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## Agri value chain in the context of finance: A case study of Samunnati financial intermediation and services Pvt. ltd.

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### Abstract

Agriculture and its allied sectors in India face multifaceted challenges arising from unpredictable climatic conditions and frequent market fluctuations. Small and marginal farmers, who form the backbone of agricultural value chains, are the most exposed to these uncertainties and often lack access to suitable and timely financial services. Conventional financial products are typically uniform in structure and fail to align with the diverse production cycles and income patterns across different agricultural activities. For example, credit models designed for long-duration crops such as sugarcane are unsuitable for short-duration crops like paddy or for agribusinesses involved in milk collection and cashew processing.

In addition to financial constraints, farmers and agri-enterprises encounter non-financial challenges such as inadequate infrastructure, poor market linkages, and limited technical knowledge. The gap between the credit needs of farmers and the services offered by both microfinance institutions and commercial banks forces many to depend on informal financing sources. Insurance products also remain largely inaccessible or unaffordable. Formal credit options, often offered through standardised subsidised loans, do not adequately capture the interconnected nature and cash flow dynamics of agricultural businesses. This study examines agricultural value chains and financing opportunities for Samunnati in selected talukas of North Gujarat, namely Palanpur, Deesa, Patan, Kadi, Unjha, and Dhanera. Data were collected from 50 traders and 10 processors, mainly engaged in castor and mustard oilseed activities. The findings reveal that traders require short-term working capital (10-15 days) due to delays in buyer payments, even though they must pay farmers immediately. Currently, traders rely on bank loans at interest rates of 11-13%, while Samunnati provides collateral-free loans at around 21%. The study suggests that by lowering its interest rates, Samunnati can expand its market presence, increase competitiveness, and better serve the short-term financial requirements of traders and processors, thereby fostering a more inclusive and efficient agri-finance ecosystem in North Gujarat.

**Keywords:** Agricultural value chains, agri-financing, small and marginal farmers, short-term credit, collateral-free loans, oilseed traders and processors

### Introduction

Agriculture across South Asian nations, particularly in India, holds immense potential to drive market-oriented economic development through the creation and strengthening of agricultural value chains at both national and regional levels. Promoting agriculture-based enterprises not only contributes to economic growth but also helps alleviate persistent poverty in these regions. Strengthening these linkages can address crucial socio-economic challenges faced by farmers and rural entrepreneurs in their daily lives (World Bank, 2015).

Globally, agriculture continues to play a pivotal role in poverty reduction. As highlighted by the World Bank (2015), nearly (75%) of the world's poor reside in rural areas, with approximately 883 million people living on less than US\$1 per day, relying primarily on agriculture as their main source of livelihood. In South Asia, rural poverty remains widespread and deeply rooted. Empirical evidence suggests that agricultural growth serves as an effective instrument for poverty reduction, comparable to growth in other sectors of the economy (FAO, 2015). Therefore, enhancing agricultural productivity, improving value chain efficiency, and strengthening market linkages represent powerful strategies for fostering inclusive economic

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growth in countries like India. The conceptual model of agricultural value chains encompasses a systematic series of value-adding activities that extend from production and processing to marketing and final consumption. Each stage in this chain establishes forward and backward linkages, integrating farmers, processors, traders, and consumers into an interconnected system. An agricultural value chain essentially defines the network of actors and processes that transform raw farm produce into market-ready goods, with value being added at each phase.

Although the terms “value chain” and “supply chain” are often used interchangeably, they differ slightly in focus. The Food and Agriculture Organisation (FAO, 2005) describes agricultural value chains as systems that connect independent business entities such as producers, processors, and distributors through coordinated activities involving processing, storage, packaging, transportation, and marketing. However, in South Asian economies like India, these value chains are often fragmented, under-invested, and lack inclusivity, particularly excluding small and marginal farmers from mainstream markets (Dunn, 2014). Weak infrastructure and insufficient coordination between farm-level production and consumer demand further limit efficiency. The International Finance Corporation (IFC, 2012) conceptualises agricultural value chains as a pyramid structure, with small and marginal farmers forming the base, intermediaries and firms occupying the middle layer, and consumers positioned at the top. For the system to be sustainable, the benefits and revenues generated at the consumer level must trickle down to the base of the pyramid, ensuring fair compensation for farmers. At the same time, the lower tier comprising farmers must gain improved market access and information flow to align production with consumer preferences. Consumers, on the other hand, seek quality agricultural products at reasonable prices, necessitating the development of a resilient and sustainable agricultural value chain supported by modern technology, innovation, and product diversification.

### Review of Literature

Singh and Vishwajit (1994) <sup>[2]</sup> carried out a study titled “*A Study of Overdue Loans in Agriculture*” to assess the loan repayment performance among agricultural defaulters in three blocks of the Agra district, Uttar Pradesh. Their findings revealed that relatively affluent farming households constituted a significant portion of the defaulters, representing (37%) of total defaulters and (57%) of total overdue amounts. The study also noted a consistent increase in the total overdue loans during the study period. One of the main reasons identified for this trend was the lack of adequate supervision over the utilisation of loan funds, which often led to misuse of credit and ultimately to higher defaults.

Bhakta (1998) in his work titled “*Financing Agricultural Development and Mode of Production*,” analysed the financing mechanisms underpinning agricultural development in the Saran district of north-west Bihar. Based on the historical evolution of economic development, he proposed that different phases of growth are supported by distinct sources of finance. His analysis highlighted that primitive accumulation, rather than modern capitalist financing, remained the dominant source of agricultural finance in the region. The study emphasised the need to reform the capitalist approach adopted by financial institutions, pointing out issues such as benami transactions, increasing loan overdues, and inefficient fund utilisation as key challenges to be addressed.

Malhotra (1998), in his book “*Agricultural Finance in Jammu & Kashmir*,” conducted an extensive examination of institutional credit systems in agriculture. His research explored the role of formal financial institutions in extending credit to farmers, while also identifying the barriers faced by both borrowers and lending agencies. The study found that farmers frequently encountered challenges such as difficulty in finding guarantors, inadequate loan amounts, high borrowing costs, tight repayment schedules, and delays in loan disbursement. Moreover, issues like corruption within development offices, greater credit allocation to large landholders, and a lack of awareness regarding loan terms were also significant obstacles. Malhotra recommended targeted policy interventions to improve credit delivery, ensure timely access to finance, and strengthen monitoring mechanisms.

Schmitz (1998) introduced the concept of “small riskable steps to upgrading” as a practical strategy to enhance productivity and competitiveness among small firms. This idea was exemplified through the banana chip industry in the Philippines, where smallholder farmers adopted incremental improvements in cultivation and processing practices. These gradual advancements led to substantial increases in both yields and profitability, proving more effective and achievable than pursuing full compliance with Good Agricultural Practices (GAP) certification.

### Objectives of the study

- To identify current players in the agri value chain in the context of finance
- To study the opportunities for Samunnati and examine its clients
- To find out the requirements and challenges in financing the products of Samunnati

### Materials and Methods

The study “*Agri Value Chain in Context to Finance: A Case Study of Samunnati Financial Intermediation and Services Pvt. Ltd.*” aims to identify current players in the agri value chain in context to finance, to study the opportunities for Samunnati and examine its clients and to find out requirements and challenges in financing products of Samunnati.

The research was based on primary and secondary data. Primary sources, such as interviewing Traders and oilseed processors and secondary sources are secondary data based on secondary online sources.

**Table 1: Materials and Methods**

| Type of research     | Descriptive research                 |
|----------------------|--------------------------------------|
| Sampling method      | Non-probability sampling             |
| Sampling techniques  | Judgemental technique                |
| Sample unit          | Oilmill owners/ Traders              |
| Sample size          | 50 Traders and 10 processors         |
| Sample area          | North Gujarat                        |
| Timing of survey     | 80 days                              |
| Research instruments | Schedule                             |
| Analytical tool      | Graphical and Tabular Representation |

### Findings

- The research findings reveal that the majority of traders in the study area are engaged in the oilseed trade, primarily purchasing oilseeds directly from farmers on a cash basis and selling them to processors on credit. Traders are required to make immediate payments to

farmers on the day of procurement, while payments from processors are usually delayed by 10 to 15 days, creating a need for short-term working capital to bridge this gap.

- Among those dealing mainly in oilseeds, approximately (70%) of the produce is sold to processors, while the remaining (30%) is sold in the local markets.
- Processors primarily supply their products to the domestic market, with only around (20%) engaged in exports. They generally obtain oilseeds from APMC markets or directly from farmers. In some cases, processors do not purchase raw materials themselves but instead offer oil extraction services on a charge basis, implying that they process others' oilseeds rather than their own.
- Traders typically buy agricultural produce at market prices and sell to processors at a slightly higher rate. This selling price includes the procurement cost plus an average (1.5%) commission, along with additional charges for market access, loading, and unloading.
- The study also observed that no Non-Banking Financial Companies (NBFCs) are currently providing value chain finance to participants in this region. As a result, traders and processors rely mainly on personal capital or bank loans to meet their financial needs.
- Those who obtained loans from banks reported interest rates between (11%) and (13%), while others managed operations using partnership-based funds. None of the respondents were aware of any NBFCs operating in the area. Furthermore, while a few traders and processors were familiar with the concepts of value chains and value chain financing, the majority lacked awareness or understanding of these financial mechanisms.

## Conclusion

Since no other NBFCs currently provide financial support to agricultural value chain participants, Samunnati has a significant opportunity to expand into this market. The company can offer short-term credit solutions tailored to the needs of traders operating within APMCs, who often require quick financing to manage their cash flow gaps. However, the high interest rates charged by Samunnati compared to traditional banks present a major challenge. To remain competitive and attract more clients, Samunnati should consider reducing its lending rates. Additionally, it can target creditworthy traders who face difficulties obtaining bank loans due to limited turnover or insufficient collateral, thereby strengthening its presence and impact within the agri-value chain finance sector.

## References

1. Angelucci F, Conforti P. Risk management and finance along the value chains of Small Island Developing States: Evidence from the Caribbean and the Pacific. *Food Policy*. 2010;35:565-575.
2. Balister, Singh, Vishwajit. A study of overdue loans in agriculture. *Indian Co-operative Review*. 1994 Apr;New Delhi.
3. Gereffi G. International trade and industrial upgrading in the apparel commodity chain. *Journal of International Economics*. 1999;48(1):37-70.
4. Gereffi G. The organisation of buyer-driven global commodity chains: How U.S. retailers shape overseas production networks. In: Gereffi G, Korzeniewicz M, editors. *Commodity Chains and Global Capitalism*. London: Praeger; 1994.

5. Henriksen L, Riisgaard L, Ponte S, Hartwich F, Kormawa P. *Agro-food value chain interventions in Asia: A review and analysis of case studies*. Vienna, Austria: UNIDO; 2010.
6. Rubin D, Tezera S, Caldwell L. *A calf, a house, a business of one's own: Microcredit, asset accumulation, and economic empowerment in GL CRSP projects in Ethiopia and Ghana*. Washington, DC, USA: USAID; 2010.
7. Swinnen JFM, Maertens M. *Finance through food and commodity value chains in a globalised economy*. Leuven, Belgium: K.U. Leuven; 2010.
8. Trienekens J. *Agricultural value chains in developing countries: A framework for analysis*. *International Food and Agribusiness Management Review*. 2011;14(2):1-15.