Agricultural Economics Research Review
Vol. 23 (Conference Number) 2010 pp 535-543

Global Market and Local Players: A Value Chain System of Collaborative Strategies[§]

B.B. Sahoo
National Bank for Agriculture and Rural Development (NABARD), Mumbai, Maharashtra

Abstract

Since independence, different institutional arrangements have been tried to reorganize the land and production relations for bringing change in farming systems and enhancing crop yield of small farmers. But, these interventions have not been successful in bringing any meaningful improvement. Non-viability of small landholdings, inadequacies in the availability of inputs, poor extension and infrastructural support and insufficient marketing avenues have been found to be the primary reasons for the low crop productivity. However, it is believed that changes in institutional arrangements of land tenure system like land leasing, contract farming and corporate farming can make the small farms economically viable. By forging strategic alliance with farmers and banks, the corporate sector, which is known for its efficient management, can provide a sound business framework and prove to be a panacea for the ills of agricultural sector in general and small farmers in particular. The experience of some the Indian companies and multi-national companies are quite encouraging in this area. This paper has made an attempt to integrate small farmers and corporate sector and establish a link between small farmers and global market through effective value chain system. Besides, it has described the role of various players in the value chain and has discussed how the government, keeping the interests of the farmers in view, can facilitate greater participation of the corporate sector through appropriate policy framework.

Introduction

In a recently published Global Hunger Index, India has been placed at No.66 among the 88 vulnerable countries. Unlike India, countries like Sri Lanka, Bolivia and Namibia with lesser spending on social improvement, are climbing up the ranks with every new report. In spite of dynamic growth in the industrial and service sectors, agricultural sector has lagged behind. In particular, during the past two decades, there has been a distinct slow down in the agricultural growth. As a result, the gap between growths of agriculture and other sectors has widened. Due to risks and uncertainties in production, marketing and access to institutional credit by the small and marginal farmers has been quite low. The other difficulties faced by the small farmers include absence of collaterals for getting bank loans, increased expenditure on cultivation and marketing and low return. Therefore, the typical Indian farming is all about poor farmers, fragmented landholdings, minimum farm mechanization, traditional agricultural practices, low use of inputs and poor market linkage. All these result in poor performance of the sector in spite of a robust overall economic growth, leading to farmers continuing in low investment/return production cycle and increasing agrarian distress, which are manifested through migration, farmers' suicides and reduced participation in agricultural activities.

It is evidenced that small producers and exporters in developing countries can be included successfully in global agricultural value chains (Fromma and Dubónb 2006), an attempt has been made in this paper to integrate small farmers and corporate sector through value chain so that both could benefit. While corporate sector will get assured and quality commodities, small farmers will get quality inputs including credit facilities,

* Author for correspondence,
Email: bbsahoo2k@yahoo.co.in

§ The views expressed by the author in this paper are those of author and not of the institution he is affiliated

technology and market for their produce. In the process, value chain will generate employment at each stage of the value addition. Besides, it will encourage crop diversification to suit the demand, tastes and preferences of the end-consumers.

Rural Credit Market

The rural credit market includes agricultural finance and micro finance. While agricultural finance is dedicated to financing agricultural-related activities, micro finance provides financial services to the low-income people for a variety of purposes in farm and non-farm areas. The small-sized loan demand and no/incomplete documentation of property make the fund flow costly in the rural areas. The high cost of handling transactions by banks and increased travel requirements by consumers and bankers aggravate the situation further. Financial reforms and financial discipline also reduce the scope for rural credit. Today, while the focus of commercial banks is on improving efficiency and increasing profit, most of the regional rural banks and cooperative banks have been fighting against poor governance and operational inefficiency. Although there are some viable institutions in regional rural banks and cooperative banks, a majority of them have been struggling with the problems of over-staffing, under capitalization and mounting non-performing assets. Therefore, in comparison with urban areas, the overall credit scenario in rural areas is less organized in terms of available financial products.

Changing Market Scenario

A couple of years ago, consumer was not pro-active and accepting whatever the manufacturer was supplying to the market, and the manufacturer, without making any attempt to optimize the external linkages, was concentrating on optimizing his operations. However, with opening up of the economy, the situation is changing drastically. With the participation of multinational companies, the consumer finds a variety of goods in the market place. He also gets an opportunity to compare the product of one company with a similar product of another company and has started dictating terms. His awareness in terms of quality, size and price of the product has increased. All these have resulted in a shrinking market for a company. Competition among the domestic and international companies has increased to attract the consumers. As a result, companies have started firming up the suppliers' end as a solution. This interlinked situation has brought out the concept of 'Supply Chain Management' (SCM) and the raw material has been brought inside the manufacturing facility. However, with the change in business climate, consumer has become more demanding, which has warranted to take supply chain beyond manufacturing into the actual selling activity. Manufacturers have started calling these extended supply chains as 'demand chains'. As a result, the manufacturer now tries to understand the different types of consumers, their demands, their requirements and their satisfaction levels. Out of this need, value chain has born.

Supply Chain and Value Chain

Supply chain management emerged in the 1980s to manage the total flow of goods from suppliers to the ultimate users and evolved to consider a broad integration of business processes along the chain of supply (Clemmer, 1990; Cooper *et al*., 1997; Supply Chain Council, 2005). In 1982, Keith Oliver[1] used the term 'supply chain management' to balance trade-offs between *his clients' desired inventory* and *consumer service goals*. The supply chain, as the name suggests, focuses on integrating supplier and producer processes and its main objective is to improve efficiency and reduce wastages. Thus, the concept of a supply chain refers to the flow of materials from their sources (suppliers) to the company and then inside the company to places where they were needed, or in other words, it is all about the product's requirement and the supply chain is a chain of business partners that collaborate to serve the manufacturer's consumer, i.e., distributor or retailer. On the other hand, a demand chain describes the process of taking orders and delivering finished goods to meet the demand of consumers. The relationship between these two types of chain is often described as 'push-pull'[2]. The major concerns of this

[1] A Vice-President in Booz Allen Hamilton's London Office; Source: What is Value chain analysis? What are the main aspects of Value chain analysis? How to write Good Value chain analysis of a company? Where to find information for Value chain analysis? *Wikipedia*, the free encyclopedia

[2] Goods and services are pushed along the supply chain ultimately to meet the requirements of an end-user. In the demand chain, the demand from consumers pulls goods and services from suppliers to the end-consumer. Therefore, they are frequently combined under the single concept, named as supply chain.

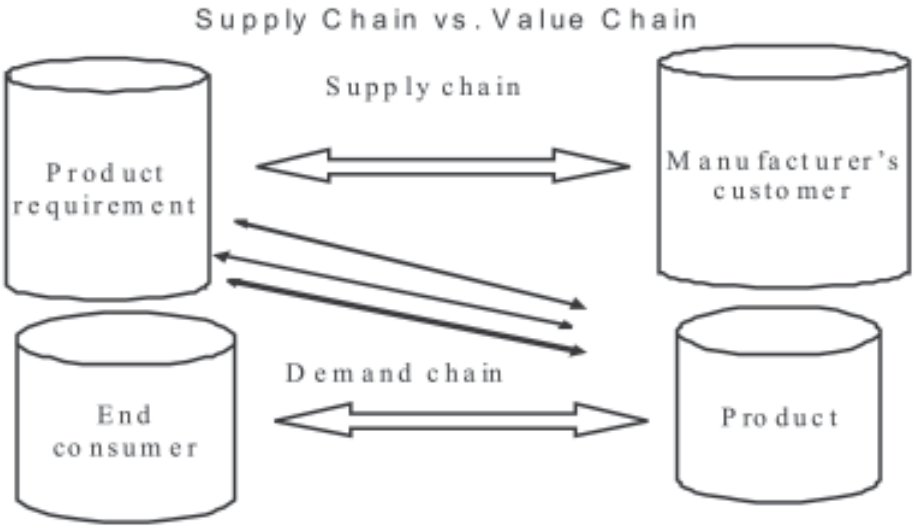

Figure 1. Difference between supply chain and value chain

chain are costs and efficiency of supply and flow of materials from various sources to final destination. The difference between supply chain and value chain is depicted in Figure 1.

Michael Porter has used the word 'value chain' in his book on "*Competitive Advantage: Creating and Sustaining Superior Performance*" to address the end-consumers, who are the source of value of any product. He has divided different activities under the value chain into *Primary Activities* and *Support Services*. According to him, while inbound logistics, operations, outbound logistics, marketing and sales and service are the primary activities, procurement, human resource management, technology development and firm infrastructure are the support services of a firm. Thus, value chain is a connected series of organizations, resources and knowledge streams involved in the creation and delivery of value to the end-consumers. It focuses on creating value in the eyes of the end-consumer and this flow of demand is often referred to as '*demand chain*'. The major participants of demand chain are: manufacturer's warehouse, wholesalers' distribution centres, retail chains' warehouses and retail outlets.

Thus, while supply chain is about the integration of manufacturer with wholesaler/retailer, value chain is about the integration of the product and the end-consumer. In other words, while goods and services flow from the source to the consumer in the supply chain, value flows from the consumer in the form of demand to the supplier. Thus, supply chain focuses upstream on integrating supplier and producer processes, improving efficiency and reducing wastages and value chain focuses downstream on creating value in the eyes of the consumer. However, in order to optimize business performance, most of the present day supply chain models, i.e., *third generation supply chain*, have been synchronizing supply chains and value chains with a view to optimize their business performance. Therefore, the concepts of value chain and supply chain have been considered synonymous in this paper. The management through the chain always tries to either reduce cost or shorten the number of steps in the chain. The success of the value chain depends on how best the corporate sector collaborates with the partners, share risks and uncertainties, offer technology and share the benefit. Therefore, developing value chains is often about improving access to markets and ensuring a more efficient product flow while ensuring that all actors in that chain benefit.

Value Chain in Agriculture: Present and Proposed Models

(a) Present Scenario

In the traditional selling systems, farmers produce commodities that are "pushed" into the marketplace, but they are isolated from the end-consumer and have little control over input costs or the funds received for their goods. They are isolated from the consumer, as well as their demands and preferences. The R&D is focused on production and on reducing cost of

production. But in a value chain marketing system, farmers are linked to consumers' preferences and tastes through flows of information and products. They work closely with suppliers and processors. Through continuous innovation and feedback, the returns to farmers and various stakeholders in the value chain increase.

At each stage of the value chain, the players require credit. They approach either formal sources and/or informal sources for their credit needs. Many a times, the financial services offered by the formal channel fall short of the stakeholders' requirement. The other problems faced by the players are collateral, excessive paper work and undue delay in sanctioning and disbursement. As a result, the stakeholders' dependence on non-formal financial sources increase. They take pre-harvest and pre-export trade credit from non-formal financial sources. Trade association, accepting warehouse receipt as a collateral and farming under contracts influence the farmers to depend on non-formal channel. The dynamics of these arrangements are as follows:

Trade Credit

Trade credits in the form of either inputs like seeds and fertilizers or products like grains and horticultural products are provided by one party to a second party for a specified duration. The financial transactions are made in either cash or kind. The duration of finance may be short-term or seasonal. In the value chain, the main player usually takes position at either end of the chain, i.e. importers and wholesalers on the upstream end and exporters, wholesalers and large processors on the downstream end. The traders, input dealers, farmers' organisations and farmers stay in between the upstream end and downstream end. The importer/wholesaler or exporter/wholesaler/processor sells inputs on credit to traders, input dealers and farmers' organizations, usually for a short-term, which is sufficient enough to cover the time period needed for the borrowers to re-sale the inputs. Finally, farmers and traders sell their produce to either downstream actors or upstream actors. Effective screening of clients, cost recovery and enforcement mechanisms are built into the loans given by the lender to the borrower. The capital charge is embedded in the system through increased price for inputs and/or reduced price for products. Lenders deal with individuals they know through personal contact or prior business relationships. In the case of new client, lender seeks guarantor. Processors and wholesalers tend to work through the traders, dealers, shopkeepers and cooperatives. The ability of the borrower to repay the loan is assessed by the commercial relationship that has developed between lender and borrower. In most of the cases, lender accepts crop as a collateral.

Warehouse Receipts

Producers and traders deposit commodities at the warehouse. The system involves the issuing of documents and warehouse receipts as evidence that specified commodities of stated quantity and quality have been deposited at a particular location by the depositor. Standards are used to define the quality of the product deposited. Each deposit needs to meet these standards. The depositors may be producers, farmers' groups, traders, exporters, processors, individual farmers or even corporate bodies. The system offers clear mechanisms for tapping and protecting the use of deposited produce as collateral. The issuer of the warehouse receipt holds the stored commodity by way of safe custody and he is legally liable to make good any value lost through theft or damage. The warehouse receipt system helps in lowering post-harvest losses and getting the farmers remunerative price for their produce. The major benefits of warehouse receipt are: (a) warehouse commodity can be used as collateral for getting an advance from bank, (b) it helps the depositor to wait until a conducive market condition, (c) application of standardized grades allows trading by description, thereby reducing transaction cost, and (d) shortens the marketing chain and increases producers' margin.

Contract Farming

In contract farming, the exporter, processor or major wholesaler generally supplies inputs, skill, technology, extension facilities and financial services to various stakeholders. All such services are generally linked to the purchase agreement. This agreement can be tacit or formal. The loan can be issued in cash or kind. Generally in the contract system, the corporate body gets bank loan and passes it on to the farmers and traders. A number of ways are adopted to recover the capital cost. He may pass the interest rate charged by the bank onto the producer or adjust prices, either in

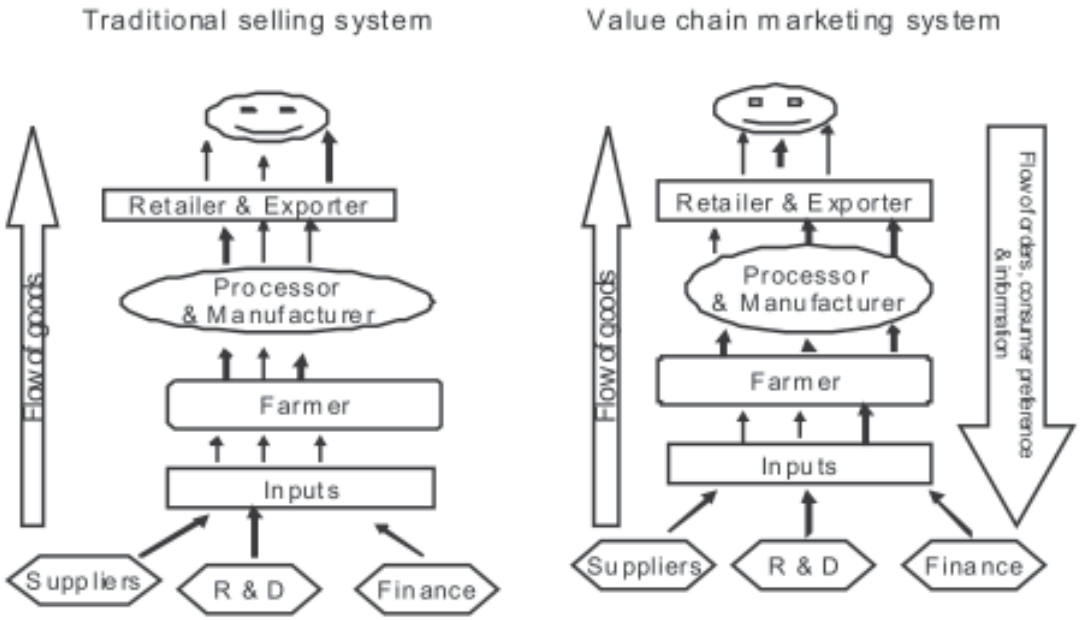

Figure 2. Difference between traditional selling system and value chain marketing system

the form of higher unit prices for inputs, lower prices for product, or a commission or fee that is assessed. He may also charge a fixed interest rate on outstanding advances. As the earning of the lender depends more on sale rather than offering financial services, he concentrates more on the borrowers' ability to deliver the required quantity and quality of the product. In the process, farmers gain access to inputs and finance, higher productivity, reduced risks and reliable access to market.

Proposed Model

Due to inadequate linkages, credit, marketing and other facilities, a large number of small and marginal farmers are left out from producing remunerative cash crops and are forced to continue in low investment/ return production cycle. As a result, given an option, many farmers are willing to take alternative occupations. Therefore, by offering a remunerative price for crop produce, the farmers can be encouraged towards crop cultivation. Credit, linkages, skill and certified seeds are the next set of requirements. Finally, it is to provide secure platform to small farmers, as a result of which, they can broaden their horizons by taking up additional activities (such as dairying, piggery, fishing or some non-farm activities) other than crop cultivation. Strategic alliances within key value chains between farmers, corporate sector and banking sector may be one promising way to mend many of the ills of the agricultural sector. In this proposed model, corporate sector will play the lead role and the government will play the role of a facilitator. The strategic alliance among different stakeholders is depicted in Figure 3.

To start with, the initial work is to help farmers and micro & small enterprises gain access to finance for value chain upgradation. The main problems faced by the small farmers are credit for working capital, quality inputs, extension services and fair price for their produce. Even the middle players in the supply chain could not expand their business in the absence of financial support. Most of the banks do not respond to different players in the supply chain due to inadequate collateral and limited market for their produce.

Under the direct monitoring and supervision, informal groups like self-help groups (SHGs), farmers' clubs (FCs) and farmers' associations (FAs) may be formed. Leading non-governmental organizations (NGOs) may also participate in the alliance. While SHGs, FCs and FAs screen and organize farmers, distribute inputs, reduce costs, monitor the progress, deliver extension services, the NGOs and corporate sector link farmers with financial institutions, share information, help reduces risk and market the produce. As a result, scale and quality of smallholders' operations and their marketing access will increase. The responsibilities of farmers, farmers' groups and NGOs are depicted in Figure 4.

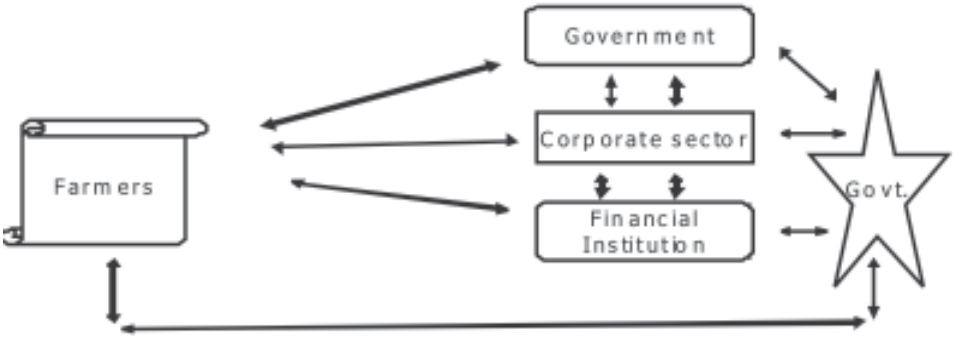

Figure 3. Strategic alliance among key stakeholders in the value chain

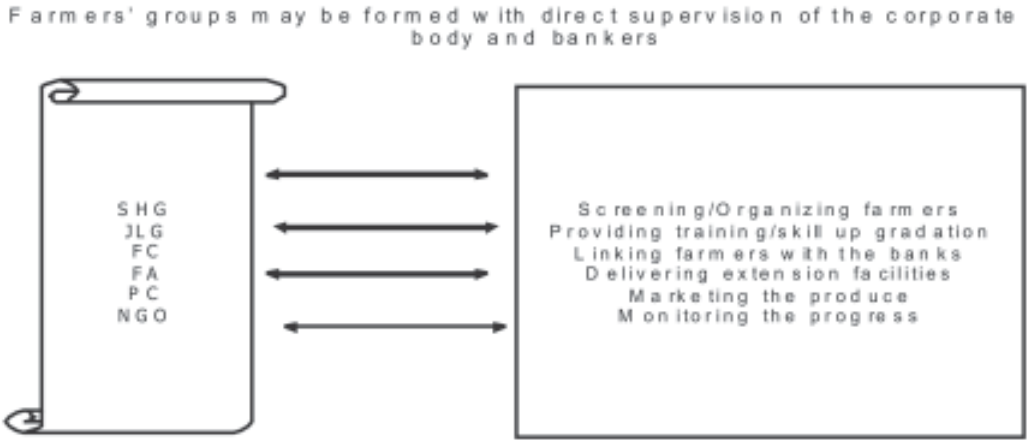

Figure 4. Responsibilities of farmers, farmers' groups and non-governmental organisations

To expand financial services, financial institutions may also consider financing of the stakeholders, who will on-lend to small farmers. The examples of trade credit, warehouse receipt and contract farming may be experimented by the financing banks. Promotion of credit in this regard will reduce banks' credit risk and will result in faster services in financing of small farmers. As a result of the association, farmers will also get access to a wider range of services, including savings and investment credit. With cost structure more appropriate to small farmers, small-scale warehouses may be designed and financed. It will allow the farmers to sell when market prices are more advantageous. Trader credit through better yields and more secure market channels can influence the potential farmers to join the value chain. As credit and other embedded services are included in the contract farming, small farmers can increase their productivity and gain access to high-value markets. However, care must be taken to remove unnecessary players in the value chain. The proposed model has been depicted schematically in Figure 5.

Role Envisaged for Various Partners in the Proposed Value Chain

(a) Corporate Sector

- To decide the organisational structure of the value chain (centralised or de-centralised)
- To identify intermediary players and add value to the product
- To serve product to the end-consumer to his best satisfaction
- To provide effective linkages such as infrastructure, extension, R&D support and credit facilities to the players
- To build trust among partners

(b) Government

- To play the role of a facilitator
- To frame suitable policy for the development of the sector

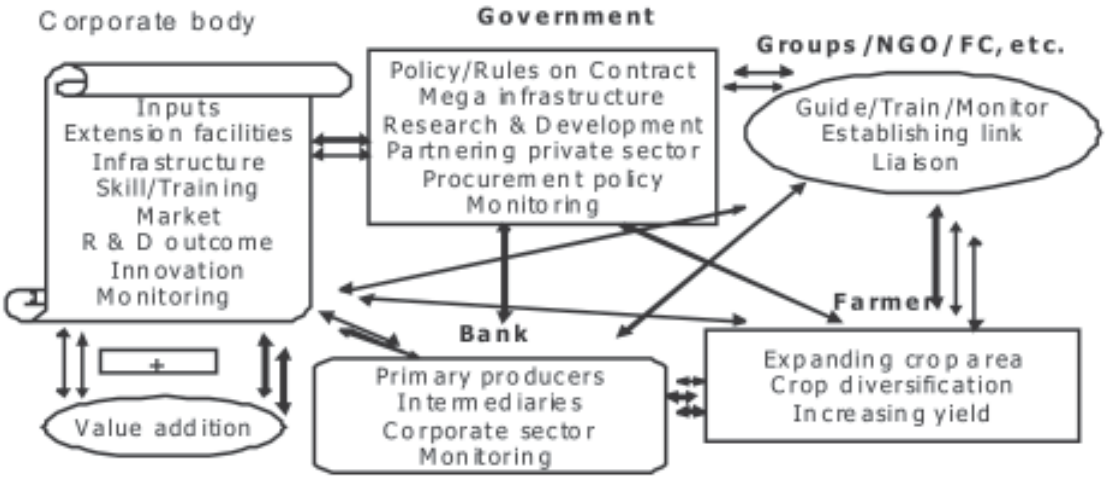

Figure 5. Proposed model for value addition

- To encourage public-private partnership in development of the sector
- To undertake mega investments in infrastructure development
- To encourage wasteland development
- To put forth suitable insurance policy for risk mitigation
- To promote agricultural export
- To encourage commercialization of agriculture
- To announce farmer-friendly procurement policy
- To make periodic assessment and evaluation of various risks, i.e. supply risk, operational risk and demand risk

(c) Banks

- To monitor the progress of self-help groups, farmers' groups, etc., involved in the chain
- To take steps for increasing the credit flow in agricultural sector through trade credit, warehouse receipt and contract farming
- To support primary producers (through NGO, SHG, JLG, FC & FA), intermediary players (through the corporate body) and the corporate body for increasing its spending on extension and technology, other support services and sales & service

(d) Farmers

- Farmers may form groups like SHGs, JLGs, FCs and FAs
- These groups take the responsibility of screening and organizing farmers, distributing inputs, reducing costs, monitoring the progress, delivering extension services, marketing the produce and linking farmers with banks in getting loan.

Benefits of Proposed Value Chain in Agriculture

- Helps small farmers to expand crop area, produce market-led crops and increase crop yield *(information flow, one-to-one interaction)*
- Enhances credit absorption capacity of the stakeholders *(getting link)*
- Reduces cost and improves quality *(better control and use of raw material and inventories)*
- Reduces risk at all levels from production to the final sale *(link, contract and proper planning)*
- Increases income and employment of farmers *(through enhanced farm productivity and higher farm gate prices)*
- Encourages farmers to go in favour of organic crops, fruits & vegetables and medicinal & aromatic plants *(contract farming and corporate farming)*.
- Benefits manufacturers and other stakeholders in the chain by lowering net cost of procurement *(elimination of unnecessary players)*
- Offers opportunity to make profitable use of wasteland
- Brings in agriculture-led growth

Constraints in the System

Constraints in the system are in:

- Getting players with appropriate skills/ competencies for proper working of the chain
- Matching the product behaviour with consumer behaviour
- Accessing quality inputs and services
- Making various activities in the chain congruent with the corporate objective
- Deciding the organizational structure of the value chain, i.e., centralized or de-centralised
- Matching with global competition
- Building trust between farmers, processors and other links in the chain
- Make efficient periodic assessment and evaluation of various kinds of risks, i.e., supply risk, operational risk and demand risk, associated with the value chain

Areas for Further Investigation

- How the gap between actual and potential yield will be identified? *(financial institutions and corporate sector)*
- How the opportunities will be identified and prioritized for interventions? *(financial institutions and corporate sector)*
- Who will be the leader in the chain? *(financial institution or corporate sector)*
- Who will be the key partners in the value chain?
- How various risks will be assessed/monitored/ treated? *(financial institutions and corporate sector)*
- What steps government should take to create a corporate - friendly atmosphere in the area of ownership of land, ceiling, leasing and buy-back arrangements? *(government)*

Conclusions

To meet the increasing household expenditure, the farmers are tempted to earn more from agriculture. But infrastructure, credit flow, marketing facilities, insurance provision, price structure and information flow do not support them. As a result, farmers face difficulties in managing different risks. However, in a global framework, when the demand for agricultural produce is increasing and the land of the country is suitable for the production of a variety of crops including fruits and vegetables, value chain system partnered with corporate sector and financial sector can bring an all-round improvement, and in the process, the common farmers will benefit. To make this happen, suitable policy for attracting private partners and bankers in the value chain may be put in place.

In the usual value chain system, one stakeholder finances the other stakeholders and charges a higher rate of interest. Many a times, the stakeholders, who finance others, face difficulties in availing credit from the formal financial sector. As a result, the system gets affected. When the system is institutionalized, the players without any contribution to the value chain are removed from the chain and effective links between banks and various stakeholders take place, the value chain finance benefits all the associated stakeholders. The experiences of stakeholders getting credit facilities through trade credit, warehouse receipt and contract farming may be emulated by the formal financial institutions in extending rural finance and achieving financial inclusion of small holders in the value chain.

References

Alderman, H. and Garcia, Marito, *Poverty, Household Food Security and Nutrition in Rural Pakistan*, International Food Policy Research Institute, Washington, D.C.

Clemmer, Jim (1990) The three rings of perceived value, *The Canadian Manager,* **15**(2): 12-15.

Cooper, Martha C., Lambert, Douglas M. and Pagh, Janus D. (1997) Supply chain management: More than a new name for logistics, *The International Journal of Logistics Management,* **8**(1): 1-14

Erappa, E. (2006) *Contract Farming in Karnataka: A Boon or Bane*, Agricultural Development and Rural Transformation Centre, Institute for Social and Economic Change, Bangalore

Fries, Robert and Akin, Banu (2004) *Value Chains and their Significance for Addressing the Rural Finance Challenge*, MicroReport #20, Accelerated Micro enterprise Advancement Project, US Agency for International Development, Washington.

Fromma, I. and Dubónb, J.A. (2006) Upgrading and the value chain analysis: The case of small-scale coffee farmers in Honduras. Conference on International Agricultural

Research for Development. Tropentag 2006. Available at http://www.tropentag.de/2006/proceedings/index.html

Haq, Mahbub Ul (1976) *The Poverty Curtain: Choices for the Third World*, Oxford University Press, New Delhi, 35 p.

Hollinger, F. (1974) Financing term investments in agriculture: A review of international experiences, *Conference on Paving the Way Forward for Rural Finance*, USAID, Washington

Humphrey, J. (2002) *Value Chain Approach: Linking National Producers to International Buyers and Markets*, Institute for Development Studies

IFAD (International Fund for Agricultural Development) IFAD's Private Sector Development and Partnership Strategy.

Kirsten, Johann and Sartorius, Kurt (2002) Linking agribusiness and small-scale farmers in developing countries: Is there a new role for contract farming?, *Development Southern Africa*, **19**(4).

Schmitz, Hubert, *Value Chain Analysis for Policy-makers and Practitioners*, Institute of Development Studies, University of Sussex, England.

Supply Chain Council (2005) available at www.supply-chain.org

World Bank (2001) *Attacking Poverty*, World Development Report, 2000/2001.