

## **Supply Chain Management: A Key to Success in Indian Rural Markets**

**Aravind Kumar Varma**  
*Administrative Officer*  
*Shaheed Bhagat Singh College*  
*University of Delhi, New Delhi*

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### **ABSTRACT**

*The logistics sector is currently looking for answers to supply chain and logistics market issues since rural India has an unrealized potential of over \$100 billion. Roughly 70% of the country's economic activity is concentrated in rural areas. The modern Indian village is a good example of a strong, developing consumer community. Rising crop prices, land sales to developers, crop rotation, a focus on exports, the return of young people from the countryside to their hometowns, government initiatives like NREGA, and higher wages for farm labourers are providing Indians in rural and small towns with disposable surpluses. In rural areas, however, there are still a number of problems with distribution and penetration. Farmers in India only receive roughly 30% of retail prices, as opposed to the 70% received by farmers in industrialised countries. Thus, it is vital to establish a distribution model that works in rural areas and delivers a competitive advantage. The goal of this paper is to present a cost-effective analysis of supply chain and logistics in rural Indian markets.*

**Key Words:** *Logistics, NREGA, distribution, model*

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### **I. INTRODUCTION**

The next major topic for researchers and companies in China and India is rural supply chains. The causes are straightforward: markets are oversupplied and metropolitan areas are congested, with a declining quality of life. According to projections, even in 2050, about 60% of India's population will still be concentrated in rural areas. In the years 2040 to 1950, 800 million people will reside in rural India, creating the scale and the markets necessary for the success of supply chains for commodities. So, it is necessary to transform rural India into a collection of advanced vibrant activity centers. For this transformation process to be successful, innovations in every layer - products, processes, business models, and service models - are essential.

Companies need to be reimagined using high-tech tools that can affordably give services and employment to millions of rural residents. In this article, we offer a comprehensive framework as well as a brief overview of the models and technologies that might be applicable in rural settings.

The world economy has undergone a radical transformation in the last two decades. Fundamentally, the development of internet services, telephony, jet jets, fax machines, global computers, television, and satellite broadcasting has resulted in a major reduction in geographic and cultural distances. This shrinkage of distance has permitted companies to widen substantially their geographical markets as well as their supplier sources. India has the potential to supply the globe with food. It has the arable land, all the seasons for producing all kinds of fruits and vegetables, and a functioning agribusiness system, albeit it still requires significant improvement. The supply chain is by far the biggest issue the Indian agricultural sector is now dealing with.

In India, 51% of the land is cultivable. It features a wide range of meteorological conditions, active river systems, and different agricultural and social customs. They are all crucial resources that support development in rural areas. Many agricultural products, including vegetables, fruits, milk, animal husbandry, and others, are placed among the top 5 in India. Yet, the income derived from these resources falls short of its full potential. The food processing sector, despite the growing importance of processed goods, is still only 1.6% in India, compared to 65-75% in Thailand and Brazil.

The wastage that goes into the Agri-produce is about 30%. Farmers are unable to obtain profitable rates for their produce due to the low quality and supply-driven nature of agriculture.

In comparison to the standards of rich countries and certain developing countries, the buying practices are incredibly out of date. Agriculture is contributing less to GDP than it once did. It accounts for 23% of the nation's GDP and 66% of employment. Agriculture, manufacturing, and service sector growth all contribute to the growth of the other three sectors.

The success of numerous initiatives that have been implemented in the rural sector both in the past and in the present can be categorized according to how they operate and how they affect rural transformation.

**RURAL INDIA AND IMPORTANCE OF SUPPLY CHAIN:**

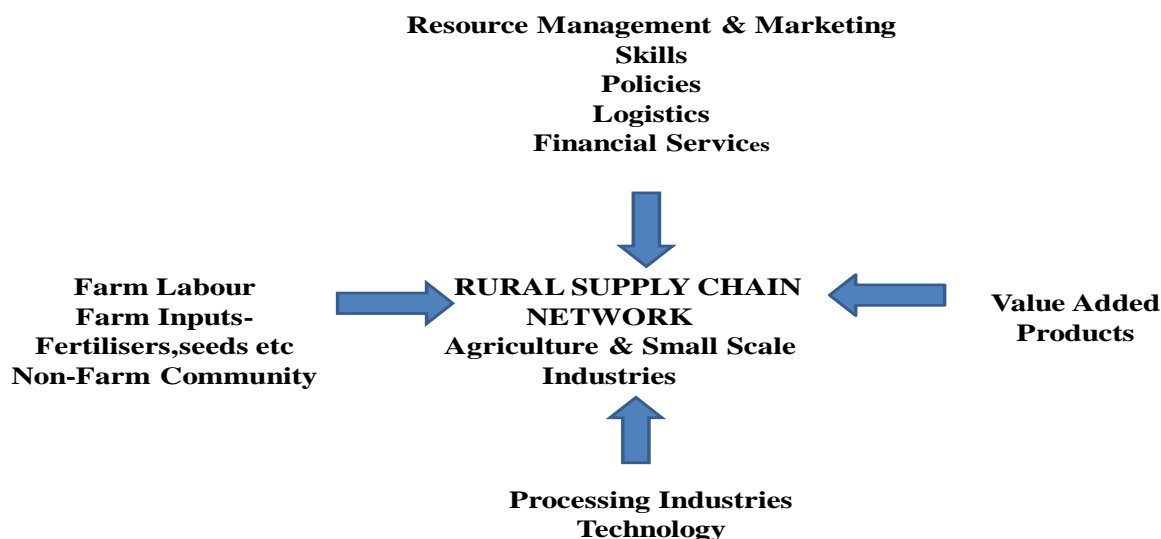
- India's staggering GDP of 1.877 trillion USD is spent on logistics at a rate of roughly 13%, creating an industry with a potential market of Rs. 4,068 billion.
- The logistics industry has had two-digit growth over the past 13 years and is predicted to surpass USD 120 billion by 2015.
- There are 6.1 lakh villages in rural India, which covers an area of 3.2 million square kilometers and is home to 700 million people.
- In rural India, there is a substantial market for putting up last-mile distribution networks valued at close to 53 billion US dollars.
- Just 42% of the country's total disposable income is earned by urban Indians, who make up 41% of the middle class in India.

**THE RURAL SUPPLY CHAIN NETWORK**

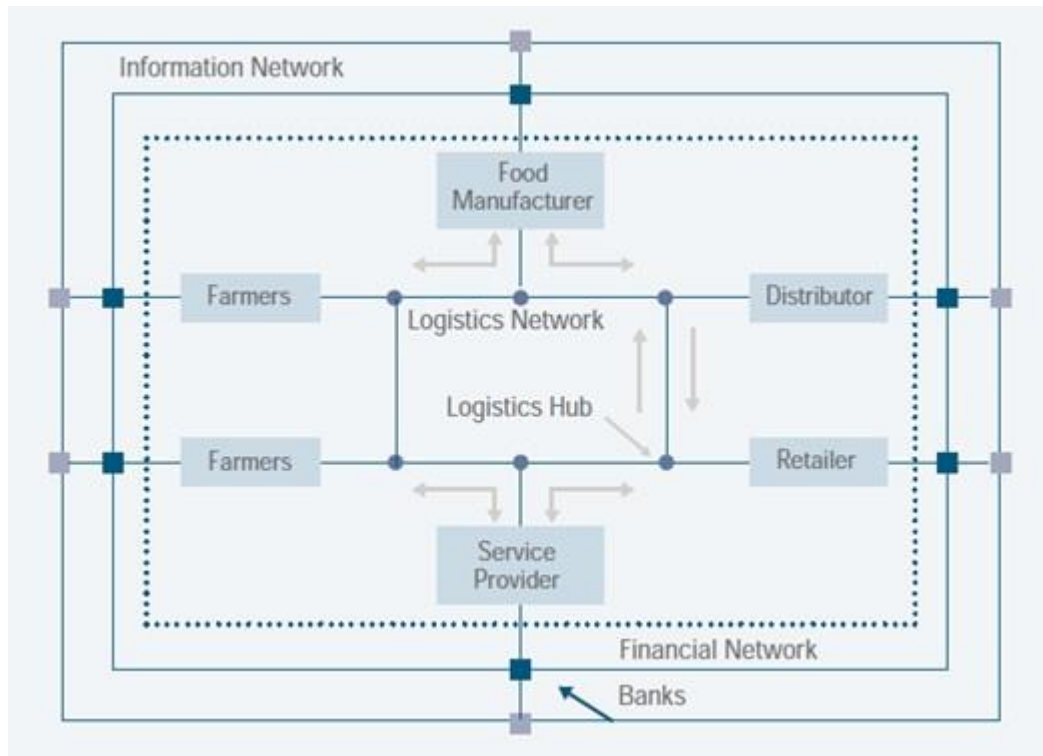
(Fig 1). exemplifies an input-output chain for a typical rural supply chain perfectly. The primary goal of the IRSN (Integrated Rural Supply Chain Network) is to efficiently develop a service or product, manufacture it, and then deliver it to clients in the best possible condition more quickly. IRSN is essentially a strategic alliance of numerous independent businesses that operate in various locations. It is a crucial fusion of three elements: a financial network, an IT network, and a logistics network tasked with the effective processing and transfer of commodities, money, and information.

The logistics network guarantees efficient material flow among partners with the primary objective of lowering lead times & material handling costs. The IT network essentially functions as a secure Extranet that facilitates communication and information integration across the business, potentially resulting in more data-driven and effective business decision-making as well as more efficient logistics.

The third financial network oversees proper connection and communication between numerous stakeholders, including funding, credit rating agencies, and insurance companies. This is what may be called an ideal rural supply-demand-financial chain, but the sad reality is that the Indian supply chain is now in a very dismal situation.



**Fig 1. Input-output representation of Rural Supply Chain Network**

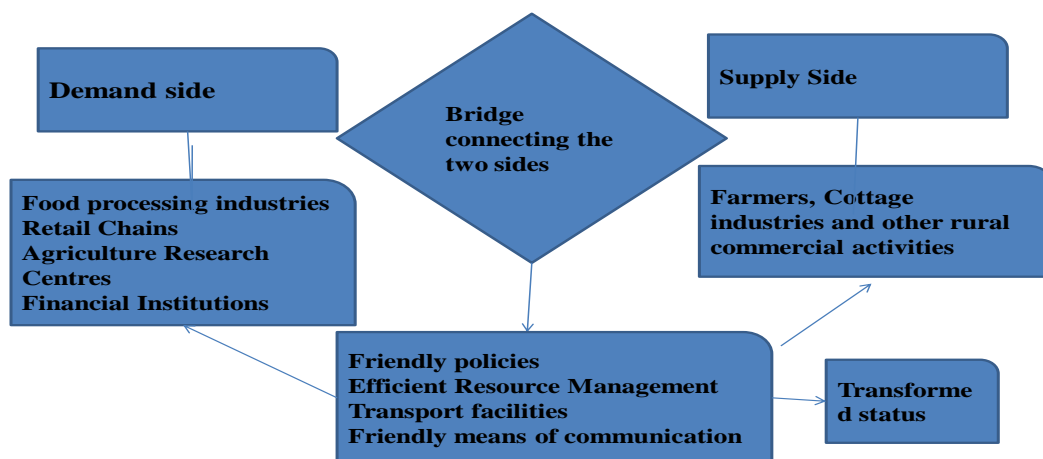


**Fig 2 Integrated Rural supply Chain Network**

**RURAL SUPPLY CHAIN TRANSFORMATION**

The goal of rural business transformation is to involve all relevant parties in the process of building an effective rural supply chain. There are two primary value delivery processes in the rural supply chain.

All Agri-based products are marketed to processing businesses, retail chains, and kirana cooperatives. Urban households make up the bulk of the customer base for cultural goods. There is a group of actors outside the boundaries of rural areas who, either directly or indirectly, make an alliance with the rural community. Retail chains, Kirana cooperatives, the textile industry, handicraft shops like FabIndia, financial institutions, research institutions, food processing, packaging, and distribution companies, retail chains,



**Fig 3 Bridge between demand and supply sides of Rural Supply chain**

Figure (3) above shows how the rural supply chain has been operating in the majority of India. The rural supply chain will change if the connecting bridge is restructured using resource management expertise, supportive

policies, and effective, environmentally friendly technologies. Technology makes it easier to supply agricultural products, process them, and find markets for them. A few examples of programs where technology can alter the face of agricultural production are cold storage facilities, mobile freezers, efficient energy sources, technology-aided agriculture, and irrigation techniques. Transforming how everyone works on the supply side as well as the demand side is the first step in building such an effective supply chain.

### **ROLE OF TECHNOLOGY AND INNOVATION**

A better method to address the limits is through innovation in the handling, transportation, and processing of rural produce. Using innovative methods calls for shattering barriers set up by tradition. The National Innovation Foundation has already started to spread inventions geared towards agricultural methods. But compared to its potential, technology has a much lower penetration rate.

The expense of putting technology solutions into practice could appear to be a barrier, but in the long run, the advantages in terms of increasing profits, making better use of resources, and raising the standard of living are too many to mention. In comparison to the Internet and computers, television and telecom are more prevalent in rural areas. Call centers and mobile communication services are examples of technology resources that can be used to enable information flow.

Building trucks and vans with mobile refrigerators and cold storage facilities is highly feasible. The expansion process is nevertheless hampered by rural areas' limited access to credit. Some ways to give the villagers improved financial transaction operations include ATMs and smart cards. Technology plays a key role in hastening rural change.

### **GOVERNMENT / CORPORATE INITIATIVES FOR RURAL MARKETS**

To meet the needs of the population living in rural and underdeveloped areas that are not connected to the retail and distribution networks of manufacturing enterprises, the Government of Madhya Pradesh wants to build Rural Shopping Malls (RSM) throughout the State.

Without a doubt, the goal of the Bharat Nirman Yojna is to provide urban facilities to rural communities. But it goes beyond just that. Better rural roads, rural homes, rural connectivity, rural schools, and rural hospitals are just the tip of the iceberg for Bharat Nirman. All of these things are true, but creating a new India is what Bharat Nirman is primarily focused on. India where there is no longer a discernible urban-rural divide.

ITC's E-Choupal was viewed as a means of distancing itself from the mandi and offering essential market information, giving the farmer more control over where and when to sell his crop. The e-Choupal model has demonstrated how a large company may combine a humanitarian mission with an ambitious business enterprise and can significantly contribute to market rationalisation and improved agriculture system efficiency.

The purpose of creating a rural distribution network is to provide facilities for multiple users, develop an integrated value chain, lessen the difficulties faced by producers and processors, and generate numerous employment opportunities as well as a reliable supply of agricultural products to rural residents.

## **II. CONCLUSION**

The development of India as a significant economic force is being seen with awe by the entire world. Nevertheless, for this to occur, our sectors of manufacturing, services, and agriculture must all experience continued expansion. As the three pillars of our economy are intertwined and mutually supportive, we must focus on all three. We require growth methods that generate wealth for both our rural and urban communities as well as jobs for our population. To do this, we must expand agriculture and boost the competitiveness of our industrial and service industries on a worldwide scale.

The future is bright for the rural supply chain. There is an urgent need to address issues connected to product designs, manufacture, marketing, and retail of food as well as other electric and communication items in rural regions at fair prices because more than four billion people reside there. Indian supply chain management will play a significant role in the country's economy and has a significant opportunity to become a leading global supplier if the right strategies are implemented and promoted because of the country's advantages in terms of infrastructure, software capabilities, private telecom networks, a labor force that is inexpensive, and most importantly, the presence of an end market.

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