Rural Industry Development

Rural Industry Development:

Implementing a Whole-of-Chain Approach

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PARADIGMS SHIFT IN RURAL INDUSTRY DEVELOPMENT IN DEVELOPING COUNTRIES

INTRODUCTION

Linking farmer to market has become an integral part of the rural development agenda of the main world donor agencies. Changes in the competitive business environment brought about by globalisation, technological advancement and change in consumer preferences have caused donor agencies such as the World Bank, USAID, AusAID, OECD and IFAD to re-focus their approach. Rather than dealing with rural communities in isolation from their markets, agencies are now investigating what opportunities exist and what improvements in the existing practices must be made to enable rural producers to improve their economic position.

The ultimate aim of linking farmers to market is to transform traditional practices in the agro food system of the developing countries so that they can participate in the movement towards producing standardised quality products which are desired by end consumers (Estelle et al. 2004; World Bank 2008).

In order to achieve this rural industry development agenda, three major challenges have been identified:

- The fostering of market based capacity building among the commercial stakeholders so as to equip them with the knowledge and skills required to compete effectively (Hall & Nahdy, 1999; Dixon et al., 2001; World Bank, 2010).
- The re-orientation of support services or the enabling environment in which the businesses operate. Capacity building of research, extension and development agency personnel is central to this

orientation so that they can reform their structures and processes to fit with the new institutional practices required of them to effectively assist their stakeholders to compete in a globalised business environment (Collinson, 2001; Davidson & Ahmad, 2002; Van de Fliert & Braun, 2002; Van de Ven & Hargrave, 2004).

- The monitoring and evaluation of interventions, from need recognition to the overall impact, to determine the effectiveness of rural industry development projects at each level of the chain/stakeholders so as to refine the development initiatives for further replication in the same or other industries (World Bank, 2005; Chadwick & Gordon, 2007).

These challenges are discussed further under the evolving theme of rural development in developing countries.

THE EVOLUTION OF RURAL DEVELOPMENT THINKING

The evolution of rural development thinking has been a dynamic process that has involved various strategic themes such as top down 'blue print' state lead approaches in the 1950s to bottom up market lead participatory approaches in the 1980s (Ashley & Maxwell 2001; Ellis & Bigg 2001). It is dynamic in the sense that the ideas that first appeared in one decade began to be refined and implemented much later. This is true, for example, of 'community development' through the modernisation of agriculture under top down approaches in the 1950s to being refined as 'Farming System Research (FSR)' under bottom up approaches in the 1970s (Dixon et al. 2001; Ellis & Bigg 2001). And thereafter , in the late 1990s, the FSR evolved to adopt a holistic view which was characterised by the recognition that the internal determinants of production and consumption decisions at the farm level must be analysed in accordance with the external determinants such as government policy, market structures and information and vice versa (Dixon et al. 2001; Packham et al. 2007).

The dynamic nature of rural development thinking has recently lead to a renewed interest in the interaction between the 'agriculture lead' and the 'market lead' approaches to rural development as 'linking farmers to market' (Estelle et al. 2004) which is mainly conceptualised under the new

paradigm of rural development such as 'network' or 'cluster' development (Amin & Thirft, 1995; Lowe et al., 1995; Cooke & Morgan, 1998; Murdoch, 2000; World Bank, 2010).

To fully appreciate the scope of this shift in rural development thinking it is worthwhile to examine its evolution more closely. Agriculture-led rural development has remained the engine of economic growth in developing countries (Roumasset, 2007; World Bank, 2008). The economic development agenda in the post war era had an overriding focus on increasing productivity at the farm level. This focus was influenced by supply-driven 'blue print' approaches that were based on well-defined central planning and implementation procedures developed by state agencies (Rondinelli 1983; Mosse et al., 1998). Hence, these approaches are referred to as state-led top down approaches (Ellis & Bigg, 2001). The Green Revolution, particularly in reference to the Asian experience, is the best known example of this approach (Dixon, 1990; Balisacan & Fuwa, 2007).

State-Lead Approaches to Rural Development

The Green Revolution of the 1960s was the result of modernisation of agriculture via large-scale infrastructure investment in research and development institutions so that they could encourage and support farmers in the adoption of new technology. In the 1970s, the World Bank lent US$19 billion out of a total US$50 billion for rural development projects in the developing countries in collaboration with other agencies (Chambers, 1997). Most of this money was delivered to improve the functioning of state departments essential to supporting the farming community in adoption of modern agricultural practices and technology. The outcome from these initiatives was good in the sense that the innovation such as the development of new varieties received high recognition and acceptance among rural producers. For example, a breakthrough in the breeding of high-yielding food grain varieties such as wheat, rice and maize had got more than doubled agricultural productivity in the developing countries such as Pakistan (Azhar, 1991).

However the state-led development initiatives of the Green Revolution were mainly delivered on the ground via large farms or farms with a 'modern'

focus as these farms were considered the agents of change in rural communities (Mellor, 1966). The essence of this focus was that community development could be achieved as the benefits of rapid growth reached the rural poor through a 'trickle-down' effect (Kakwani & Pernia, 2000). However, the limited focus on large farms widened the socio-economic disparities between the large and the small farms and small farmers were even deprived of a basic level of extension services (Pingali & Raney, 2007). This unintended outcome raised equity issues which led to the adoption of a 'participation of all' focus in the development process (Chambers, 1997). A wide-spread acceptance of 'small farm narrative' described as 'social investment' was the emerging agenda in rural development thinking, which became known as integrated rural development, in the 1970s (Vernon, 1984; Cohen, 1987; Dixon, 1990).

Integrated rural development was an area-based approach to rural development that emphasised the integration of multiple sectoral interventions by development agencies. The purpose of this approach was to give farmers (large and small) access to key resources such as inputs (seed and fertilizer), credit, technology and marketing arrangements that delivered assured prices (Cohen, 1987). However, this approach was more structural in nature and lacked a proper consideration of the local area's need to adopt new technology. Hence, there was a rejection of imported improved varieties among small farmers, especially in South Asia (Dixon, 1990; Chambers, 1997; Farrington et al., 1999).

It can be concluded that state-lead rural development approaches, even those with an integrated rural development agenda, eventually came to be seen as inadequate, or misplaced, due to two major constraints:

- Inequity as a result of the unequal participation of large and small famer, in the development process.
- The emphasis on structural approaches which ignored local needs and the capabilities of the farmers to adopt innovative or improved practices.

Consequently, there was a radical shift from the top-down rural development approach to the bottom-up participatory approaches.

Participatory Approaches to Rural Development

The essence of participatory approaches to rural development is that change, or motivation to change, resides within the population of the local community because they are more capable of doing their own appraisal and analysis than its being imported solely from outside (Dixon 1990). Ideologically, a participatory approach seeks and embodies ways of empowering local people, thus enabling them to express and enhance their knowledge, take action jointly and receive feedback on desired action from facilitators (Chambers 1994a). As a result, a number of participatory tools/approaches such as Rapid Rural Appraisal (RRA) in the late 1970s, Participatory Rural Appraisal (PRA) in the late 1980s and Participatory Learning and Action (PLA) in the 1990s emerged (Ashley & Maxwell 2001; Ellis & Bigg 2001).

RRA is a diagnostic tool that extracts information from local producers by the outsiders/scientists/facilitators mainly through surveys, interviewing and group meetings that is used to design training or education programs for rural people/producers (Chambers 1994a, 1994b). The nature of the training was initially conducted in a class room setting followed by practice under the instruction of an expert trainer. RRA has been acknowledged as an excellent means of problem identification and has been effective as a means of implementing new ideas/technology among the rural producers (Ison & Ampt 1992; Chambers 1994a).

However as Chambers (1994b) observed, under RRA information is elicited by the facilitators at the time of appraisal and then used by them to design the training programs. This approach can result in diminished ownership of the programs by the local people particularly in regards to the adoption of new technology or continuity of the recommended practices after the termination of the project duration. As a result, the emphasis in participatory learning shifted from the instructive learning to more experiential and facilitator supportive learning in the 1980s, which gave birth to PRA.

The essence of PRA is ‘learning by doing’ both at the time of identification of problem (appraisal) and at the implementation of new technology/practices.

Furthermore, both facilitators and participants suspend their ideas for a moment to diagnose the root causes of the problem and then take joint action in which the facilitators play a supporting role rather than an instructive role (Chambers, 1994b, 2007). Percy (2005) observes that under experiential learning scientists, extension workers, and farmers undergo transformative learning thus learning takes place among all the stakeholders involved which results in joint ownership for the process and its outcomes. Some commonly used techniques under a participatory leaning approach are group dynamic transact walks, workshops and experimental field trials. Since the ultimate objective of PRA is to enhance learning involving both action science (Argyris et al., 1985) and reflection-in-action (Schon, 1983). Hence, PRA was renamed as Participatory Learning and Action (PLA) in the 1990s (Chambers, 1994b, 2007).

Learning in a PLA context can be described as the '*product'* (something learned), the *'process'* that delivers the product (Argyris & Schon, 1996) and finally the assessing of the effectiveness of *product* and *process* through reflection on what has been learnt (Schon 1983). In the case of *product,* one might ask 'what actually has been learnt?' This focuses on the accumulation of knowledge or skills and involves an evaluation of prior verses new capabilities. In the second case one might ask 'how it was learnt?' This question reflects on how 'well' or 'badly' was the learning process managed? Chambers (1994b) described the 'product' and 'process' of learning as the 'content' and 'style' of learning respectively. Both these elements are critical to the effectiveness of the PLA approach in motivating participants in the program to remain involved, adopt new ideas and transform their practices (Percy, 2005; Ganpat et al., 2009). This way of capacity building in rural development and extension project known as learning which encompass training and all other forms of learning that enhance the knowledge, understanding and competencies or skills of individuals or groups to take desired action in the specific areas identified mutually by the participants and the facilitators (Cavaye, 2005; Coutts et al., 2005; Chadwick & Gordon, 2007).

The evolution of participatory approaches to rural industry development has the potential to enhance learning among the rural producers through the engagement of stakeholders in the appraisal of existing problems, the design

of capacity building projects and active involvement in the learning process (Coutts et al., 2005; Percy, 2005). However, in practice more emphasis is placed on participation in the appraisal process to define the learning 'content ' at the expense of participation in the determination of the learning 'style' (Chambers, 1994b, 2007). For example, in Pakistan, practitioners 'have sought to accommodate the shift in practice by taking PRA to mean participatory reflection and action (Chambers, 2007 p. 7).

A Participatory Reflection and Action (PRA) study is based on a methodology of extensive involvement of community at all stage of development where the output is fully owned by the organisation, individuals and community. The product of the development reflects the opinion of all people involves directly or indirectly.

Across the development of industries, new ways of development challenged the community engagement in which they can interact with needs and problems and find out the appropriate solution within the community. It can restore both confidence and trust in their need and increase the impact of outside interventions. In general, outside groups can only facilitate the people for a limited time and empower the local community within the internal resources. This model solves the local need with limited input from outside. The Participatory Reflection and Action (PRA) study is one of these new models that emerged, and it has proven a very successful application of the new development and research paradigm. The community-based approaches resulted into social capital network which develop a society or organisation to create common value known as public good.

Social Capital

Social capital is a form of capital in which network of people or community is central. People are united on the basis of reciprocity, trust common values and cooperation. The goods and services evolved are common and known as the public good or common good. Concept of Public good is also discussed in the Behavioral theory of contribution in joint value creation in the management literature in which the employees in a firm hold beliefs that their organization values their contribution and cares about their wellbeing

(Bridoux and Stoelhorst, 2016). The social capital term generally refers to resources and the value of these resources, both tangible (public spaces, private property) and intangible ("actors, human capital, people) produce common good that can befit to all. Social capital has been used to explain the improved performance of diverse groups, the growth of entrepreneurial firms, superior managerial performance, enhanced supply chain relations, the value derived from strategic alliances, and the evolution of communities. The social capital theory is widely applied to explain the value chain approach particularly in the context of joint value creation driven by the market need.

Market-Lead Rural Development

The globalisation and technological advancement driven by the growth of supermarket chains changed the agricultural marketing systems in the developed countries as producers sought to establish closer relationships with their customers in order to protect their competitive position (Schoorlemmer, 2000; Hartmann et al., 2010). This process involved more intense management of the supply chain that was based on cooperation between supply chain partners that was designed to improve supply chain efficiency and create customer value.

The impact of globalisation along with the increased presence of supermarket chains in the developing countries brought new challenges for the rural producers in terms of greater access to export markets as well as meeting the challenges in domestic markets that are exposed to competition from imports (Reardon & Barrett, 2000; Wilkinson, 2002; Spriggs et al., 2005; Van der Vorst et al., 2007).

Maintaining reliable supplies of a product that meets consumers increasing quality standards is one of the biggest challenges facing growers in the developing countries (Estelle et al., 2004; Batt, 2005; Murray-Prior et al., 2007; Shepherd, 2007; Van der Vorst et al., 2007). Some critical issues in this regard are the lack of technical knowledge at the farm level in establishing and implementing quality management systems, inadequate off-farm logistics infrastructure and an inadequate government policy environment. These deficiencies inhibit efforts to improve the functioning

of the commodity chains (Van de Ven & Hargrave 2004; Batt et al. 2005; Murray-Prior et al. 2007; Van der Vorst et al. 2007). For example, efforts directed to on-farm capacity building in quality management, such as Europe Gap certification, have little impact because of poor infrastructure (Humphrey 2005; Shepherd 2007) or out-dated marketing systems (Spriggs et al. 2004).

Government is often the principal actor in rural industry development interventions in the developing countries because of its impact on reforms via its regulatory powers and R& D institutions (Rondinelli 1983; World Bank 2010). The World Bank (2010 p. 139) identified that the 'burden of managing the regulatory environment severely hinders the growth of the industries which diminished competitiveness and success in the global market'. In fact the lack of skilled people at the institutional levels and appropriate laboratory facilities were some major challenges in rural industry development in the developing countries (Van de Ven & Hargrave 2004).

The traditional marketing systems that exist in the developing countries that have been established around government regulated central markets and with their multitude of marketing intermediaries such as collectors, commission agents and distributors inhibit price transparency and that impacts on the producers' abilities to respond to consumer needs (Khushik & Smith 1996; Humphrey 2005; Van der Vorst et al. 2007; Ghafoor 2010). This whole set of stakeholders in a value chain are discussed in a whole of chain concept in which each partner plays a critical role to create value as per the market need.

Rural development approaches that have proven significance of participation from all level of the beneficiaries starting from planning, implementing and evaluating can also be undertaken in a whole of chain perspective. The approach can generate a social capital for common or public good.

The evaluation of development initiatives/approaches in the developing countries indicated that the development agencies have two broad thinking

to link the farmer with their respective markets using a whole of chain approach:

i. Targeted approach
ii. Global approach

Targeted approach

Targeted approach focuses on selective producer organisations working to find out market opportunities in the existing market, addressing the problem in a specific commodity chain and finding the new market opportunities.

Existing market opportunities focus on strengthening small holders' positions and improving the functioning of a specific commodity chain. The objective of this approach is to strengthen the farmer position on existing market through encourage production, input purchase, crop marketing and by value adding activities over the downstream of supply chain. Strategy is designed on the basis of field survey and information about farmer's connection in the market, their production system is collected and project directly intervenes with producers or through producer organization.

The Government or NGO are involved in facilitating the stakeholders through their support program such as intervene to create producer groups at the local level. The facilitators promote the institutionalization of existing small groups and strengthen their existing activities through assistance on a one-off basis based on group demand. They mainly worked on higher level by involving Rural Producer Organization (RPO) with diverse objective such as:

- To realize economy of scale in input supply and in produce primary marketing
- To set up and provide services for their members
- To advocate producer interest either in sectoral or territorial framework
- To collaborate with other actors by establishing commercial agreements e.g. contracts

This approach promotes capacity building and institutional arrangements which results into long term relationship between producer organisations, market agents and facilitator.

Under the specific commodity approach constraints are identified in order to improve the competitiveness of organization of one or several commodity chains which are considered strategic to market. For example, Food Security Program (PASAL) in Guinea funded by French agencies which focus on rice supply chain to improve commercialization through reliable and low-cost technology innovation with the applied research institution which the traders experimented in pilot project. Similarly, in Pakistan intervention are made in mango industry at the trader level in which hot water facility were installed at the central level to promote disease free mango to Europe or China. This project improved the logistic operation and project benefited the stake holders by increasing price of mango in international market.

It is the direct type of intervention in the down-stream supply chain and assumed that increased turnover of the traders will generate high demand from the producers and ultimately will increase the producer's income. We can conclude:

- This type of approach can bring indirect support to farmers through partnership with others.
- This type of approach requires improving sectoral policies to motivate the farmers to produce accordingly much based on the Government policies.

In the new market opportunities value added production is promoted instead of producing exceptional raw material. This is a source of competitive advantage which may arise through process-oriented strategies such as high value organic or the premium quality products. The option for small producers is to target high value product like dairy, fisheries, fresh fruits and vegetables both for the domestic as well as the export market. Business support services are provided in form of packaging, preservation, cool chain protocols, trade documentation and processing technologies in partnership with the universities as well as through the linkages with international

clienteles. However, there are many challenges to implement this approach in developing countries such as:

- After identification of market for high value products by the project operator the small holders are not likely to respond without specific support because switching to new product is highly risky.
- The development for export of high value products needs particular institutional arrangement to ensure commercialization for long term benefits and the issues are more concern with organization of the chain rather than the technical aspect.
- Production of high value product is more viable within a diversification strategy than within a specialise one. Sometime contractual commitments are not guaranteed in some circumstances especially in uncertain conditions.

Global approach

Global approach is much concerned with support programme intends to account for the whole economic environment at the national scale for improving small farmer access to market. These projects present their approach as aiming to create an enabling environment to develop private sector investment capacity and do not intend to bring direct support to producers. The general assumption is that the overall economic growth will impact positively on farmers. The development of business service markets for SMEs in Bangladesh financed by World Bank, is one of the examples in this regard.

Another project under this category was the Agricultural Marketing Systems Development project in Tanzania, financed by IFAD. It was a holistic approach to improve the functioning of rural markets, assist the government in rationalising policies, provide infrastructure, support the farmers group, set up market information services, etc. The main challenges of the approach are:

- This type of approach targets actors with high social capital because it requires a network of relations and access to information, though

the small holders who are the weakest actors in this network may be excluded.

- Such projects start activities in urban areas or in regions where agricultural and socio-economic context is favourable, therefore its impact on small holders is difficult to evaluate.
- It is also identified that the capacity building is one of the only intervention components, among others described above, which minimise the trade related constraints such as barrier to entry, risk, transaction cost, asymmetry of information and maximise bargaining power, human and social capital, which shows the positive prospects for the stakeholders - specifically the producers - to connect with market.

However, global approach is very holistic in nature which supporting the actors (farmers, traders, exporters and service provides) through capacity building, support to services and promotion of conducive institutional arrangements. Under the institutional arrangement, two types of contracts can further strengthen the bond between the producers and the market agents:

i. Promotion of contract farming
ii. Promotion of implicit contracts

Contract farming refers to a system where a central processing or exporting unit purchases the harvests of independent farmers and the terms of the purchase are arranged in advance through contract' (Baumann, 2000). In addition, it also guaranteed reliable source of supplies to market and tightness of the contractual arrangement varies according to the depth and complexity of the provision of each of the following (Eaton & Shepherd, 2001);

- Market provision: the farmers and buyer agree to terms and conditions for future sales and purchase
- Resource provision: buyer committed to provide input as agreed
- Management specification: farmers agreed to recommended production methods.

The contractor may be the processing firms which may also provide input and technical assistance to farmers for a desired standardised product (Bijman, 2008). One characteristic which is common in both cooperatives and contract farming that both are institutional in nature and allow small holders to overcome various types of transaction cost such as searching of product buyer, input supplier and can be productive in using the contractor's capital (Simmons, 2004). Some practical examples of this approach have been well presented in literature in Sub Saharan countries where human capital development is achieved by providing training in the desired field such as grading and packing (Bingen et al. 2003). Some tangible gains is also evident at village level organizations of Indonesia through this approach (Simmons, 2004).

Some multinational and national companies model of partnerships with local farmers especially in the developing countries may also be called as contract farming approach in rural industry development such as PepsiCo in India (Gandhi et al. 2001) and Nestle in Pakistan. This model involves backward integration by private companies with strong marketing capabilities, brands and the established products. But the contracts are more morally build rather legally binding. Companies build trust through commitment to providing extension services and production inputs.

Simmons (2004) concluded on contract participation may be benefited in various ways like improve access to markets, credit and technology, better management of risk in term of both quantity and quality because of uncertain nature of agriculture production, improved family employment and development of successful commercial culture. In addition, it may be a source of training and capacity building among farmers. But some empirical evidence in contract farming on the welfare of small holders has been controversial and it favours large growers and left the poor growers aside in the development process. Simmons further declared that the negligence of small farmers generates negative social impact in the rural economy. In addition to this, contract farming in the developing countries faced difficulty in execution of the contract especially when the market circumstances changed abruptly. Contractors breach the contract to avoid any loss to their businesses due to decline of prices in the market. Small farmers must accept

whatever the contractor offered because of poor regulatory measures to respect the agreement.

CHALLENGES OF PARTICIPATORY A "WHOLE OF CHAIN" APPROACH

Estelle et al. (2004) identified the eight trade related constraints regarding linking farmers to market in a 'whole of chain' approach in developing countries. For example, barrier to entry, high transaction costs, high risk, asymmetry of information, low bargaining power and lack of human and social capital. They described the nature of these barriers as under;

- Barrier to entry is related to specificity of the asset which can be created through acquisition of physical assets such as equipment and or through intangible assets like knowledge of specific process. Other barriers may be legal frameworks, institutional environments and standard compliance requirements. They further declared that barriers to entry depend on the type of product. These are highly processed products and in long commodity chains.
- Risk is associated with dynamism of the market such as price fluctuation, transaction risk and also with production which is dependent on the natural conditions and climatic shocks.
- Transaction cost such as market research cost, bargaining cost, monitoring cost are some major costs which are high for the rural producers and one of the reason of this cost is the remoteness of their location with poor infrastructure of communication and transportation. Similarly, it creates asymmetry of market information between buyer and the rural producers. Therefore, generates another cost for the producers.
- Lack of market information results in the low bargaining power on the part of producers, compelling them to under value their products due to the perishability of the product.
- Social capital is the reciprocal relationship of a network formed for the purpose of achieving mutual goals. It enables the holder to overcome transaction costs, obtain favourable terms of exchange and reduce risk, which ultimately facilitates trade, and also bolsters the capacity to act effectively with the power of choice. However, it is

difficult to develop in these developing countries due to the presence of status quo in the chain relationship.

SUMMARY

Based on the literature review, it can be concluded that rural development thinking has been changing from a traditional top-down approach to the bottom-up approach over the last two decades. Under the bottom up approach, the supply chain in a 'whole of chain' context is getting more attention than addressing one level of the chain, for example producers. This paradigm shift can be explained as rural industry development rather rural development thinking. The rural development paradigm shift is summarized in the Table 1.

	Government driven (1950-60s)	**Industry or Market Driven (1970-present)**		
Objectives	Increased productivity	Increased productivity	Increased prices	Increased competitiveness
Target	Farmers	Farmers	Farmers (linking farmers to market)	Farmers-middle men-retailers (whole of chain)
Activities	Technology adoption skill development	Technology adoption skill development	Skill development, market knowledge quality management	Skill development, market knowledge quality management, SCM
Outcome	Poor adoption	Improved productivity	Producers cooperative/ poor market penetration	Value chain development
Cause	Lack of ownership and relevance	Poor market links/ poor Infrastructure	Lack of business skills/ inadequate business services	Cooperative relationship

Table 1: Paradigm Shift in Rural Industry Development

Globalization in the food sector has changed the focus of business strategies among food suppliers in term of differentiation, value addition and nutritious products. Due to the rising demand of fresh, nutritious, convenient and multiple varieties of agricultural products among the modern globalize consumers, the spot market transactions have been transformed into vertical integrated fashion. It has also opened the windows of new business opportunities for entrepreneurs both in the rural and urban sectors. Though the world top donor and development agencies continued

to put emphasis on rural development but the traditional top down and bottom up approaches have not been achieving remarkable success since last half century and evidence lies in the persistence of rural poverty.

Linking farmers to market as a core development agenda in the current decade among the world donor agencies has been instrumented by extending financial aid and impart capacity building both at macro and micro levels in rural economy to meet the new challenges in global food sector. It invites to look some different way of linking farmers to market which should promote trust based relationships and co-innovation among different stake holders from producers to end consumers. Food chains and networks play an important role in providing access to markets for producers in the developing countries. Changes in the agro food systems impact the ability of agro-industrial enterprises to compete; small and large alike will have to innovate and reduce costs, while being more responsive to consumer needs. This is where supply chain management can help and seems to be a competitive strategy in general and a “whole of chain” approach in particular.

CHAPTER 2

SUPPLY CHAIN MANAGEMENT: A STRATEGIC PERSPECTIVE ON LINKING FARMERS TO MARKET

INTRODUCTION

A 'whole of chain' approach to rural development, as discussed in the previous chapter, has its foundations in the supply chain management literature (Dunne 2001; Collins et al. 2004; Estelle et al. 2004; Batt 2005; Hofman & Ledger 2005; Spriggs et al. 2005; Chang et al. 2007; Murray-Prior et al. 2007; Rankin et al. 2007; Van der Vorst et al. 2007; Batt et al. 2010)

Supply chain management is certainly one of the most talked about topics in agri-business management circles over the past ten years. As with any management concept, supply chain management means different things to different people. To most, supply chain management is all about logistical efficiency – the efficient transport handling and storage of physical products through the various stages of production and distribution to the final consumer. It is essential to the whole marketing concept that the right product gets to the right place, at the right time, in the right condition, and in the most efficient manner. But logistical efficiency is only one aspect of supply chain management when the term is used in a competitive strategy context. Supply chain is more to connect the product flow with an effective communication system to ensure procuring right product for the right customer.

SUPPLY CHAIN MANAGEMENT

Supply chain management combines logistical efficiency with the drive for creating customer value as a means of achieving sustainable competitive advantage for the firms involved.

> We have entered a new era in understanding the dynamics of competitive advantage and the role played by procurement. We no longer talk about suppliers and customers as though they are managed in isolation, each treated as an independent identity. More and more, we are witnessing a transformation in which suppliers and customers are inextricably linked throughout the entire sequence of events that bring raw materials from their source of supply, through different value-adding activities to the ultimate consumer. Success is no longer measured by a single transaction; competition is, in many instances, evaluated as a network of co-operating companies competing with other firms along the entire supply chain. (Spekman R.E., Kamauff J.W. and Myhr N. 1998)

In a strategic sense, the adoption of supply chain management requires managers of firms servicing a consumer market segment to re-evaluate their business relationships with input suppliers and buyers of their products. This re-evaluation usually involves a shift in their focus from an adversarial to a co-operative relationship. As a result, the competitive focus shifts from that between firms within one supply chain to that between different supply chains which service a common market segment.

Hence, supply chain is a process of interconnected activities from input suppliers to end product delivery that ensure efficient and effective flow of goods and service that can deliver value to the end consumer. Simply, it is managing value through managing the firms or people involved in a chain of activity. Hence, value chain has also been used interchangeably with supply chain management.

Basically supply chain management is a competitive strategy where businesses, in a supply chain servicing a specific market segment, deliberately decide to cooperate with each other so as to improve their competitive position by enhancing the value they collectively create for their customers (Dunne 2001).

Boehlje (1999) identified five dimensions of a supply chain that require co-ordinated management to be successful in achieving this strategic intent. These dimensions were:

- product flows – logistics management so as to deliver the product demanded by customers in full and on time to specification

- financial flows – efficient and timely distribution of revenue among the chain members
- information flows – timely, accurate and relevant information to provide customer feedback and facilitate the coordination of activities to maximize net value creation
- incentives – a distribution of rewards that promotes commitment to on-going cooperation
- governance – a system of monitoring the effectiveness of the chain members working together

The above concept is depicted in Figure 2.1.

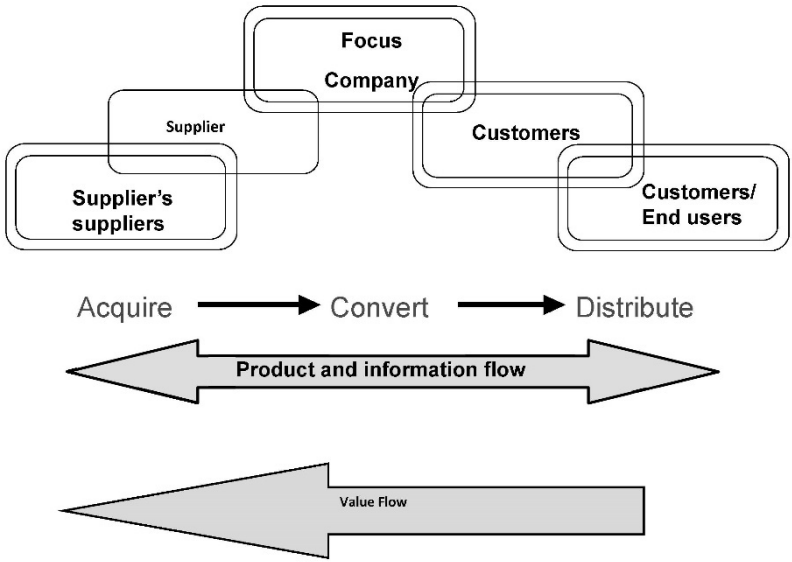

Figure 2.1: Supply chain flows

Collins and Dunne (2007) report a slight modification of these supply chain management dimensions in their approach to identifying the major supply chain management issues associated with mango supply chains in Pakistan. These modifications reduced the number of key management dimensions to four by eliminating the management of financial flows.

In the context of rural industry development involving a perishable product, such as in the case of the Pakistan mango industry, these dimensions fall into three categories:

- technical – which involve aspects of production, quality management and logistics (Batt 2005; Shepherd 2007),
- marketing – information relating to consumer demand, competitor behaviour, pricing and out-turn performance (Shewfelt 1999; Batt 2005; Hofman & Ledger 2005; Spriggs et al. 2005),
- relationship management – building on-going trust and commitment between the chain partners (Morgan & Hunt 1994; Wilson 1995; Matopoulos et al. 2007).

It is important to note that information flow management is critical to all three categories. Therefore, the issue arises – how do you manage the flow of technical and market information between supply chain partners? Morgan and Hunt (1994) posit that the answer lies in building trust and commitment between partners. Spekman et al. (1998) extend this proposition by stating that the level of trust and commitment will determine the quality and type of information chain partners are willing to share.

Spekman et al (1998) describe four basic types of relationships that can exist between supply chain partners – transactional, co-operative, coordinated and collaborative. Transactional relationships are usually short-term price-based adversarial negotiations that are characterized by poor communication and coordination, the use of market power and a focus on self-interest. At the other extreme, collaborative relationships are long-term, highly integrated relationships that are characterized by open communication and high levels of integration with joint planning, and are focused on maximizing mutual benefits through shared goals. Cooperative and coordinated relationships lie in between these two extremes.

Most business relationships in agricultural supply chains in developing countries are transactional, (Van der Vorst et al., 2007; Goel, 2010; Hartmann et al., 2010) while a co-operative/coordinated relationship is required when the objective is to improve the reliability and efficiency of

the chain (Batt, 2004; Batt & Purchase, 2004; Spriggs et al., 2005; Montiflor et al., 2010).

Higher order business relationships are developed over time (Bucklin & Sengupta, 1993) as trust is gained through consistent, reliable performance and commitment is reinforced through the delivery of promised benefits (Whipple & Frankel, 1998). Therefore one of the issues associated with managing information flows within existing chains where transactional relationships dominate is to change the culture and practices of existing chain members (Batt & Rexha, 2000; Janzen & de Vlieger, 2000) or establish new chains (Marsden et al., 2002; Sachan & Datta, 2005).

The literature indicates that the key success factor associated with a supply chain management initiative is finding compatible chain partners who share a common vision, have a cooperative culture, have the capacity to create customer value and are willing to share the rewards resulting from their collaboration (Cann 1998; Spekman et al. 1998; Whipple & Frankel 1998; Spekman et al. 2002; Dunne 2006; Bonney et al. 2007).

Schein (1992) provides a simple definition of business culture as the way things are done in a business – its business behaviours and practices or its 'theories-in-action'. Schein (1992) also claims that businesses will resist change, unless there are compelling reasons to change and that the change process is driven by strong committed leadership. This may have serious implications for the successful adoption of a 'whole of chain' approach to rural industry development unless the participants are convinced about the need to change that their current business situation is threatened - a key principle that needs to be managed in an adult learning or experiential learning process (Kolb 1984; Mezirow 1990). This situation is further complicated by the strong possibility that businesses within a supply chain will have differing views on the need to change and hence their commitment to any 'whole of chain' activities. For example, producers may want change but wholesalers may be satisfied with the current situation (Batt & Rexha 2000; Dunne & Johnson 2010; Goel 2010). Hence an effective dialogue or open communication is the norm in participatory approaches.

In regards to the option of establishing new supply chains involving businesses who have aligned objectives, cultures and practices, this option may face difficulties in developing countries where existing supply chain relationships are often long standing and/or based on social ties (Spekman et al. 1998; Estelle et al. 2004; Batt et al. 2005; Van der Vorst et al. 2007; Dunne & Johnson 2010). Hence, to meet the need of the growers with varying social arrangements in rural development projects, the biggest challenges for the Government and extension agencies is how to best coordinate the activities among diversified stakeholders (Davidson & Ahmad 2002).

A further limitation to the adoption of a 'whole of chain' approach to rural development relates to the specific nature of supply chain management as a competitive strategy focused on a specific market segment. From a participatory learning perspective this is an advantage for those members of the chain(s) involved but a disadvantage from an industry engagement perspective. For example, in the ASLP mango project resource and time limitations restricted the supply chain management activities to a series of demonstration activities (Collins et al. 2006; Mazhar 2009).

Finally, the intense and specific nature of 'whole of chain' approach to rural industry development is the limitation it places on the number of participants from each section of the chain that can actively participate in the program's activities. For example the number of participants that were involved in planning and execution of the ASLP mango project activities was restricted (Collins et al. 2006). This may explain why the vast majority of rural industry development projects aimed at linking farmers to market are not participatory in a 'whole of chain' context but rather focus to build capacity within one section of the chain which is usually the production section (Gandhi et al. 1999; Van Roekel et al. 2002; Chau et al. 2004; Estelle et al. 2004; Spriggs et al. 2004; Dimyati & Muharam 2005; Nielson et al. 2005; Dela Cruz 2007; Murray-Prior et al. 2007; Rankin et al. 2007; USAID 2009; Batt et al. 2010; Correia & Rola-Rubzan 2010; Irianto 2010; Montiflor et al. 2010; Van der Waal & Zongo 2010).

Without doubt, participatory rural industry development projects that have a narrow sectoral focus, such as those cited above, can produce positive outcomes. For example, such projects may strengthen the farmers' position in the existing marketing system by promoting group or cluster formation around the critical quality management and reliability of supply issues (Bayogan et al. 2005; Dimyati & Muharam 2005; Murray-Prior et al. 2007; Batt et al. 2010; Montiflor et al. 2010). However, developing and sustaining direct links between farmers and their markets is difficult because of a lack of long term commitment, poor infrastructure and the remoteness of growers from their ultimate markets (Spriggs et al. 2004; Batt et al. 2010; Montiflor et al. 2010).

The role of government agencies, and in particular extension service providers, in linking farmers to their markets is often underestimated (Akhtar et al. 2010; World Bank 2010). Not only do these facilitators need to develop their understanding of technical and social issues post farm gate; they also need an understanding of the marketing and commercial issues involved (Pence & Grieshop 2001; Davidson & Ahmad 2002).

SUMMARY

The approach taken by aid donors to rural industry development in developing countries has evolved over the past 50 years from that of a State-led top-down approach to that of a localised participatory bottom-up approach. This evolution has been driven by two factors:

- the realisation that development needs vary between localities and therefore 'a one size fits all' approach will not be effective in delivering the desired outcomes to local communities,
- a better understanding of the adult learning process that indicated that participants' acquisition of new knowledge and the adoption of new practices was enhanced if they were engaged in the process of problem appraisal, activity planning and activity implementation.

Historically the focus of rural development programs in developing countries has focused on the production sector since agriculture has been the engine of economic growth. The main objective of rural development in