

# Some Investigations on Improvement of Effectiveness of Supply Chain Management in an Indian Context

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**Abstract**— Farm mechanization allows in effective utilization of inputs to increase the productiveness of land and labor. Except it enables in decreasing the drudgery in farm operations. The early agricultural mechanization in India becomes substantially motivated by the technological development in India. Irrigation pumps, tillage system, chaff cutters, tractors and threshers had been progressively added for farm mechanization. The high yielding sorts with assured irrigation and higher charge of application of fertilizers gave better returns that enabled farmers to undertake mechanization inputs, specifically after green revolution in 1960. The improvement of power thresher in 1960, with integrated bhusa making attachment and aspirator blower and mechanical sieves for grain and straw separation, was the predominant success of Indian engineers. Those threshers have been broadly followed through the farmers. Steadily demand for different farm machinery including reapers and combine harvesters additionally elevated. Gadget for tillage, sowing, irrigation, plant safety and threshing were extensively general by using the farmers. Even farmers with small holdings make use of many improved farm gadget through custom hiring to make sure timeliness of farming operations.

The present fashion in agricultural mechanization is for high capability machines through custom hiring and for contractual area operations. But, mechanization of horticulture, plantation vegetation and industrial agriculture is yet to be brought inside the tempo of farm mechanization within the India. Expanded with the manufacture of agricultural system by the neighborhood industries. With the modest starting of manufacture of tractors in 1960 with foreign collaboration, today the Indian farm equipment industries meet the bulk of the requirement of mechanization inputs and also export. The manufacture of agricultural machinery in India is pretty complicated comprising of village artisans, tiny gadgets, small-scale industries, country agro-business improvement companies and prepared tractor, engine and processing system industries. Traditional hand gear and bullock drawn implements are in large part fabricated by means of village craftsmen (blacksmith and carpenters) and

small-scale industries. The small-scale industries depend upon public institutions for technological aid. Those industries, however, upgrade those designs and manufacturing approaches with experience. Organized sectors confine to the manufacture of machines like tractors, engines, milling and dairying gadget. Those industries have adopted sophisticated production technologies, and some of them in shape international requirements. The improved scope of import of technology (product designs and production method) with the aid of organized sector and access of foreign investors is possibly to boost up exports. In view that cost of production of farm equipment in India is extra aggressive because of lower labor wages. Indian products, but, shall want enhancements in high-quality for gaining primary export growth. For this, mass production of critical and speedy wearing components and their standardization would substantially help.

**Keywords:** *Agricultural industries, Agricultural industries supply chain management, Agro food Market.*

## I INTRODUCTION

The country witnessed unparalleled increase in agriculture which has helped India to graduate from starvation to self sufficiency in food grains via growing the meals grain manufacturing from 51 million tons to 208 million tones, with surplus for export. the technology lower back-up by means of agricultural scientists, within the form of “green revolution” mixed with commercial boom, tremendous coverage aid, liberal public investment for agricultural research and development and dedicated paintings of farmers contributed to the phenomenal boom in agricultural, animal and fish production. software of engineering in agriculture was similarly appreciated by way of the farmers and to-day they feel proud to have progressed machinery from bakhars to rotavators, persian wheel to drip and micro-sprinkler structures, cone-dibblers to pneumatic planters, sickles to combine harvesters, sieve to coloration sorters, and, kolhus to solvent extraction flowers, and hand mills to roller flour mills, and many others. The farmers are not afraid of hot/cold wasteland and vagaries of weather as they've green houses and occasional tunnel plastic houses technology to grow crops in any place at any time of the year.

The increase in adoption of agricultural machinery in the country has been feasible due to their nearby manufacture. The manufacture of agricultural equipment in India is



underneath taken via village artisans, tiny gadgets, small scale industries, organized medium and massive scale quarter. Organized sectors manufacture sophisticated equipment which includes tractors, engines, milling and dairying gadget. Traditional hand tools and bullock drawn implements are largely fabricated by means of village craftsmen (blacksmith and carpenters) and electricity operated machinery via small-scale industries.

Agricultural industries is an essential zone of Indian economy as it contributes approximately 17% to the total GDP and provides employment to over 60% of the population. Indian Agricultural industries have registered magnificent increase over last few decades. The meals grain manufacturing has increased from 51 million tons in 1950-51 to 250 mt throughout 2011-12 maximum ever due to the fact that independence. An agricultural industry plays an essential role in the global economic system. But, the production of most agricultural merchandise is affected by a lot of factors, consisting of the climate modifications, seeds quality, way of life techniques, marketplace availability, authority's rules, era, coordination and role performed a number of the deliver chain members.

The scenario is made in addition complex via the fact that there is an extended lead time in the manufacturing of agricultural product. It manner that it is not possible to modify the manufacturing plan while the surroundings modifications. Among all of the trouble, the rapid growth has helped Indian Agricultural industries mark its presence at global degree.

India stands amongst pinnacle three in terms of manufacturing of diverse agricultural commodities like paddy, wheat, pulses, groundnut, rapeseeds, end result, greens, sugarcane, tea, jute, cotton, tobacco leaves, etc. however, on advertising front, Indian Agricultural industries continues to be dealing with the troubles including low degree of market integration and connectivity, accessibility of dependable and timely facts required by means of farmers on diverse problems in Agricultural industries Blacksmiths and carpenters have been the conventional fabricators of agricultural gadget in India.

The early agricultural mechanization in India was substantially stimulated by way of the technological improvement in England. In 1889, watts and kaiser delivered ploughs, corn grinders and chaff cutters Cawnpore (now Kanpur) experimental farm in Uttar Pradesh. Sardar Joginder Singh (1897-1946), who changed into the agriculture minister inside the Punjab authorities (1926-37), introduced the steam tractors in India in 1914 for reclamation of waste land and eradication of 'Kans'. Horse drawn and steam tractor operated implements have been imported all through the latter part of the 19 century. The horse drawn equipment imported from England have been now not suitable for bullocks and he-buffaloes utilized in

India and thus, were certainly modified via small scale manufacturers to in shape Indian draught animals. With the establishment of Allahabad agricultural institute, Allahabad in 1942, the improvement activities in agricultural machinery elevated and as a result bullock drawn meston, shabash and wah-wah ploughs had been added in Uttar Pradesh, synthetic with the aid of the agricultural improvement society, naini in early 1940. the Indian farmers step by step responded to farm mechanization generation mainly after green revolution in 1960's. Excessive yielding sorts with confident irrigation and higher price of software of fertilizer gave better yields and higher economic returns. This enabled the farmers to begin adopting mechanization.

The development of energy thresher with integrated bhusa making attachment and aspirator blower and mechanical sieves for grain and straw separation in Sixties turned into the essential fulfilment of Indian engineers which became extensively adopted by way of our farmers. Steadily call for other farm machinery such as reaper and combine harvester also elevated. Call for of tractors within the country changed into met through importation till 1961 whilst Eicher tractors ltd. and tractors and farm equipment ltd started production tractors with overseas collaborations. to satisfy the extra call for, importation persisted up to 1977. In the meantime many other industries started out production tractors with overseas recognize how consisting of Gujarat tractors ltd (1963), Escorts ltd (1966), international tractors (India) ltd. (1966), and Hindustan gadget equipment ltd (1977). Punjab tractors ltd. started their manufacturing with indigenous technology in 1974. Many extra industries started production tractors because then with indigenous and overseas realize how.

## II SUPPLY CHAIN MANAGEMENT

The real degree of deliver chain success is how properly activities are coordinated across the supply chain to create value for purchasers, in conjunction with growing the profitability of each link in the deliver chain. Deliver-chain management (DCM) is the management of the whole set of manufacturing, distribution, and advertising methods via which a customer is supplied with a desired product [13]. Supply chain management is the included system of manufacturing value for the give up person or ultimate consumer. SCM is a philosophy for integrating all of the activities in the life of a product or a provider from the earliest supply of raw materials to the final customer, and beyond to disposal [12]. In the course of the 1990's, the worldwide competitive surroundings shifted closer to a horizontal or in reality integrated enterprise structure regarding near interplay amongst providers, producers, and customers. A deliver chain is "an included system wherein a number of numerous enterprise entities paintings collectively with the intention to accumulate raw substances, convert those raw materials into targeted final products and deliver those designated final products to retailers".



The supply chain incorporates the production and delivery of materials and components, and it serves each the manufacturing logistics chain and distribution logistics chain [3]. Network of companies which might be involved, via upstream and downstream linkages, in the unique approaches and sports that produce fee in the shape of services and products in the hands of the ultimate client [9]. The supply chain businesses are transferring towards elaborate, cooperative well worth networks where the companions work and studies together on solving trouble, encouraging inter-firm reading and also allocation of dangers and earnings is done. The firms that replicate these types of values of feat and received benefits have used their deliver chains as a aggressive weapon are like Zara, dell, proctor and gamble and Toyota.[28] deliver chain management objectives at constructing agree with, changing data on market needs, growing new merchandise, and decreasing the supplier base to a specific poem (authentic system manufacturer) that allows you to release control resources for growing significant, long time dating[5].

Deliver chain management encompasses substances/deliver control from the supply of basic uncooked substances to very last product (and possible recycling and re-use). Supply chain control focuses on how firms utilize their providers' strategies, generation and functionality to enhance competitive gain. Its miles a control philosophy that extends conventional intra-company sports by bringing buying and selling companions collectively with the common goal of optimization and efficiency [29]. The properly-known "flow to the middle hypothesis" posits that corporations will input into a fixed of stable relationships with few providers [10]. A thrilling query that arises is the position of the intermediary in the redefined deliver chain. Intuitive reasoning indicates that the advent of an internet platform have to cause disintermediation through without delay connecting shoppers and planters. The intermediary performs a outstanding position. This is constant with recent in included deliver chain that points to a new and redefined function of the middleman in digital supply chains [8]

Hajjdiab and Taleb describe approximately the improvement of agile software to make supply chain greater responsive and extra traceable [16]. Bechini emphasize on using the it equipment and web services in collaborative practices to make the deliver chain more traceable [4]. Laosirihongthong [18], Schuster [27], Gaukler [15], Brintrup[6] describe about the use of and imposing raid in deliver chain to growth its visibility and traceability of stock in the entire deliver chain to beautify the collaborative practices. A key point in supply chain control is that the whole system must be considered as one machine.

Any inefficiency incurred throughout the deliver chain (providers, manufacturing vegetation, warehouses, customers, and so on.) need to be assessed to decide the proper talents of the method. At the same time as preferably deliver chain management emphasizes "general" integration of all of the business entities inside deliver chain, a sensible approach is to be don't forget best strategic providers and customers because most deliver chains are too complicated to achieve full integration of all the deliver chain individuals.

(Maurya, 2001). SMEs are distributed in all industrial sectors, serving the production and related activities of agricultural industries and livestock, small factories, small engineering workshops and service businesses.

FMCG and the automobile industry have both traditionally been dependent on SMEs, where the latter are first tier suppliers. Under a regime of free trade and globalization, the state generally withdraws the protection it provides to small-scale businesses. Larger organizations emerge to take up products and services, which until recently were reserved for enterprises in the small-scale sectors. Selected perspectives and country-specific definitions on SMEs are set out in Tables I and II.

A high degree of vertical integration is unlikely to result in guaranteeing competitiveness (Mitra, 2006). Integration of this type has the potential to deliver long-term benefits through proper understandings about economic factors, trust and transparency in international alliances and venture. Small firms can improve their competitiveness through links with domestic Les or trading houses on dimensions like brand names, collective marketing, aggressive marketing, and intensive promotional efforts in export markets, bulk shipping, the transport of goods and assistance in custom clearance. For the purpose of this paper, an initial description about the key characteristics of SMEs helps clarify the environment in which they operate. Comprehensive lists of 16 characteristics of SMEs, which are frequently reported in the literature.

Individual SMEs often find trouble in achieving economies-of-scale in the purchase of inputs like equipment, raw materials, finance and consulting services. SMEs are also unable to take full advantage of market opportunities that require large production quantities, homogenous standards and regular supplies. Being small is also a constraint on how these enterprises internationalize functions such as training, market intelligence, logistics, technology and innovation. Size also influences the capacity of small enterprises to achieve a specialized and effective internal division of labor. To preserve their normally narrow profit margins, small-scale entrepreneurs in India, for example, are often unable to introduce innovative improvements to product lines and processes. This lack of capacity limits the potential for an SME to take advantage of new and emerging opportunities in the market.

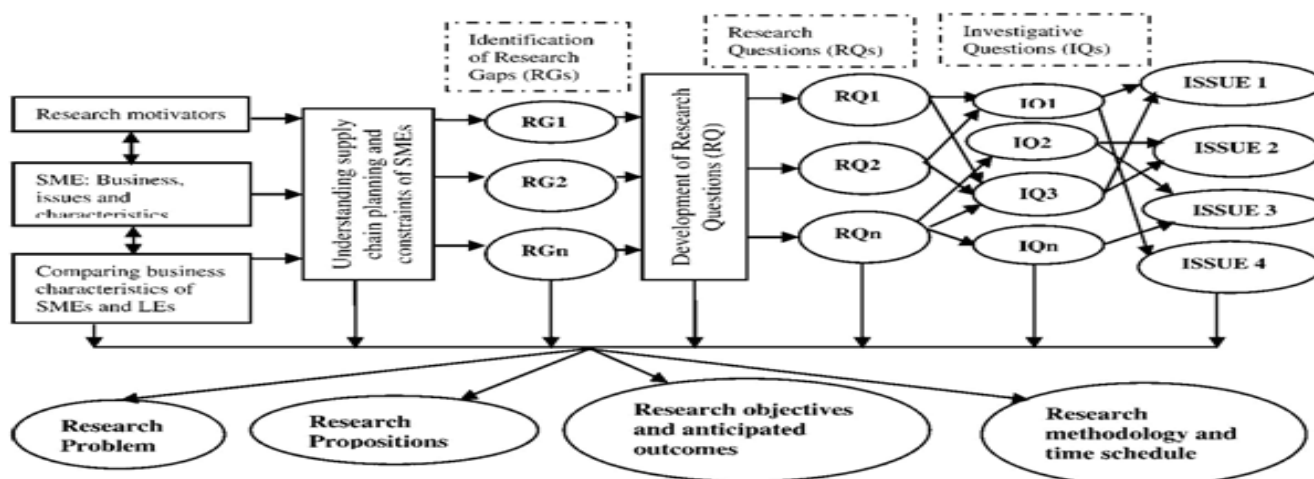


Figure 1 A suggested approach by Maurya 2001

Table 1 Limitations

SN	Paper Title	Year	Limitation
1	Keah Choon Tan	2000	Some leading organizations adopt a strategic approach to managing the value chain, such as forming strategic alliances with suppliers and distributors instead of vertical integrating; inter-company competition is elevated to inter-supply chain competition.
2	Taco van der Vaart, Dirk Pieter van Donk	2007	The proposed framework needs further empirical testing, and therefore we are cautious in offering managerial advice. However, we believe that making a distinction between attitudes, practices and patterns could help managers in understanding their relationships with buyers and suppliers.
3	Kannan Govindan, Hamed Soleimani, Devika Kannan	2014	Modification opportunities in nondeterministic approaches, utilizing two-stage stochastic and robust optimization approaches, considering forecasting methods, and regarding new uncertain parameters are identified as future opportunities in uncertain parameters.
4	Noor Aslinda Abu Seman Norhayati Zakuan, Ahmad Jusoh, Mohd Shoki Md Arif	2012	Further study still required for more understanding toward the adoption and implementation of GSCM and also the organization awareness level on environmental problems that caused by their business operation.
5	Vishal Parmar H.G.Shah	2016	The practitioner needs to concentrate on these barriers more cautiously during implementation in their organizations.
6	Burt ,Larson	1994	Primary settling studies will be conducted in the mixer-settler column, future trials are planned with a ruggedized 'site-ready' ABA on a full scale non-active separation corral. This will for the first time give the ability to fully correlate and verify model predictions in a realistic and controllable environment

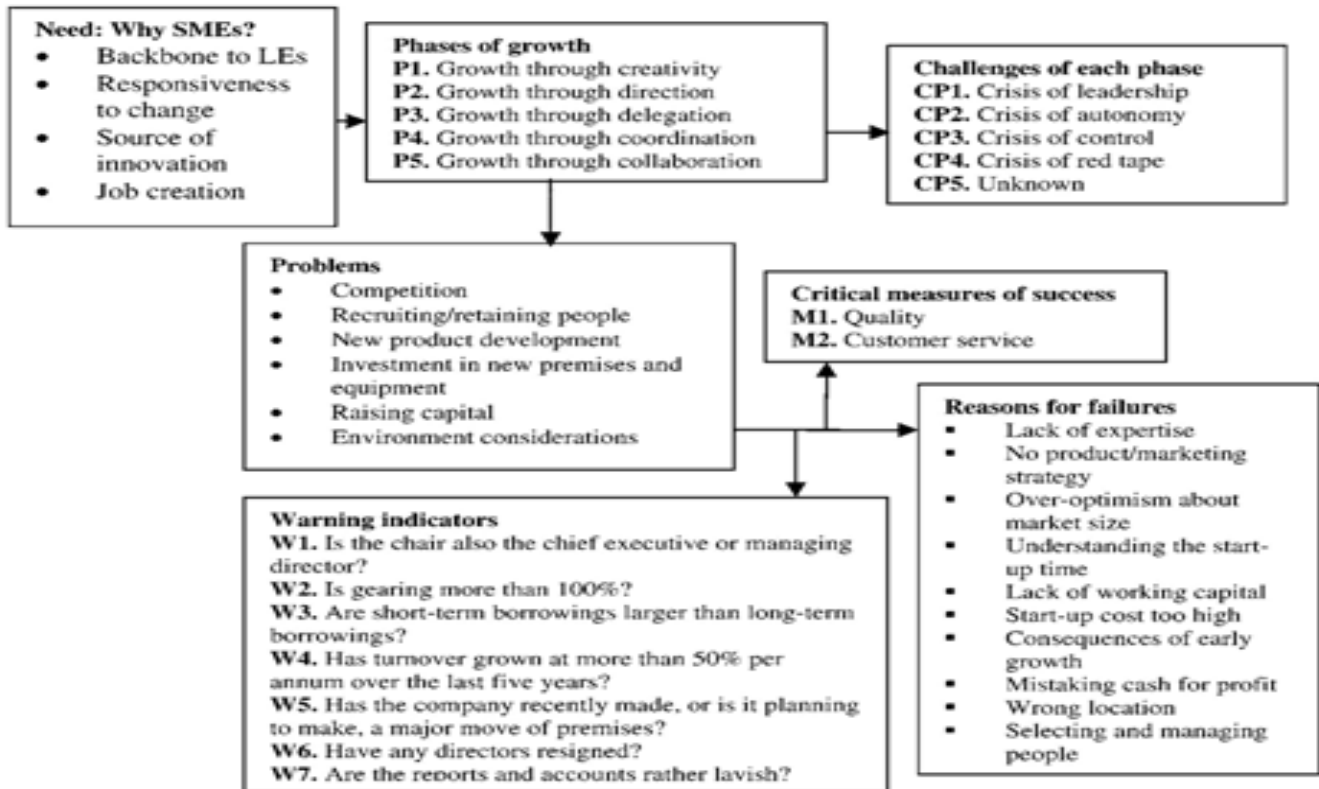


Figure 2 towards an overall picture SMEs

Table 2 Issues in SCM

SN	Issue	Description
1	Vertical integration	True vertical integration is generally not an option for the SME, it either uses the spot markets or the networks(Arend and Winsor, 2005; Oakes and Lee, 1999) SMEs are unlikely to need to consider antitrust implications in their alliances (Arend and Winsor, 2005) More vulnerable to holding specific assets and more sensitive to contract costs (Oakes and Lee, 1999) SMEs are usually in a worse bargaining position (Hong and Jeong, 2006)
2	Trust	Does not generally need to consider antitrust issues when pursuing networks and alliances (Power, 2006; Oakes and Lee, 1999)
3	Sensitivity to supply	More sensitive to the assurance of supply issues because firm may have invested in specific assets to better serve a supply chain partner and, thus, be at a potentially devastating financial risk if the partnership dissolves (Morrissey and Pittaway, 2006)
4	Expected communication	Fast and direct communications in the network because of its own shorter hierarchical distance to decision makers
5	Organizational culture	A small firm may have organizational culture differences with larger partners that can create problems in relationships that are based on shared, often tacit coordination and adaptation (Hong and Jeong, 2006)
6	Time-frame and relationships	Less likely to have the long-term time frame required to build and reap the rewards of relationships (Ritchie and Brindley, 2000)



*Table 3 Gaps in SCM*

<i>SN</i>	<i>Paper</i>	<i>Gaps Reported</i>
1	Keah Choon Tan, Taco van der Vaart, Dirk Pieter van Donk 2007	The proposed framework needs further empirical testing, and therefore we are cautious in offering managerial advice. However, we believe that making a distinction between attitudes, practices and patterns could help managers in understanding their relationships with buyers and suppliers.
2	Kannan Govindan Hamed Soleimani Devika Kannan 2014	Modification opportunities in nondeterministic approaches, utilizing two-stage stochastic and robust optimization approaches, considering forecasting methods, and regarding new uncertain parameters are identified as future opportunities in uncertain parameters.
3	Frank Teuteberg, David Wittstruck 2010	Future research should build on the current level of knowledge and develop reference models for sustainable management in specific supply chains
4	Noor Aslinda, Abu Seman, Norhayati Zakuan Ahmad Jusoh Mohd Shoki Md Arif 2012	Further study still required for more understanding toward the adoption and implementation of GSCM and also the organization awareness level on environmental problems that caused by their business operation.
5	Aziz Muysinaliyev Sherzod Aktamov 2014	Future researches will pay more attention on generating much needed conceptual and empirical work in the SCM literature, thereby creating a body of literature that is more heavily influenced by a deeper analysis of the supply chain on a chain wide or network basis.
6	Nayyar and bantel 1994	The business literature has done much to uncover the realities of the off shoring equation, but in the process it has reached into the areas of business model design and supply chain risk management. A future area of potential development is to integrate the findings
7	Ashwini Sharma1, Dixit Garg2 , Ashish Agarwal3 2012	It has been observed that quality in supply chain has not been focused in the literature related to supply chain management.
9	A. Gunasekaran C. Patel Ronald E.McGaughey 2004	Tremendous opportunity exists to develop measures that facilitate progress and promote greater supply chain integration.
9	Mark A.Vonderembse Mohit Uppal Samuel H. Huang John P. Dismukes 2016	As markets begin to grow and customers demand rapid change and high levels of innovation, strategic partnerships among supply chain members are essential to create the knowledge rich environment needed to support these efforts.
10	Rubian and marquez 2003	Show the potential improvements of the integration by using Internet tools for SC collaboration

**III SUPPLY CHAIN ISSUES FOR SMES**

The increased importance of SCM can be attributed to several forces driving global outsourcing and an emphasis on quality during a period of great competition and environmental uncertainty (Mentzer, 2001). The broader spectrum of activities of SMEs include procurement, manufacturing, distribution and waste disposal together with associated transport, storage and information technology issues. Effective

management of logistics, especially in a developing country like India, delivers substantial savings and improves the overall competitiveness of the industry. For example, logistics influences about 64 percent of all costs in a manufacturing company. In Europe, logistics-related costs hover around 55-65 percent of total turnover. In India, such costs are estimated to be around 70-80 percent of turnover (Singh, 2004). This figure suggests the significant potential for cost saving and



opportunities for in-depth research into logistics and related topics in India.

**Agro Business:**

The idea of agro business started gaining instructional and professional acceptability ever on account that Goldberg and Davis first defined the time period in 1957. They regarded it as 'the sum overall of all operations worried within the manufacture and distribution of farm elements; production operations on the farm; and the garage, processing and distribution of farm commodities and the objects made from them. This definition hooked up agro culture as an industry that is going far past in reality developing vegetation and raising animals [25]. Agro culture-primarily based activities continue to be the mainstay of growing economies despite their constant industrialization and tertiarisation over past four a long time. Recent trends in globalization and integration of international consumer marketplace offer in addition possibilities for improvement of agro business and meals industry the world over which could also advantage developing international locations, provided they may certainly manipulate their assets to tap the rising opportunities. However, the prospective possibilities are also likely to be observed with the aid of numerous challenges. Position of agro culture and agro culture-based enterprises gains further significance in view of the reality that large portion of population in countries is at once or circuitously depending on agro culture for their livelihood. Moreover, such economies have comparative benefit in agro culture-primarily based industrialization. As a result, agro business-led growth has desirable capability to contribute in sustained financial development of these countries

**IV AGRO CULTURE SUPPLY CHAIN MANAGEMENT**

All through the 1990, academic and commercial interest in supply-chain control in agro business rose in Europe and America. The driving forces protected the trend in the direction of consolidation of organizations at the side of authority's deregulation of agro business markets. Hobby turned into additionally growing in excellent-management structures and food safety, and competition in markets changed into increasing, related to worldwide exchange in agro business merchandise. Manufacturing and advertising and marketing preparations are responding to converting call for, driven with the aid of urbanization and weight loss program change. Government-backed schemes in horticulture have combined outcomes, generating more jobs than cereal manufacturing. Beyond direct government interventions, new sorts of contractual and sharecropping relationships are rising between non-public dealers and farmers [24]. Agro-industry also generates new call for on the farm quarter for extra and extraordinary agro cultural output, which might be extra appropriate for processing. [30] SCM implies dealing with the relationships among the corporations responsible for the green

manufacturing and supply of agro business products from farm degree to customers, to reliably meet consumers' requirements in phrases of quantity, excellent and fee. Assembly clients' necessity entails integrated management of the transactions and relationships between corporations in addition to procedures inside companies. Dealing with these relationships affords a possibility for overtly negotiating the shares between chains members of the value produced within the chain. More importantly, joint planning of collaborative techniques is viable, to develop the shared value. The latter contrasts with the standard battle among agro business providers and buyers approximately their relative stocks of the value generated.

Members in unstable agricultural supply chain may want to most effective efficaciously control and mitigate threat if an in depth identification and outlines in their root reasons are recognized. In spite of a high farm output, the reputation of agro culture in India seems bleak supplying greater questions than solutions. The solution to quite a few those questions lies inside the useless deliver chain that ends in the shipping of the produce from the farm to the give up consumer. The supply chains of various agro cultural commodities in India, but, are fraught with challenges stemming from the inherent troubles of the agricultural industries area. The agro supply chain machine of the united states of America is determined by way of extraordinary sartorial issues like dominance of small/marginal farmers, fragmented supply chains, absence of scale economies, low degree of processing/price addition, inadequacy of advertising infrastructure and so forth. Agricultural industries perform a vital position within the global economy. However, the production of most agricultural products is tormented by a variety of external elements, inclusive of the climate changes, seeds pleasant, and lifestyle methods, which are not in complete manage by using the supply chain individuals. The scenario is further complex through the fact that there is a protracted lead time inside the manufacturing of agricultural product. It method that it's far impossible to adjust the manufacturing plan while the surroundings adjustments. For the rural product producers, they lack the market records and aren't positive of the final output while going into manufacturing.

They may be extra blindfold to pick out what to produce and what kind of to supply, particularly within the unsure surroundings. Then oversupply and lack of the agricultural product are quite popular inside the agricultural product marketplace, which lessen the profit of the deliver chain and hurt the enthusiasms of the deliver chain contributors. A way to reduce the effects of the fluctuations and share the risks facing the deliver chain contributors is a vital topic within the supply chain management. Coordinating deliver chain has been a main difficulty in deliver chain control studies. Supply chain contracts are contractual agreements governing the pricing and change of goods or offerings between impartial participants in a supply chain.



Properly designed supply contracts are an effective approach to proportion the demand and deliver danger and better coordinate the decentralized deliver chain. It is widely recognized that the dealer and retailer can both benefit from coordination and thereby improve the overall performance of the deliver chain as an entire. Many famous settlement bureaucracies along with buy-lower back, sales-sharing, amount flexibility, sales rebate, -part tariff, and amount cut price have shown to coordinate the supply chain.

**Objectives:**

1. Identify Awareness about SCM in ABCM.
2. Identify risk areas in SCM in ABSMEs.
3. Identify critical success factors of SC M in ABSMEs.
4. Identify Supply chain performance measures in ABSMES.
5. Develop a model for successful SC planning in ABSMES.

**Factors Affecting performance of SCM:**

Initiated or commissioned research is expected to be more explorative in nature for two reasons: supply chain

dimensions are studied more and with a greater focus in the context of LEs and lack information about the efforts of SMEs; and business characteristics and the environment of an SME are quite different to LEs. For the purpose of this framework, we advocate case study research for two reasons. The case study methodology is recognized as being particularly appropriate for examining “how and why” questions (Yin, 1994). In addition, because of the framework and methodology, case studies have the potential to identify additional variables and relationships not conceived of or identified adequately in theory (McCutcheon and Meredith, 1993). To understand associated phenomenon in its most natural setting, we aim to safeguard case study research by infusing it with the principles of interpretive management research (see, for example, Klein and Myers, 1999) and compare this approach to positivist research, which mainly focuses on identifying “cause and effect” Relationships between variables.

<b>Factors</b>	<b>Meaning</b>	<b>Reference</b>
Capacity constraints	The inability of a system to produce an output quantity in a particular time period.	Lee, et. al. (1997)
Cost reduction capabilities	The act of lowering the cost of the same goods or services.	Steele et. al. (1996).
Cycle time	The time between purchase request to a supplier and receipt.	Handfield (1993); Hult (1997)
Disasters	Any occurrence that causes great harm or calamity.	Baird et. al. (1990); Wagenaar (1992)
Environmental performance	Activities such as selecting materials used, product design processes, and process improvements.	Dean et. al. (1995); Walton, et. al. (1998)
Financial health of suppliers	Profitability trends in cash flow and the existence of financial guarantees.	Krause et. al. (1999); Steele et. al. (1996)
Inbound transportation	Methods to distribute, handle, and transport inputs	Lee et. al. (1993); Noordewier et. al. (1990)
Information system compatibility and sophistication	Information system capability of suppliers to transfer timely, accurate and relevant information to buyers	Krause et. al. (1999), Lee et. al. (1997).
Inventory management	Supplier ability to manage raw materials, work-in-process, and finished goods and inventories.	Krause et. al. (1999)
Legal liabilities	Legally enforceable restrictions or commitments relating to the use of the material, product, or service.	Zsidisin et. al. (1999)
Management vision	Supplier management attitude and ability to foresee market and industry changes.	Krause et. al. (1999)
Market price increases	Trends, events, or developments that may increase prices.	Steele et. al. (1996)
Product design changes	The unpredictability of changes in product technology.	Noordewier et al. (1990); Stump (1995)





Quality	The ability of suppliers to conform to specifications.	Noordewier et al. (1990)
Shipment quantity inaccuracies	The gap between the actual demand requests and the quantity shipped.	Steele et. al. (1996).
Supply availability	Availability of strategic materials in terms of quality and quantity, and the relative strength of suppliers.	Noordewier et al. (1990); Steele et. al. (1996)
Volume and mix requirements changes	Demand fluctuations in quantity and type for a component or service.	Noordewier et al. (1990); Walker et. al. (1984)

**V SCM IMPLEMENTATION MODEL/Framework**

The increased importance of SCM can be attributed to several forces driving global outsourcing and an emphasis on quality during a period of great competition and environmental uncertainty (Mentzer et al., 2001). The broader spectrum of activities of SMEs include procurement, manufacturing, distribution and waste disposal together with associated transport, storage and information technology issues. Effective management of logistics, especially in a developing country

like India, delivers substantial savings and improves the overall competitiveness of the industry. For example, logistics influences about 64 percent of all costs in a manufacturing company. In Europe, logistics-related costs hover around 55-65 percent of total turnover. In India, such costs are estimated to be around 70-80 percent of turnover (Singh, 2004). This figure suggests the significant potential for cost saving and opportunities for in-depth research into logistics and related topics in India.

<i>Model</i>	<i>Author</i>
Focus on the AMS and develop a conceptual model for achieving agility, with a pre-supposition that a lean chain is a subset of an agile chain	Sharifi and Zhang (1999)
Performance Model	Taco van der Vaart Dirk Pieter van Donk 2014
A framework for analyzing supply chain performance evaluation models	Dominique Estampe Samir Lamouri Jean-Luc Paris Sakina Brahim-Djelloul 2010
A business model perspective	Lascelles and dale 1989
Business Sustainability Evolution Model	Lyons
Benefits comparing Models	Li and chen 2001
SCM maturity model	Lalit Ashok 2015
ITESCM Model	Mamun Habib 2014
Structural equation model testing predictive validity.	Suhong Li S. Subba Rao T.S. Ragu-Nathan Bhanu Ragu-Nathan 2005
optimization models	Jeremy F. Shapiro
Evaluation Model	Rajat Bhagwat

**Future directions in research:** Indian SMEs are failing to achieve their business potential due mainly to myopic viewpoints and short-sightedness, which results in weak quality processes and products, late deliveries, problems with inventory management and a poor mismatch between demand and forecasts under conditions of uncertainty. Increased manufacturing and delivery lead times as well as low trust concerning LEs in their business dealings also influence the plight of the Indian SMEs. However, SCM offers Indian SMEs the capacity to leverage their scalable competences (for

example, product design and radical process innovation) in a cooperative network through fast and feasible access to assets of complementary partners (Arend and Winser, 2005). The proposed research framework will help redefine the supply chain for the SME sector, which is mainly focused on studies about LEs. For the purposes of the proposed approach, an exploratory multiple case study would be conducted. In addition, the outcomes of such research are expected to identify causal relationships between SCM and SMEs, which will further help to prioritize Decision making in SMEs.



The inputs of many les in India are derived from SMEs. Hence, improved fine and reduced fees on the sub-meeting level can truly deliver cost to the client. the proposed research framework is also expected to provide following advantages for the SME area:

A higher knowledge by way of SMEs of their logistical weaknesses, which have been until these days, taken into consideration to be habitual. This expertise will improve the responsiveness of the supply chain through reduced prices and improvements within the pleasant of merchandise.

A higher understanding of the elements that produce a strategic in shape among SCM and SMEs. This can highlight the vital changes required in present practices, in particular related to it, overall performance dimension and organizational structures.

In sum, this paper is informative in nature. But, it has documented many key issues associated with the SME sector in India and the problems it faces in the deliver chain. At this degree, we remember that studies tasks that observe the framework endorsed above and take account of the expected effects, information about SCM and SMEs in India may be increased. The under references additionally offer pathways for growing insightful understandings about the various issues faced through SMEs in India.

#### VI CONCLUSION

From the review of literature it may be concluded that, strengthening the subsequent elements develops a better model of agricultural industries deliver chain control which facilitates in fixing the meals problem of the country certainly the arena. Statistics is important to green agricultural markets. The availability of accurate rate and other market records allows lessening dangers and transaction fees and enables market participants to devise and coordinate extra efficiently their manufacturing and trading sports. Although market statistics has public good elements, most of the efforts to expand public area marketplace records structures have failed, as maximum structures have lacked industrial software and were unsustainable.

- Blessings of nicely-coordinated supply chains derive from stable markets which can result in more profitability and employment. supply chain coordination can:
- Provide access to new market shops and as a consequence growth manufacturers' capability to in shape manufacturing and call for.
- Provide get right of entry to for manufacturers and small-scale companies to information on era, financing, and marketplace necessities for characteristics and portions.
- Higher manage product exceptional and protection thru tracking, tracing, and certification.
- Share risks among chain companions, especially for massive investments.

- Lessen lead-time and losses of perishable merchandise through joint planning and coordination of deliver.
- Offer a means to pool production and accordingly develop economies of scale.
- Increase employment from greater participation in price-adding activities.

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