast Asia and China), and currently taking place in Africa and slowly moving toward South Asia.

33. In the early 1990s developing countries around the world liberalized their economies, opening them up to a wide range of foreign investments, including investments in retailing. Large supermarket chains from Europe and the United States, seeing the rising incomes and urbanizing populations in developing countries, rushed into these markets.

34. Latin America has seen the fastest growth of supermarkets among developing regions, achieving a rate of diffusion in one decade that took five decades in the United States (Reardon 2003). Supermarkets diffusion in East and Southeast Asia is about five years behind Latin America, but supermarkets growth is proceeding at an even faster pace. Between 1999 and 2001 the supermarkets' share of retail food sales rose from 35 to 43 percent in Thailand and from 30 to 48 percent in urban China.

35. The major effects of supermarkets on the agrifood system are through the procurement system of large volumes of products from suppliers. Stiff competition from both small retail shops and other supermarkets results in cutting costs and raising quality and diversity. Cutting costs in turn requires the improvement of all aspects of procurement, including product and transaction costs. This is done by improving coordination and logistic systems such as distribution centers, logistics platforms, contracts with wholesalers and producers, and private standards specifying quality, safety, volume, and packaging of products (Reardon and Berdegué 2002)

36. The major challenge for smallholder farmers is how to become part supermarket chains. Supermarkets decide the products that farmer have to grow according to standards that are often too high for small farmers to comply with. Meeting the demand of procurement officers requires technical and management skills that small farmers often do not have. Those farmers that can access a procurement account with supermarkets are the winners. But to win implies also to make investments in equipment and logistics support often not available to small farmers.

3.5 Concentration of the Global Agrifood Industry

37. In the last two decades of the 20th century, merger and acquisition activity resulted in increased concentration of food retailing, food manufacturing, food wholesaling, food service industries, and food international trade. The trend started in Europe and North America, but is now gathering momentum in countries in Latin America, Southeast Asia and China.

38. In the US, the grocery sales market share of the top four retailers increased from 16.6 percent in 1996 to 27.4 percent in 2000 (USDA 2002). In trade of most tropical commodities, often 4 or 5 players play a dominant role (Vorley 2003). The top five retailers in the UK have around 70% of the grocery market, a figure which is likely to increase to 80% following the sale of Safeway. In Latin America, the top five chains have 65% of the supermarket sector (versus 40% in the US and 72% in France).

39. These dominant players in the retail industry are in fact the major drivers beyond a staggering flow of commodities, products, information, and finance that coordinates the activities of hundreds of million of farmers in the world and affects billions of people as consumers.

40. In order to function effectively, these dominant players organize production, processing, logistics, trade, and distribution of numerous other players. Suppliers are organized into value chains that act on a global scale with production carried out in numerous countries and often, by making use of different seasonality of agricultural production around the world, can provide commodities, products, and services on a consistent basis throughout the year. The specific ways of organizing these value chains differ from commodity to commodity and from value chain to value chain. What is common to different value chains, however, is the increasing concentration of the industry leading to horizontal and vertical coordination.

3.6 Corporate Social Responsibility

41. The World Business Council for Sustainable Development used the following definition: "Corporate Social Responsibility (CSR) is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large".

42. The pressure on business to play a role in social issues is growing. Over the last ten years, those institutions which have grown in power and influence have been those which can operate effectively within a global sphere of operations. These are effectively the corporates and the NGOs. Those institutions which are predominantly tied to the nation state have been finding themselves increasingly frustrated at their lack of ability to shape and manage events. These include national governments, police, judiciary and others.

43. There is a growing interest, therefore, in businesses taking a lead in addressing those issues in which they have an interest where national government have failed to come up with a solution.

44. Corporate businesses are realizing that there exist untapped market opportunities in poverty-stricken regions of the world and among the *bottom of the pyramid* (those with less than \$2/day and constituting 80% of world population) (Prahalat 2005). Corporate

expansion into emerging economies can be structured to significantly enhance local incomes and quality of life (Halliday 2001). Making the market work for the poor involves two basic measures: enabling access to effective markets and spreading consumer purchasing power. Finding ways to generate viable income-generating activities for the poor starts to be regarded as a major component of business development.

3.7 Increasing Connectivity

45. One of the major developments in the global economy over the past 10 years has been the spread of telecommunication and internet. Mobile phones in India are increasing by 2 million per month. Internet connections in developing Asia are increasing at an impressive growth including 70% annual growth for China and India, 36% for Bangladesh and skyrocketing to 600% in Viet Nam. Even though penetration is still low (when compared to the total population), the trend is continuing and spreading to rural areas.

46. Rural areas in the countries where the Green Revolution has taken place have all improved the overall infrastructure (transport, water, electricity) and increased literacy both for boys and girls. To be sure, isolation still affects several parts of rural areas and marginal areas are present. However, through the combined effect of improved transport infrastructure, better communication, and increased access to education and health, there are more favorable conditions for an agricultural development that goes beyond the food self-sufficiency targets of the past.

47. The major implication of increasing connectivity, improved infrastructure, and better education and health in rural areas is that there is a more fertile terrain for penetration and growth of business enterprises in rural areas. Whereas the CVAD relied mostly on public research and extension organizations and on public investment in infrastructure together with subsidies to chemicals and seeds, the next stage of growth of agriculture and agribusiness will have to take into account the growing potential that rural areas represent for business.

3.8 Competing Claims for Public Expenditures

48. The Green Revolution benefited greatly from huge investments in roads and irrigation and subsidies on a scale hardly conceivable today – up to 10% of agricultural GDP in some cases. If agricultural growth relies on large-scale fertilizer, water and electricity subsidies, as well as major investments in roads – the issue is that there are many competing claims for public expenditure, particularly in the social sectors of health and education.

49. Many of the advocates of the CVAD would agree that huge subsidies are not needed for an efficient agriculture and would instead support investment in agriculture research, extension, and market infrastructure. However, if taken seriously, these investments would further push commodity prices to lower levels, through higher productivity at the farm level and thus accelerate the process of agricultural transformation. Unless mechanisms to smooth the agricultural transformation are obtained which benefit farmers, ensure food security, particularly of the poor, and help the generation of employment in the off-farm sector of the agrifood system, the CVAD will actually do little to contribute to growth and poverty reduction in rural areas, and could in fact aggravate the current plight of

smallholder farmers and landless poor.

3.9 Environmental Concerns

50. The success of the Green Revolution was predicated on intensive use of land and water, and increased use of chemical fertilizer and pesticides. The ensuing increase in yields has resulted in more food availability, higher farmer incomes, and cheaper real prices of food grains paid by consumers. At the same time, several environmental negative effects have emerged including heavy use of fossil fuels, falling water tables, soil problems related to salinization and compaction, and a variety of residue problems in the environment and in products leaving the farm. Despite talk of environmentally friendly options and the idea of 'regenerating agriculture', and despite the growth of niche markets for organic products, environmental considerations seem more likely to constrain agricultural growth than to accelerate it. In some cases, environmental problems are threatening the sustainability of the current mode of production; the lowering water tables in Punjab and arsenic water contamination in Bangladesh are two of the most dramatic examples.

51. Environmental concerns are also present in relation to the development of agroindustry (and its potentially negative impacts through factory effluents polluting water, soils, and air). As consumers become more affluent, urbanized, and removed from agriculture and rural areas, their concerns for a cleaner environment increase and conflicts between farmers and the general public are likely to increase over time.

3.10 Implications for Agriculture

52. The discussion above could be summarized as follows:

- Real prices for agricultural commodities will continue to go down, and technology will continue to reduce per-unit costs of production
- Demand for food (particularly food grains) will not increase significantly in the future, and the farm share of the retail food price will decline
- The importance of international trade in the food and agricultural system will increase and consumers will eat a more diversified diet, more processed and convenient goods, more food away from home, more quality food, and give increasing importance to features such as safety, organic, and fair trade (particularly among the better-off consumers)
- The role of consumers is changing and increasing in importance not only in rich countries but also in urban middle classes in developing countries. Purchasing behavior of supermarkets is changing (see EUREPGAP). Consumer advocacy groups are imposing CSR (and other requirements such as Fair Trade, CFC refrigeration, ISO, and labor standards).
- The environmental effects of agriculture will become increasingly important to society
- The growth potential of agriculture as a sector lies largely in non-staple production, where resources should therefore be concentrated;

- Individual agricultural enterprises will prosper to the extent that they are able to deliver predictable and traceable volumes of high quality produce to increasingly sophisticated and integrated market agents;
- Farms that cannot meet these requirements will survive only to the extent that they are subsidized by non-agricultural incomes, as homestead plots or part-time, often recreational enterprises;
- The 'new economies of scale' mean that small-scale commercial farms will be increasingly disadvantaged unless they organize and integrate with value chains;
- There will be many benefits to poor people, partly indirectly through lower food prices, and partly through new kinds of growth linkages associated with a prosperous commercial farming sector;
- These benefits will manifest themselves as jobs in food processing or manufacturing, or in other ways in the supply chain.

4. TOWARDS A NEW VIEW OF AGRICULTURAL DEVELOPMENT

53. Even though the CVAD has served the purpose of accelerating growth of agricultural productivity thus contributing to food security and poverty reduction in several Asian countries during the period 1960 to 1990, the challenges at present are going to require a different view and approach to agricultural development. The future of agriculture in developing countries for the next two decades will contain features that are already recognizable.

54. Rural development concepts are evolving from a main focus on agriculture within a multi-sector framework to a multi-disciplinary, participatory, and pluralistic approach to achieve sustainable development (Csaki 2004). As is the case now in more developed countries, the trends for most developing countries indicate that farms will be predominantly commercial and larger in size, the great majority of rural people will not be landowners and their income will not be agricultural in origin (though with linkages to agriculture in most cases of low-income developing countries). Agricultural GDP will decline to 10-15% of GDP and to less than 10-15% of total exports.

4.1 Change of Focus

55. The changes in global trends and in developing countries that have achieved some degree of food security require new approaches to agricultural development. Elements of these new approaches imply a change of focus:

- From staples to high value crops
- From commodities to products
- From narrow agricultural to broader policy context – including global impacts
- From focus on crop yields to market demands and incomes
- From primary production to entire food chain
- From enhancing production of commodities toward enhancing the productive capacity of rural people
- From thinking of farms as a homogeneous group to heterogeneity³

³ Typically, in most developing countries, farms are distinguished in terms of size (marginal, small, medium, large, etc.). However, a greater heterogeneity than the one associated to size is already visible. Farms differ

- From public to public-private partnerships, including community driven development
- From avoidance of issues to head on approach (biotechnology, forestry, water)

56. In almost all countries, agriculture remains the dominant land use in rural areas, but increasingly less is the dominant form of rural economic activity, even in developing countries. The recognition of this important transformation suggests that enhancing employment opportunities in rural areas must be the main focus of rural development. Rural areas are increasingly integrated with the urban economy, with the markets, and with the global economy. As a result of increasing infrastructure, even traditionally isolated rural areas are starting to be linked to smaller urban centers; because of connectivity, they have the potential of being linked to the global economy.

4.2 The Key Challenge

57. A new view of agricultural development for those developing countries that have already achieved a basic level of food security should address the key challenge: How to accelerate the transformation of an agricultural system still largely focused on production of grains to a system that is able to meet the changing demand for food within the context of a global agrifood system while ensuring food security for the population, generating adequate income for producers, and smoothing the transition to an economy where most of the employment will be in non-farm activities?

58. The challenge is formidable, given that the majority of the population is rural, most of the rural population derives its livelihood from agriculture, and most of the farmers are smallholder households. To face the competition from the global agrifood system, smallholder farmers will require new organizational forms that allow them to benefit from the integration with global food chains. Small farms will not be able to generate sufficient productive employment for a growing labor force; declining commodity prices will set in motion a process of land consolidation and increased generation of value in off-farm activities; the agricultural system will increasingly be dominated by enterprises involved in the transformation, finance, distribution, and trade of agricultural products.

4.3 Declining Share of Agriculture in GDP

59. To a certain extent, this is not a new challenge; it is the process that has accompanied the agricultural transformation of most countries. New is the acceleration of the process that took several decades to occur in the past and is now occurring within few decades in an increasing number of countries.

60. Between 1980 and 2000, the share of agriculture in total GDP declined from about 30% to 15% in China, from almost 40% to 25% in India, and from 32% to 26% percent in Bangladesh. In the case of Viet Nam, the decline from 40% to 25% occurred in a shorter period, from 1985 to 2000. The decline has accelerated after 1990s in most countries and is likely to continue as other sectors are growing more rapidly under the pressure from both demand factors (towards non-food products and services) and supply factors (more

in terms of degree of commercialization (corporate, cooperative, family farm), type of commodity (bulk, niche), level of technology, purpose of household (recreation, part-time farming, preservation of rural habitat).

investment and capital accumulation in non-agricultural sectors). This process has occurred in developed countries as well. In Australia, the share of GDP declined from 30% of GDP in 1950 to about 10% in 1970 and to about 3% in 2000.

61. The decline of the share of agriculture in GDP is strongly correlated with increase in agricultural productivity. As agricultural productivity increases, it makes possible the migration of labor from agriculture to other sectors. However, the CVAD has downplayed the role of increases in productivity in non-farm sector. Unless higher productivity in other sectors occurs, there will not be incentives for migration from agriculture. The higher growth of productivity in non-agricultural sectors is pulling labor to migrate from the agriculture sector.

62. The non-farm sector in rural areas of most developing countries is often itself related to agriculture (agricultural marketing, agroprocessing, et.). Once a minimum level of food security is provided to the population, a situation that is largely achieved in most of the countries which have achieved food self-sufficiency or have undergone a Green Revolution, the situation is mature for accelerating the process of migration from farms to other sectors.

4.4 Declining Growth of Agriculture

63. When compared the 1990s to the 1980s, agricultural growth is declining for several of the major countries that have undergone a Green Revolution. This is the case for the three most populous Asian countries, China, India, and Indonesia. The average growth of agriculture for these three countries declined from 6.2, 3.5, 3.7 in the 1980s to 3.9, 2.6, and 2.0, respectively, in the 1990s.

64. Declining agricultural commodity prices are related to lower growth rates of agriculture in a number of countries, including China and India, where the major achievements of the CVAD were located. Moreover, agriculture is not likely to absorb the new labor force. In fact, increased productivity of agriculture will accelerate the process of movement of labor from agriculture to non-farm activities. The CVAD does not provide much guidance of how to smooth this process.

65. Growth of agriculture might not be a good indicator of growth of income of farmers. Given heterogeneity of farmers, growth of income of the some segments of the farming population might be high; some segments could grow fast and other segments could grow slower, and the average growth might be weak. Available statistics do not indicate which group of farmers grows faster; only which subsector grows faster.

66. Perhaps a better insight could be gained by looking at the agricultural system as a whole, not just to agriculture. The growth of the total agrifood system might be strong even if the growth of one of its components is not high.

4.5 The non-farm component of the agrifood system

67. The agrifood system includes both agricultural production and non-farm activities such as services (trade, marketing, distribution, finance, consulting, research, extension) and industry (processing, packaging, inputs manufacturing). While the GDP share of agriculture declines, there is an increasing share of non-farm activities in the agrifood

system. During the process of agricultural transformation, the agrifood system transforms itself from one dominated by production to one dominated by off-farm activities.

68. It is useful to get a comparison of the agricultural system in two countries, Bangladesh and US. While the total GDP of the agrifood system in the US is almost completely dominated by non-farm activities (94.6%), in a country such as Bangladesh, agriculture constitutes still the main share (54.3%) of the agrifood system GDP.

69. Two conclusions can be derived from this comparison. First, non-farm activities are an important component of the total agrifood system even in a low-income country such as Bangladesh. Second, the share of non-farm activities in the total GDP of the agrifood system is likely to increase as a result of development.

70. Any alternative to the CVAD will have to take into account these two conclusions. Unless the strategy for agricultural development incorporates non-farm activities, the opportunity of increasing productivity of rural households engaged in the agricultural system is going to be limited.

71. Both demand and supply factors indicate the way to new view of agricultural development. On the demand side, the changing pattern of demand requires the emergence and growth of non-farm activities spanning over both industry and services. On the supply side, more incentives in the non-farm sector provide a stimulus to capital accumulation and investment that could lead to higher rural growth and employment in the non-agricultural sector.

4.6 The key role of enterprise development and entrepreneurship

72. Most of the non-farm activities are carried out by enterprises, engaged both in services and industries related to agriculture. An exclusive focus on farmers is not likely to generate the necessary growth needed to meet the challenges of an agricultural system that has already reached food self-sufficiency and is facing the competition from the global agrifood system in meeting the changing food and agricultural demand of growing economies. This does not imply that farmers (and particularly smallholder farmers) should be disregarded in the strategy. It only means that a successful strategy for agricultural development will have to address the needs of both farmers and agro-based enterprises.

73. The recognition of the critical role of non-farm activities in the agrifood system in contributing to overall GDP and absorbing rural employment is a key element of the alternative view of agricultural development. In this view, farmers are still the majority of the actors of agricultural development; however non-farm enterprises become the major actors as development proceeds. Unless favorable conditions exist for these enterprises to develop, rural development itself may be retarded.

74. Agro-enterprises will not only be able to absorb an increasing share of rural employment, but will also capture an increasing share of value added, and contribute to the rapid transformation of the rural economy from one dominated by agricultural production to one based on services and industry, while at the same time reducing migration from rural to urban areas.

75. The structure of firms in most developing countries is characterized by a large number

of micro-enterprises and small and medium enterprises (SME). Most enterprises are not registered and very few corporate firms are present. Most of these firms generate little value added and have very low labor productivity.

76. In order for agriculture to move to a more commercialized level with high value added a multitude of firms will have to emerge. This requires entrepreneurship and enterprise development. Yet, most of the interventions related to agriculture are uniquely focused on producers, and assume that enterprise development and entrepreneurship will arise automatically. This is not so.

77. In most developing countries, investment in agriculture is limited. It is often emphasized that low and declining public investment in agriculture, particularly in research and extension, might compromise the future growth of the sector. It is true that public investment in agriculture is low and there are good arguments for its expansion particularly in those areas such as research that have often a public good nature.

78. However, it is also the case that most of the investment is undertaken by the private sector and if conditions and interventions are targeted to enterprise development in rural areas, private investment in agriculture itself will increase and more than offset declining public sector investment. In this context, inadequate attention has been given to entrepreneurship development in rural areas and in particular in the development of a modern agrifood system.

79. The importance of enterprise development has not been lost to strategists of rural development. Rural infrastructure development, improvement of health and education are widely perceived not only as key strategies for raising living standards and access of rural households to markets and information, but also as favoring conditions for creation of new enterprises. Most countries offer incentives to enterprises to relocate in rural areas because they perceive the key role that enterprise development has in creating employment, raising local incomes, and add to value added.

80. More recently, a new paradigm has emerged, consisting in not just attracting existing enterprises from urban to rural areas (or from more favorable to less favorable rural areas), but also in growing entrepreneurs in the local areas. Local entrepreneurs are more likely to reinvest their wealth locally, rather than send their corporate wealth back to metro areas. Moreover, local entrepreneurs are instrumental in connecting local areas to the urban areas and to the global economy.

81. Yet, the CVAD with its exclusive focus on production and farmers not only neglects the global trends in agrifood systems, but also neglects a powerful engine of development, namely enterprise development, and the nurturing of local entrepreneurship that could make a direct contribution to the agricultural transformation. A new view of agricultural development will have to redress this unbalance and elaborate policy to grow local entrepreneurship that facilitate the linkages of smallholder farmers to rapidly growing urban and international markets.

4.7 Complexity of the process of agricultural commercialization

82. Agricultural commercialization refers to the transition from subsistence or “own” production to an increasingly complex production and consumption system based on

market and other forms of exchange between producers and consumers. Agricultural commercialization is a process involving the transformation of the rural economy into a system where non-farm activities are the main source of income and employment. Central to this process is the development of agriculture into a commercial system including agribusiness. While recognizing that agribusiness enterprises are fundamentally motivated by profit-making opportunities, enterprises engage in investment, create employment, and add value to agricultural commodities, thus stimulating growth in the economy.

83. Agricultural commercialization involves different degrees and dimensions. A low degree of commercialization involves farm production essentially for subsistence purposes with any surplus sold to the market. At high degrees of commercialization, farmers produce only for the market and are integrated with dynamic urban and international markets. In the latter case, farming is a profession rather than a way of living, production is specialized and based on modern technology, and income stabilization and profit making rather than food security are among the major concerns of farmers.

84. In the movement from subsistence to higher degrees of commercialization, different dimensions such as farming system, technology, marketing, finance, infrastructure, and the role of consumers take on different values. Even though a precise measurement of commercialization is perhaps impossible, it is however possible to suggest a simple taxonomy of commercialization. The purpose of the taxonomy is to identify those activities and processes that require intervention.

85. At a low level of commercialization, there are a large number of subsistence farmers. The marketable surplus is generally small, with the exception of a few high value commodities. Farming is regarded as a way of living, rather than as a profession or a business-oriented activity. Formal training for farming and formal procedures for production, marketing and processing are virtually absent. Information about new technologies and market opportunities is disseminated slowly, mostly by word of mouth. There are few large markets, most market transactions are local and take place in cash. Research and extension systems are usually public, poorly functioning and reaching just a few of the producers, and almost none of the post-production actors such as traders and agroprocessors. Farmer organizations are few and often ineffective. Trade associations are in a similar situation. Few financial instruments are available. A large part of credit is informal and most credit, including formal sources, is for the very short term (3-6 months). Consequently, little private investment in agriculture is taking place. Production is not intensive and farmers or post-production actors use little modern technology.

86. As the degree of commercialization increases, several dimensions acquire different significance and a movement towards higher use of technology, formalized processes, integration, information and finance sophistication takes place. In most developing countries some farmers are already commercialized, in the sense that significant volumes of marketed output pass through organized, mostly private sector, channels including traders and sometimes processors. Moreover, the marketed output (a) is generally produced deliberately for commercial sale and is not merely surplus over farmers' production for their own subsistence consumption, and (b) sometimes travels considerable distances to the final markets, including occasionally export markets. Commercial activities affect a considerable number of smallholder farmers engaged in the production of fruits

and vegetable, spices, potato, onion and garlic, tea, coffee, sugar cane, jute, cashew nuts, and shrimp. In the case of medium and larger scale farmers, cereal production is also largely commercialized.

87. Any process of change involves some winners and losers. The process of commercialization is no different. It is important to realize who will gain and who will lose, and mitigate the negative impact if necessary and possible. Commercialization might increase the pressure on a fragile eco-system; it might lead to concentration of assets; it will lead to a demise of traditional farming systems and a more intensive use of technology and formal processes that will be reflected in different power relations within the households, the village, and society; it might lead to loss of biodiversity and pollution; it might be promoting cultural attitudes that go against social norms and restrictions; it might promote new roles for women that are not accepted by society. These are examples of negative effects or conflicts that commercialization might cause. Conversely, there are examples of positive effects, such as higher income, more employment for the poor, greater consumer satisfaction, and recognition of women's role in agriculture and improvement of their access to assets, information and decision-making.

88. For this transformation to take place, three simultaneous things are likely to occur: (1) creation of competitive business enterprises, (2) increase in rural wages, and (3) land consolidation. Poverty reduction will occur as less productive farmers move away from agriculture into rural and urban services and industries where they can obtain higher wages and more stable employment. Several factors influencing commercialization include effective institutions, improved infrastructure, knowledge management, adequate incentives, stakeholders' initiatives, and a conducive and enabling policy environment. The recognition of the complexity of these different factors should however not divert the attention from focusing on agribusiness enterprises as the main vehicle for the process of commercialization to take place.

4.8 The relation between agricultural and non-farm growth revisited

89. (Foster 2003) shows that a single-minded focus on enhancing productivity growth in agriculture as a source of welfare enhancement in rural areas is counterproductive in the context of a global economy. Not only is increased global food productivity likely to result in decreased prices and thus lower returns to poor farmers, but also there are substantial regions of the world where poor climate or topology provide little opportunity for expansion of agricultural yields in the absence of sustained subsidies.

90. The main message of the CVAD is that agricultural growth is the engine of growth in rural areas and the expansion of the non-farm sector in rural areas is predicated on the prior expansion of agricultural productivity in those areas. However, more recent evidence casts some doubt on this message. Evidence from India shows that over the past 30 years there has been substantial growth in the non-farm sector in rural India and the primary source of this growth has been the expansion of rural industry, not the expansion of agricultural productivity. In fact, factory growth was largest in those areas that did not benefit from enhancement of local agricultural productivity growth over the period.

91. Non-farm growth can play an important part in the expansion of incomes in rural areas

and non-farm growth is especially pro-poor. Poor rural households are endowed with little other than low-skilled labor and rural industry appears to be able to productively employ this labor. This contrasts with agricultural productivity growth, which expands the return to a factor that is concentrated among the better-off households (land) in addition to expanding the return to unskilled labor, entry of factory sector tends to have a greater proportional impact on the income of the poorest members of the village.

92. This is not to say that investment in agricultural productivity growth is not an important dimension of an overall strategy for poverty reduction in rural areas of low-income countries. Instead, it suggests that, from the perspective of poverty reduction, removal of barriers to non-farm capital and product mobility within and across countries is an important complement to investment in agricultural productivity that target those areas well suited to cultivation.

4.9 Economies of Scale

93. The Green Revolution technology, centered on seeds, was scale neutral. Small farmers could participate freely, especially as modern varieties became less risky. New technologies are more likely to involve mechanization and capitalization or require high levels of education, both of which may disadvantage asset -constrained smallholders.

94. Moreover, as urbanization and the industrialization of the food system proceeds, the way food is produced and marketed in developing countries changes in response to a changing demand. Small-scale, under-capitalized and often under-educated farmers in developing countries find it particularly difficult to meet the quantity, quality, timeliness and traceability requirements of the new supply chains – and have yet to find widely replicable institutional solutions, for example through cooperatives.

95. Smallholder farmers could be highly productive, and in fact are often more productive than large-size farms (see (Agrifood Consulting International 2001). The issue of economies of scale, however, does not primarily emerge in production. The issue arises mostly in processing, marketing, and distribution. When several standards have to be adopted at the farm level, the necessary changes in production and post-production activities required for a modern agrifood system are more difficult to implement and monitor when a large number of farmers are involved. The complications arise from the coordination of a large number of people. Farmer organizations, such as groups, cooperatives, and associations could take the lead in reducing the coordination problems faced by enterprises in dealing with farmers. Contracts between farmers and agribusinesses, and vertical integration are alternative options. The value chain approach proposed in the following section shows ways to address these coordination issues.

5. THE VALUE CHAIN APPROACH

96. Value chains are organized linkages among groups of producers, traders, processors, and service providers (including NGOs) who join together in order to improve productivity and the value added of their activities. By joining together, the actors in a value chain increase competitiveness and are better able to maintain competitiveness through

innovation. The limitations of each single actor in the chain are overcome by establishing synergies and governance rules aimed at producing higher value.

97. The main advantages to commercial stakeholders deriving from being part of an effective value chain consist in being able to reduce the costs of doing business, increasing revenues, increase bargaining power, improve access to technology, information, and capital, and, by doing so, innovate production and marketing processes in order to gain higher value and provide higher quality to the customers.

98. A value chain approach focuses on the interaction of actors along each step of the supply chain. Such an approach thus considers trade relations as being part of a series of networks of producers, exporters, importers, processors and retailers, and service providers, whereby knowledge and relationships are developed to gain access to markets and suppliers. The success of stakeholders in adding value to their production lies in their ability to access these networks.

99. Several concepts are central to the understanding of value chains including the concepts of linkages, coordination, governance, consumer demand, competitiveness, innovation, and distribution. Box 1 summarizes the key concepts.

100.

Box 1. Key Concepts in Value Chain Analysis

- The value chain organizes business **linkages** by getting stakeholders to work together.
- For different actors in a value chain to work together effectively requires effective **coordination** of decisions and exchange
- The rules regulating the coordination within a value chain constitute the **governance** of the chain.
- In order to increase value, the value chain needs to meet **consumer demand**.
- To meet consumer demand is not enough; the actors in the value chain need to meet consumer demand better than actors outside of the value chain: the value chain actors have to be **competitive**
- In order to keep competitiveness, the value chain needs to **innovate** continuously, otherwise their initial gains in competitiveness will be eroded over time.
- In order for the chain to establish effective linkages, the chain needs to **distribute benefits** that provide incentives to the participants. If only one party in the value chain appropriates all the benefit, the chain will not be sustainable in a market system.

Source: (Goletti 2004b)

101. The understanding of governance implies understanding of who controls the power relationships within the chain (Kaplinsky and Morris 2001). Governance issues are of increasing importance in the agrifood system, given the greater emphasis on product differentiation, food safety and product standards required in a competitive market environment. Such issues place a premium on strong linkages within the value chain

between agents in the chain. While individual and isolated smallholder farmers may be unable to capture value added vis à vis traders or processors, associations of producers may be in a better position to access technology, credit and market opportunities.

102. Rather than a linear model in which relations from farmers to consumers are considered in a sequential manner (input providers supplying to farmers selling to traders distributing to processors and consumers), in a network all actors can establish relations with each other in order to gain from the value chain. That implies a multiplicity of partnerships that can be formed between not only different groups and organizations belonging to the private sector, but also between public and private organizations.

103. In order to meet the challenges of the global economy, a successful value chain must continuously innovate in the form of products, technologies, management, marketing, distribution, etc. The chain must be efficiently organized using a variety of organizational structures that allow achieving economies of scale. The chain often establishes coordination among its participants by moving beyond spot market transactions and utilizing contracts, vertical integration, supply networks, alliances, and other forms of coordination. Increasingly the world over, effective value chains introduce practices that meet environmental and social responsibility concerns.

104. Spot markets can be the most efficient way to organize production and exchange when the level of coordination is relatively low and the differentiation of products is also low (as in the case of bulk commodities). In the case of perishable products and processed products however, the differentiation in terms of quality, safety, convenience, is quite high and often requires higher level of coordination than what provided by spot markets. In these cases, spot markets might not be the most appropriate way to organize production and exchange. Value chains or even hierarchies (e.g. vertical integration of an industry) might be the most efficient way of organizing the industry.

105. The more differentiated the product, the higher is usually the coordination requirement with the chain to ensure that the products of desired quality are available to the consumer at the right time and place. Markets and hierarchies are at the extremes of the coordination line; markets, hierarchies, and intermediate forms of coordination including joint ventures, alliances, network, clusters, etc. are the domain of value chains.

106. A value chain is not the same as a supply chain. A value chain is about linkages generating value for the consumer. A supply chain is about processes of moving and transforming commodities into products from producers to consumers. While a value chain is about generating value for the consumer, a supply chain is about logistics.

107. An example of how to generate higher value added is the one present in the transformation of a relatively undifferentiated commodity such as paddy into highly differentiated products. The first transformation of paddy in rice is relatively well known. Rice itself could be highly differentiated according to different features related to variety (basmati, jasmine, Arborio, etc.), size (long, medium, short grains), broken percentage, fragrance, etc. Different products could also be made out of rice including starch, snacks, crackers, spirits, etc. By-products of the milling process itself could be used for producing bran and fuel.

108. The value chain approach contains several features that are consistent with a new view of agricultural development. The approach is consistent with both global trends in the agrifood system and with a strategy intended to accelerate the transformation of the rural economy into a more dynamic system able to absorb productive employment and generate higher wages. A value chain intends to create or strengthen existing linkages among different actors, and therefore goes beyond a narrow view of agricultural development as only based on production. Value chain linkages imply that producers are linked to consumers through various mechanisms involving enterprises. These linkages aim at increasing value for the consumers and therefore utilize opportunities existing in the rural economies, arising in production, services, and industry. Sustainable poverty reduction will occur if emerging businesses in rural areas and rural-urban growth centers will increase demand for non-farm employment and induce growth in rural wages.

109. The value chain approach is broad enough because it not only focuses on producers and smallholder rural households, but also on business enterprises, service providers, and consumers. At the same time, the approach is not too broad to include everything that a government or development agency could or should do to promote commercialization. It seems to strike the right balance between comprehensiveness and focus.

5.1 The Issue of Coordination and Linkages

110. Value chain analysis stresses the general failure in coordinating the decisions of private stakeholders (e.g. farmers, traders and agroprocessors in the case of the agrifood system) and service providers from the public, private and NGO sectors. Coordination failures arise both within the private and NGO sectors and the public sector. Within the private and NGO sectors each stakeholder perceives agribusiness development in relative isolation. As a result, stakeholders do not make a concerted effort to overcome constraints that are affecting different participants in the value chain. Linkages among commercial stakeholders (farmers, traders and processors) exist, but are characterized by lack of trust, are weak, and do not result in effective actions to increase value added, improve competitiveness, and maintain competitiveness through continuous innovation. Within the public sector, coordination among government agencies is weak; its improvement requires leadership, commitment and vision.

111. Individual interventions to improve technology, infrastructure, and access to credit and markets can only be partial solutions that could at best keep the growth of the sector at the levels experienced in the past rather than accelerating growth substantially and make a real and appreciable contribution to the national goals. For growth to accelerate substantially a new way of thinking about and carrying out agribusiness is needed. This new way implies overcoming coordination failures. This will not happen automatically but will require appropriate institutional mechanisms that are currently not in place. From a business perspective, this general coordination failure among commercial stakeholders and service providers translates into ineffective value chains.

5.2 The Impact of Lack of Effective Value Chain Linkages

112. **Supply Chain Bottlenecks.** The lack of effective linkages among stakeholders in a value chain has several consequences. Perhaps the most obvious one is the

predominance of supply chain bottlenecks. Bottlenecks result in produce from farmers not flowing to the market in the amount and quality necessary to ensure high and stable returns. As a result, farmers experience gluts of commodities; processors are not able to procure sufficient raw materials for their plants; retailers do not get sufficient products to meet the demand of consumers; and exporters are unable to meet foreign customers' requirements. The overall volume of domestic and international trade is reduced; in turn this implies that rural households and enterprises will not be able to reap the benefit from higher rural income and employment. In turn, a weak rural economy reduces the scope for further investment in rural areas and entails low aggregate growth.

113. **Lack of Innovation.** In the absence of effective linkages among stakeholders the scope for innovation is limited. As an example, lack of improvements in packaging technologies is not necessarily the result of the lack of knowledge and availability of technologies, or of the fact that technologies are expensive. From the point of view of a fruit processing factory it might make sense to have the raw materials delivered in plastic crates rather than bamboo baskets. However, the introduction of plastic crates involves not only the factory and its suppliers, but affects the overall supply chain, and requires changes in logistic and supervisory systems that are acceptable to transporters, suppliers, farmers and factory workers. Another example is the adoption of improved seed and crop husbandry at the farm level. The resulting increase in production will not necessarily result in higher income for the smallholders, unless established market linkages ensure that the increase in production is actually marketed and does not result in a glut in the market. Low rate of innovation implies low productivity which in turn leads to low comparative advantage and missed market opportunities.

114. **Isolated Cases of Success.** Without effective linkages among stakeholders, success cases of entrepreneurs remain isolated and do not translate into a wider growth of the agribusiness sector. To achieve wider growth effects, entrepreneurs need to be linked to each other, form associations and establish mechanisms to exchange information, including the formation of economic clusters which are locations where many similar enterprises group themselves to achieve economies of scope and scale. The weakness of linkages is particularly acute in the case of women. Successful cases of female entrepreneurship remain isolated partly because of the lack of mechanisms to disseminate their experiences and learn from each others' success. The overall effect is a low level of innovation and slow agribusiness development.

115. **Low Organizational Capacity.** The capacity of individuals to solve business problems does not translate into organizational capacity. Product development requires the concerted effort of several people within the organization and among organizations. In the absence of this concerted effort market opportunities cannot be exploited. The frustration in solving problems as individuals generates a perception of helplessness and induces a dependency attitude, whereby problems are expected to be solved by the Government, or by investment and technical assistance provided by donors. This in turn translates into a lack of sustainable enterprise development.

116. **Low Private Investment in Rural Areas.** Isolated attempts at investments are not likely to raise the necessary capital to undertake modern agribusiness activities. At the farm level, the low income of most rural households often does not allow for individuals or small groups of poor smallholders to mobilize sufficient capital or access credit to adopt

new technologies, build basic marketing infrastructure, and obtain working capital for a variety of business activities. A similar situation occurs for other value chain stakeholders, albeit at a different scale. If organized into larger groups or alliances, the same stakeholders could make larger investments and avoid dependence on scarce and unreliable sources of finance for their investment. Low investment in the sector results in lower growth.

6. IMPLEMENTATION OF THE VALUE CHAIN APPROACH

117. The value chain approach provides some key elements towards a new view of agricultural development. However, unless the approach indicates some viable models for implementation, the approach remains at best a useful analytical framework to interpret the changing agrifood system in countries that have reached a minimum level of food security and are embarking in the process of agricultural transformation. The following sections propose models to help implement this approach.

6.1 Linkages

118. In most developing countries, market linkages between farmers and retailers or processors are extensive and complex. For a particular product to travel from the farm gate to consumers it usually has to pass through many different hands. On the way it is packed, unpacked, graded, sorted, handled and transported many times. This has significant consequences not only for the quality of the product when it reaches the consumer, but also for the efficient organization of the agricultural marketing system.

119. In most developing countries, there are relatively few linkages directly between retailers or processors and the farmer level. The majority of sales by farmers are at either the local market or the farm gate. Few farmers make sales to wholesalers or retailers, even in organized marketing groups. This means that the organization of the multitude of middlemen is an important factor in improving the agricultural marketing system.

120. A lack of linkages between non-adjacent levels of the chain perpetuates a situation where there are multiple middlemen handling the produce from farm gate to consumers, with the attendant increase in post-harvest losses and financial inefficiencies from multiple handling, packaging, storage and transportation.

6.2 Trust and Linkages

121. Trust and linkages are inextricably linked. Organizations without linkages have little reason to “trust” each other, even if they do not “distrust” the other party. Conversely, organizations with linkages may not need to have trust in order to do business if there are some enforcement mechanisms in place to ensure compliance with a given set of rules governing their relationship (for example, contracts and other legal regulations). However, in the absence of an effective mechanism of enforcement, linkages without trust are invariably weak (see (ANZDEC, ACI et al. 2003b).

122. It is clear that any intervention in the agricultural marketing system by governments

or donors is ultimately unsustainable unless there is a strengthening of the linkages between stakeholders. There are significant opportunities for improvements in coordination between the different levels of the marketing system. If levels of trust can be increased, then stakeholders are more likely to be willing to coordinate activities.

123. Strengthening the linkages between the different stakeholders in the marketing system will lay the groundwork for improvements in the other constraints; establishment of a contract regime, improvements in post-harvest and transportation systems, improvements in quality, and the effective use of market information.

124. Linkages can be strengthened in a variety of ways, but ultimately it is a matter of confidence building between stakeholders; which implies that the process is a long term process without any short-term fixes.

125. The key to improving linkages is through a Value Chain approach, utilizing the concept of a network model where all actors can establish relations with each other in order to gain from the Value Chain. This implies a multiplicity of partnerships that can be formed between not only different groups and organizations belonging to the private sector, but also between public and private organizations. As noted above, linkages between different stakeholders and actors along the value chain are extensive but weak; farmers may be linked to traders, but are not directly linked with processors or retailers.

126. The challenge for value chain development is to move to a situation where there are strong and extensive linkages between each of the stakeholders. There is little evidence in the case of most low-income developing countries that these linkages can be built and strengthened without some external assistance; after all, if this were the case then linkages would be much stronger and more pervasive than is currently the case. As such, there is a strong argument that an intervention (a “project”) in facilitating the creation and strengthening of linkages between value chain stakeholders.

127. As an example, the weak linkages between agro-enterprises and finance providers are strengthened by the provision of investment and technical services by the project. The project acts as an intermediary and facilitator between the agro-enterprise and the financial institutions; possibly providing business plan development, financial proposal preparation, technical consulting services, etc. on a case by case basis. In the case where linkages do not exist, for example between farmers and exporters, the project may provide investment and technical services to assist exporters to source their supplies directly from contract farmers, and provide technical services to farmers in order to assist them in meeting contract and quality specifications.

6.3 Value Chain Models

128. Five models⁴ are presented that link smallholder farmers to entrepreneurs and markets in a competitive and sustainable way, including

- (i) Farmer to Market Linkage Model;
- (ii) Farmer to Enterprise Contract Model;

⁴ See (Agrico, ANZDEC et al. 2004a)

- (iii) Large Enterprise to Farmer Model;
- (iv) Small and Medium Enterprise to Market Linkage Model; and
- (v) Supermarket Supply Chain Model.

129. Clearly, this list is not exhaustive; however it provides some example of how the value chain approach could be implemented in a variety of situations commonly arising in many developing countries characterized by a low level of agricultural commercialization and an agrarian structure consisting mostly of smallholder farmers.

130. In the *Farmer-to-Market Linkage* Model, farmers are linked with market services and other value chain stakeholders through facilitating service provider organizations.

131. In the *Farmer-to-Enterprise Contract* Model, farmers are linked directly with enterprises through contract grower systems. There are two types of contracts envisaged; contracts directly between enterprises and farmers, and contracts indirectly through traders, NGOs and suppliers.

132. In the *Large Private Enterprise* Model, out-growers are treated as partners in the enterprise rather than as mere contract suppliers. The large private enterprise provides a guaranteed market outlet for associated smallholders, as well as technical extension services and credit in the form of production inputs. In order for the large private enterprise program to be successful, however, the enterprise must also exercise some degree of management control over the smallholders' production and post harvest practices and must take some responsibility for the general well being of the smallholder and his/her family.

133. In the *Small and Medium Enterprise-to-Market Linkage* Model, enterprises are linked with market services and other value chain stakeholders through the facilitation services of organizations and institutions such as NGOs.

134. In the *Supermarket Supply Chain* model, farmers are linked with supermarkets and large retailers through supplier organizations. The supermarkets and retailers are responsible for developing standards and quality specifications, as well as contractual terms for suppliers. Suppliers are responsible for organizing individual farmers and farmer groups to supply perishable product that meets those standards and quality specifications.

135. The models suggest different types of interventions which have a common feature: the centrality of the commercial stakeholders (farmers and entrepreneurs) in meeting consumer demand and in making investment decisions to expand their businesses. In this approach, service providers (public, private, and NGO) are not the initiators of change that leads to sustainable growth; they are provider of services that are demand-driven by the key stakeholders. The approach indicates the need of investments to be driven by commercial stakeholders in the pursuit of business opportunities, rather than by service providers.

7. THE VALUE CHAIN APPROACH AND IMPLICATIONS FOR AGRICULTURE AND RURAL DEVELOPMENT

136. The expected benefits of the proposed models for implementation of the value chain approach can be identified in several areas:

- (i) **Income.** Enabling rural enterprises and entrepreneurs to increase their business scope and profitability through improved value chain linkages and effective business development services will not only increase the incomes of these entrepreneurs, it will also have a multiplier effect on the incomes of others in the area. Groups that will most directly benefit will be farmers and private sector entrepreneurs who are presently impeded by lack of agribusiness linkages and value chain management. There would be indirect benefits to suppliers of input goods and services particularly in regional areas. There would be large potential flow-on benefits in income generation to a wide range of farmer producers who may be either suppliers of agro-processing businesses or directly participate as members of farmer cooperative agribusiness enterprises. Positive income effects will also affect rural households who are employed in new or expanded processing enterprises. Most income effects would be expected in rural areas.
- (ii) **Employment.** The greatest potential source of new jobs in the future will be rural non-farm enterprises. Enhancing the growth potential of these enterprises will increase their contribution to national employment generation. Indirect benefits will also occur for the rural labor force through increased employment opportunities. Employment effects are expected to be positive, especially in rural areas and particularly for women with increased opportunities as agro-industry workers.
- (iii) **Prices.** Increasing the technical and managerial capabilities and the productivity of agribusiness enterprises should make it possible to provide products of better quality and additional variety to the consumer at lower prices. The establishment of contracts and the adoption of various post-harvest technologies (including improved storage, packaging and processing techniques) will also provide additional stability to prices.
- (iv) **Trade and competitiveness.** Increased production of higher value goods and services will increase the volume and value of market transactions. Improved value chain linkages will allow innovations in technology and management, more stable supply chains, and will increase competitiveness of agribusiness enterprises.
- (v) **Market efficiency.** The strengthening of value chain linkages between farmers and markets will contribute to a better organized marketing system, reduction of post-harvest losses, increase in quality, lower congestion of market places, investment in market infrastructure, and “shorter” marketing chains yielding higher marketing margins for farmers.
- (vi) **Poverty reduction.** Reducing the incidence of poverty in the countryside, where it is most prevalent, will occur as a result of increases in income brought about by growth in the volume and value of goods produced and marketed. It will occur to an even greater extent as a result of employment creation in an expanded rural enterprise sector. For poor farmers supplying agricultural commodities, strengthening of value

chain linkages improves market access and, through better coordination and cooperative relationships with buyers, increases their income security. The same holds when the poor are on the buying side of the value chain. The poor, however, are not only producers but they are also workers and consumers. Development of medium and large agribusiness enterprises will have an indirect effect on the poor through generation of new employment opportunities. At the same time, agro-enterprise development will increase demand for agricultural goods which are likely to be produced by poor commercialized farmers.

- (vii) **Gender equity.** Development of effective value chains will provide new opportunities for women to be involved in value chains as either workers or agribusiness entrepreneurs.
- (viii) **Ethnic group advancement.** Impact on ethnic group advancement and social equity will depend on the degree to which ethnic groups are integrated with value chains as both supplier of raw materials and as entrepreneurs at different stages of the value chain.

7.1 Implications for the poor

137. Past approaches to poverty reduction have centered on government programs, NGO's activities often based on subsidies and foreign aid in the form of grants and cheap loans. The poor, particularly in rural areas have often characterized as having limited assets (land and capital), knowledge, and access to markets, information, and infrastructure. The poor have also been seen as lacking education and skills, having little organization, often been isolated, and victims of the vagaries of weather, disasters, diseases, discrimination, and abuse. The majority of the poor in most developing countries are located in rural areas and derive their main livelihoods from agriculture-related activities.

138. A variety of approaches has been proposed in the past to poverty reduction. Most of the past approaches see the major role played by the government institutions and NGOs. Most the past approaches in agricultural development see the rural poor primarily as producers whose productivity needs to be raised. The approach promoted in this paper views the poor not just as farmers, but primarily as wage workers and consumers, and the private sector as a major initiator of change in poverty reduction.

139. The private sector includes micro, small, medium, and large enterprises, multinational companies (MNC), and cooperatives. The private sector has a major role in poverty reduction if starts to approach the poor as a viable and profitable markets. Prahalat (2004) sees the "*bottom of the pyramid*" (those with less than \$2/day and constituting 80% of world population) as a major opportunity for business, provided that NGOs, community-based organizations (CBOS), and micro-small-medium enterprises (MSME) join large enterprises and Multinational Corporations (MNCs) as partners.

140. For the opportunity to be realized, the private sector will have to innovate in its strategies related to pricing, marketing, distribution, and risk management. Traditionally, MNC have not looked at the poor because they have not been able to develop new methods to tap the needs and demands of these consumers. They have applied

developed market strategies to developing countries, thus making possible only the tapping of the top 10-20 percent of the population.

141. This has already shown promises in the case of various countries including India, Mexico, etc. where MSMEs, NGOs, and CBOs have joined large local companies and MNCs to get access to global markets and capital. Innovations by the private sector will require the building of a capacity for governance of transactions.

142. The poor can benefit from commercialization as producers, consumers, and workers. Business enterprises can have a positive influence on poor people's livelihood in different ways including (Mayoux 2003):

- (i) Generating employment
- (ii) Providing adequate working conditions
- (iii) Increasing or securing the poor's access to assets
- (iv) Investment in infrastructure and technology
- (v) Developing human capital
- (vi) Providing adequate, affordable goods and services
- (vii) Fostering a sustainable natural environment

143. As a minimum requirement, enterprises should not take advantage of poverty and the marginalization that often accompanies it (e.g. by paying less than a living wage, by selling harmful products, by denying land rights without fair compensation). Instead, companies might in some instances seek to reduce poverty (e.g. by locating factories in deprived areas, investing in education and health, providing poor people with market access). Seen as consumers, the poor acquire new opportunities in terms of choices of products and services. Of course, the poor can also be harmed and lose from interacting with enterprises, and there is a need for checks and balance. In the past, the protection of consumer was considered as one main task of the public sector. Currently, press and media can provide such a role. Ultimately, informed consumers will be the ones to provide the most important check and balance through their consumption choices.

7.2 Implications for women

144. Women are likely to benefit from the development of value chains in terms of (i) newer employment possibilities at household level in agro-processing and post-harvest tasks; (ii) newer employment possibilities in large and small-medium enterprises; (iii) increased income at household level; (iv) improved human capital and skills through training and capacity building activities and (v) increased availability and quality of agricultural goods.

145. The combination of these effects may significantly increase the overall status of women in the household and in society at large. However, various constraints may prevent or decrease the occurrence of benefits to women. By considering the women potential involvement in employment opportunities, attention needs to be given to (i) social /cultural constraints which limit women participation in the labor force; (ii) economic constraints as necessity to count on women work inside the household for children care and housekeeping; (iii) facility constraints which do not allow women to access appropriate facilities in the working or market place.

146. The following general strategies of gender enhancement could be incorporated in

the design of value chain models: (i) development of commercial value chains, which is positively associated with the participation of women; (ii) collaboration with women entrepreneurs associations and women associations; (iii) implementation of awareness campaign for promoting commercial activities among women groups; (iv) capacity building for institutions, NGOs, associations, groups, financial institutions and women involved in agri-business and agro-processing activities.

7.3 Implications for the environment

147. Agricultural growth has historically been resource-intensive. It has been associated with heavy use of fossil fuels, falling water tables, soil problems related to salinization and compaction, and a variety of residue problems in the environment and in products leaving the farm. Despite talk of environmentally friendly options and the idea of ‘regenerating agriculture’, and despite the growth of niche markets for organic products, environmental considerations seem more likely to constrain agricultural growth than to accelerate it.

148. This is evident in those areas where the Green Revolution has been successful (e.g. Punjab) and are now facing major environmental problems (e.g. lowering of the water table). But is also evident in developed countries where as income increases the demand for “*environmental amenities*” also increases and with it the regulations of and penalties for socially undesirable food and fiber production systems.

149. In the emerging global agrifood system, value chain might be a powerful force in promoting sustainable practices. Regulatory activity by governments and the key role of civil society organizations (NGO, associations, community-based organizations, citizens and consumer groups) in monitoring environmental parameters will provide a strong message to businesses and farmers engaged in environmentally damaging practices. At the same time, the pursuit of environmental amenities will represent an opportunity for market development and provide incentives to agribusiness to adopt sustainable practices and to ensure food safety for consumers and environmentally safe practices for workers and communities.

7.4 Implications for food security

150. Chronic hunger derives from low real incomes. Every major country that has substantially improved real incomes has done so through a structural transformation of its economy involving:

- (i) A process by which increasing proportions of employment and output of the economy are accounted for by sectors other than agriculture. The economy becomes less agriculturally oriented in a relative sense, although agriculture and, more broadly, the food system continue to grow absolutely and generate important growth linkages to the rest of the economy. Structural transformation thus involves a net resource transfer from agriculture to other sectors of the economy, over the long term.
- (ii) Movement of the economy away from subsistence-oriented household-level production towards an integrated economy based on greater specialization, exchange, and the capturing of economies of scale. Many functions formerly

conducted on the farm, such as input production and output processing, are shifted to off-farm elements of the economy.

151. One implication of this process is that driving down the real cost of food to consumers requires increased attention to fostering technical and institutional changes in the off-farm elements of the food system. Increasing productivity at the farm level is absolutely necessary but is alone insufficient to assure decreases in the real price of food to consumers. Another implication is that for this process of structural transformation to go forward, the economy must develop low-costs means of exchange. High transaction costs in the economy can choke off structural transformation by making it too costly for people to rely on the specialization and exchange necessary to take advantage of the new technologies in the food system.

152. Increased access to knowledge systems of the wider world embodies new technologies, management practices, and institutions. In the future, the sources of economic growth will depend increasingly on these types of embodied knowledge.

7.5 Implications for Marginal Areas

153. Certain regions of the world are at such a disadvantage with respect to their endowment with natural resources that they can be considered marginal locations in terms of settlement and utilization of resources. This includes semiarid and arid regions with no means of irrigation, highland and mountain regions with little precipitation, but also areas with inadequate transport facilities. Usually the whole system is quite unstable and offers little resistance to human intervention; sometimes, however, the system also shows great powers of regeneration, if the damage has not progressed too far.

154. As the result of population growth and pressure to increase production using means that are no longer ecologically sound, which often results in the destruction of resources, the ecological carrying capacity of these areas is no longer adequate for the existing population, and it is hardly possible for the inhabitants to take part in the general economic development.

155. Admittedly the development of marginal areas is a major challenge for development practitioners and the value chain approach cannot be expected to make a major contribution to a problem that involves multi-dimensions such as community development, infrastructure development, and preservation of cultural identities. However, several marginal areas in developing countries have also comparative advantage in the production of specialty commodities (e.g. tea, coffee, spices such as ginger and cardamom, medicinal and aromatic plants, nuts, mushrooms, fruits) that are often not adequately utilized.

156. The challenge for a value chain approach would be to use the comparative advantage of these areas in the production of certain commodities and identify niches whereby consumer would pay a premium of these commodities while maintaining ecological balance and promoting sustainable practices in the local communities. The approach of the CVAD which intensify production of staple commodities is not appropriate for at least two reasons. First, the approach implies using techniques that are ecologically damaging to these areas; second, these commodities would hardly meet generate the

income increases that would ensure food security and poverty reduction.

8. CONCLUSIONS

157. The structural transformation of rural economies requires a view of agricultural development different from the one inherent in the conventional view which originated with the Green Revolution and was based on increasing productivity of food staples grown by smallholders.

158. In the context of major changes in the global agrifood system and a situation in which some basic food security for the majority of the population has been achieved, a new view is required. The new view of agricultural development sees agricultural production as part of the agrifood system involving production and off-farm activities (storage, transportation, processing, retailing, trade) geared to generate higher value while meeting an increasingly complex consumer demand.

159. While the old stressed the role of technology to increase farm productivity, the new view considers coordination along the agrifood value chain as the main issue for agrifood system development.

160. In order to improve coordination, facilitating organizations will be needed in addition to appropriate policies, regulations, and infrastructure. Major emphasis should be given to institutions that allow technology, capital, and information to flow along the value chains from producers to consumers. The value chains include farmers, enterprises and service organizations (finance, research, NGOs, associations, regional planning agencies, local development).

161. For value chains to be effective, enterprises will be the leading actors. In most developing countries, enterprises have to link with smallholder farmers, since most of the agrarian structure in these countries is dominated by smallholder farmers. These linkages will not occur automatically. Even large enterprises will need favorable policy and infrastructure conditions; established lines of communication, sufficient power, and connectivity. Facilitating contracts and linkages with thousands and millions of smallholder farmers will imply overcoming communication and legal barriers.

162. The value chain approach recognizes and builds upon global trends in order to ensure that benefits could reach a large number of people, those who have been referred to as the “bottom of the pyramid”. The corporate sector and the SME will need to reorient their strategies to meet the demands of this group of the population that represent a huge market potential.

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