

# A Comparative Study on Supply Chain Management Practices among Production and Service Sector – Theoretical Prospective.

**A.Iffath Jehan**  
Assistant professor  
Dept. of Corporate Secretaryship & ISM  
JBAS College for Women (Autonomous), Ch-18  
Ph. 7550121306  
Mail Id. [Iffathjehan@yahoo.com](mailto:Iffathjehan@yahoo.com)

**Dr. C. Shalini**  
Principal  
Associate Professor  
Department of Commerce  
Vidhya Sagar Women's College  
Chengalpet.

## Abstract:

Service sector deals with supply of services such as information sharing, funding, counselling, transportation, consultancy and similar other services. These services appear to be vital for smooth and successful functioning of the business units. Similar to production sector the aim of service sector is on time delivery of services to the end users. Prompt delivery of services depends on the free flow of supplies along the chain. The present study aims to compare the supply chain functionality in both the sector by reviewing the literature developed by the earlier researchers.

**Key Words:** Service Sector, Production Sector, Supply chain, Services.

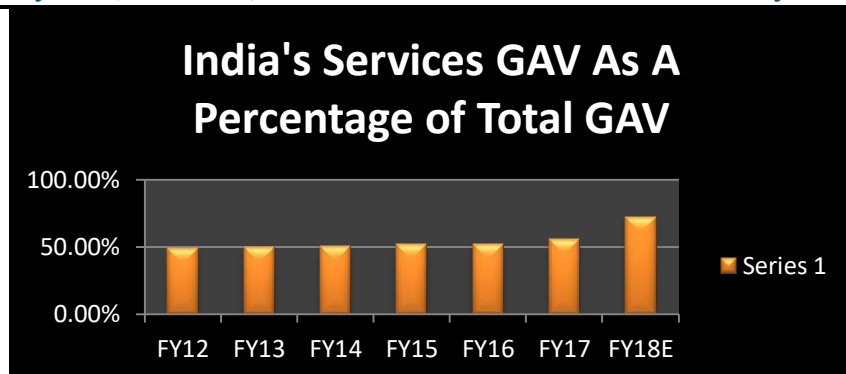
## 1. Introduction:

### Service Sector:

The service sector comprises of insurance, tourism, banking, retail, education, healthcare, professional and other social services. In this sector, people deploy their knowledge, skill and expertise to render services as per the demand of the consumers. Service industry offers services to both businesses as well as final consumers. In service sector, the focus is on people interacting with people and serving the customer rather than transforming physical goods.

### Importance of Service Industry

In India, the service sector is a dominant sector in GDP and also serves as a key driver of India's economic growth. As per press information bureau's report, service sector has contributed 55.65% of India's Gross Value Added at current price in 2017-18 and expected to increase by 72.5% in 2018-19 (Figure 1) and employed 33 % of the total population. Nikkei India Services Purchasing Managers' Index (PMI) is also improved from 50.9 in Sep.'18 to 52.2 in Oct.'18 due to robust growth in the new business. India has become the export hub of software services. This sector is a major contributor to the country's FDI Flows. It has a 55% share in the US\$185-190 billion global sourcing market in 2017. Service exports become the major part of the total exports of India. Net service exports from India stood at US\$18.7 billion in 2018-19. The other sub-sectors performing well are Aviation, Tourism, Information Technology, Healthcare, Financial and Business services.<sup>(2)</sup>



Source: IBEF Report. April - June 2018

Figure 1

## 2. Research Objectives:

Though the service sector considered as one of the key driver to economic growth of India, very less attention has been given to supply chain of services. The review of the existing research studies also revealed that, most of the studies are focused on production supply chain leaving behind the service supply chain. Moreover, the implementation of supply chain in service sector is still in the infancy stage. Comparing to production sector, there is lack of awareness about service supply chain, lack of standardised procedures and absence of uniformity in practices. This in turn affects the performance and growth of service industry. There arises the need for channelizing the services to accelerate the economic growth of the country.

The present study aims

- (i) To identify the components of Supply Chain in production Industry and
- (ii) To study the application of supply chain factors in service industry to improve its performance.

## 3. Methodology:

This study is an empirical research based on the analysis of secondary data from the existing research articles in the area of supply chain management gathered from e- sources like Google Scholar, Pro Quest, Ebscohost. Data is also obtained from the published reports like IBEF, Economic Survey, and Economic Times.

The first part of the paper defines the terms such as Supply Chain Management and Service Supply Chain. The second part of the paper comprises of review of literature and the third part of the paper deals with summary and conclusion.

## 4. Literature Review:

### 4.1. Supply Chain Management:

**Global Supply Chain Forum** – Supply chain management is the integration of key business processes across the supply chain for the purpose of creating value for customers and stakeholders (Lambert, 1997).

According to **Council of Supply Chain Management Professionals (CSCMP)** – Supply chain management comprises planning and management of all activities involved in sourcing, procurement, conversion, and logistics management. (Frankel et.al. 2008) found that Supply

Chain Management comprises integration of variety of functions and processes both within and between organisations. (Nabil Abu el Ata, 2016) observed supply chain management as the management of upstream and downstream value-added flows of materials, final goods, and related information among suppliers, company, resellers, and final consumers.

In simple words, Supply chain management denotes managing the flow of all vital components needed for delivering the goods and services from the supplier to end users.

#### 4.2. Service Supply Chain Management

According to **Global Supply Chain Forum** Service Supply Chain Management implies “the management of information, processes, resources and service performances from the earliest supplier to the ultimate customer”. (Lambert, Cooper and Pagh, 1998), (Baltacioglu et al., 2007).

(He et al. 2010) observed it as an integration of a series of entities (individuals, organisations, enterprise) to provide personalized service directly or indirectly. (S. Sakhuja et., al. 2012) defines service supply chain as a structured chain which is needed to be managed with supply chain principles in order to produce and deliver services at competitive level. According to (John D. Smith 2013) service supply chain management encompasses the planning and management of all activities involved in sourcing and integrating services across functional and organizational boundaries necessary for meeting the need of the end.

In short, Service Supply Chain Management is a process of planning and organising the free flow of services along the chain in order to offer services at a lower cost to the end customers without any delay.

#### 4.3. Components of Supply Chain Management:

This study analyses the theoretical frame work and models developed by several authors in the field of supply chain management to identify the components which can be applied in service supply chain management. The following table shows the summery of some of the factors specified by the various authors in their study.

**Table No.1 Table Showing the Summery of Components of SCM**

S.No.	Key Element	Components	Author and Year
1	Supply Chain Management Sustainability	Demand Management, Resource & Capacity Management, Customer Relationship Management, Supplier Relationship Management, Information Management, Service Management, Financial Performance	Syed Habibollah et. al., (2018)
2	Organisational Performance of Manufacturing firm	Organisational Culture, Supply Chain Management,	Ahmad Adnan Al-Tit (2017)
3	Supply Chain Performance in E-commerce Environment	Supplier Operational Performance, Enterprise Financial Performance.	Huiping Mu and Guopeng Yu (2017)
4	Retailers Relationship in IT Industry	Retailer-Supplier Relationship, Retailer - Customer Relationship	Vishal Gupta et. al.,(2017)
5	Business Performance	Information Technology, Value added Process, Partner Relationships, Supply Chain Management Performance, and Competitiveness.	Z. Zekic,L.Samarzija (2017)

6	SCM Performance of Manufacturing Industry	Trade Management, Information Technology, Uncertainties, Manufacturing, Customer Satisfaction.	Muhammad Ibrahim et.al, (2015)
7	Determinants of Supply Chain Performance of Manufacturing firm	Supplier Buyer Relations (SBR), External Supply Chain (ESC), Environmental Factors (EF), Human Metrics (HM), Information Sharing (IS), Supply Performance Measurement Approaches (SPA).	Amit Kumar Marwah et.al, (2014)
8	Collaborations in Supply Chain Management	Information Sharing, Trust, Stake holder Relationship, Government Support, Resource Sharing, Supplier Performance	Manoj Hudnurkar et.al.,(2014)
9	SCM performance in Manufacturing firm	High Quality Services, Supplier Relationship, Production Schedule, Logistics Services, After Sale Services,	Richard Ronoh (2014)
10	Organisational Performance of Manufacturing firm	Purchasing Strategies, Product-Oriented Strategy, Supplier Relationship Strategy, Procurement Strategy.	Shahram Gilaninia et. al., (2013)
11	Supply Chain Performance	Information Technology, Demand Management, Customer Relationship Management, Supplier Relationship Management, Capacity & Resource Management	Yongji Shou 2013
12	Supply Chain Efficiency	Business Process re-engineering, Information Sharing, Co-ordination among Players	Duangpun Krtchanchi (2012)
13	Supply Chain Excellence in Manufacturing Industry	Environmental Uncertainty, Information Technology, Supply Chain Relationships, Value-added Process(Manufacturing), Supply Chain Management Performance, Business Management, Customer Satisfaction.	Henry Quesada et. al., (2012)
14	Supply Chain Responsiveness	Top level Management Commitment, Organisational Factors, Mutual Understanding, Flow of Information, Relationship Management, Decision Making.	Khizer Hayat et. al., (2012)
15	Supply Chain Performance	Inventory Management, Lead time and Delivery Schedule, Information Sharing, Quality Management, Customer Care, Cost Reduction.	Fan de Varies and Robbert Huijsman (2011)
16	Organisational Performance of Manufacturing firm	Stake holders Satisfaction, Delivery System, Customer Services, Inventory Management, Information sharing.	Smith et. al., (2011)
17	Quality of Services	Personal and Professional Competency	Ayer (2010)
18	Performance of Manufacturing firm	Customer Relationship, Manufacturing Process, Delivery Time, Supplier Relationship	Cecil C. Bozarth et. al., (2009)
19	Flexibility in Supply chain Management	Buyer - Supplier Relationship, Information technology, Production Strategies, Delivery Time, Ability to Change.	Jarmila Kopeeka et.al., (2009)
20	Supply Chain Integration for Improving Performance	Customer- Supplier Relationships, Trust & Commitment, Information Sharing	Taco van der Vaart et.al., (2008)

## 5. Comparative Analysis:

The following table shows the differences in supply chain functionality among production and service sector.

**Table No. 2 Table showing differences in Supply chain functionality**

S.No.	Properties	Production Supply Chain	Service Supply chain
1.	Components	It deals with physical flow of commodities between the primary producer and final consumer.	It deals with flow of personalised services among the service provider and service adopter.
2.	Functionality	It involves an integration of key business activities to supply commodity	It involves integration of services across the functional and organisational boundaries.
3.	Nature	Flow of physical goods is tangible and immortal	Flow of services is intangible and perishable.
4.	Quality	Quality of goods delivered can be	Quality of services rendered cannot be

		measured.	measured.
5.	Demand	Demand conditions in production industry is predictable and homogeneous	Demand conditions in service industry is non-predictable and heterogeneous
6.	Cost	Cost is pre-negotiated.	Cost is determined after rendering services.
7.	Customer Expectations	Customer expectations are accurate and specific	Customer expectations are vague
8	Procedures	Uniform procedures are followed in entire industry.	No uniformity in procedures are followed in service industry.

## 6. Discussion:

Service supply chain is a complex network which integrates both direct and indirect service providers along the chain. It entails the exchange of services between service provider and service adopter (final consumer) through service integrator. Under this chain parties are connected through information sharing rather than the flow of physical product. It is general conviction that the service sector can be benefited by applying some of the best supply chain practices from manufacturing sector to their processes. But, the inherent characteristics such as intangibility, perishability, heterogeneous performance of service providers and fragmentation of services, create a need for supply chain management tools specific to the service sector. Therefore all the components of production supply chain management mentioned in the above literature cannot be applied as it is.

Accordingly seven factors are identified as components applicable to service sector such as Information Sharing, Supplier Relationship Management, Customer Relationship Management, Demand Management, Service Delivery, Capacity and Resource Management, Top Management Commitment.

**6.1. Information Sharing (Yogi shou (2013), Manoj Hudnurkar et.al.,(2014), Syed Habibollah et. al., (2018):** The success of service supply chain management (SSCM) depends on the free flow of information among the parties involved in the supply of services both within and outside the organisation. This implies the collecting, processing, recording & storing, presenting data regarding services offered, policy matters, skills required, work flow, cost-related data, and performance status. Provision of correct information at the right time to the right person helps to improve integration among the supply chain partners. Information can be swiftly disseminated through the aid of communication technology.

**6.2. Supplier Relationship Management (Taco van der Vaart et.al., (2008), Mettler T, Rohner P (2009), Richard Ronoh (2014):** In service supply chain management, supplier relationship activities play an important role. The focus of SRM is to develop two-way and mutually beneficial relationships with strategic supply partners to deliver greater levels of innovation and competitive services. This is a long-time relationship purely build upon trust, mutual understanding, commitment. It can be retained by closely monitoring the supplier's performance, his production and delivery schedules, pricing strategies.

**6.3. Customer Relationship Management (Jarmila Kopeeka et.al., (2009), Vishal Gupta et. al., (2017), Syed Habibollah et. al., (2018):** Customer relationship management deals with all those activities, strategies adopted by the companies to manage their customers. This enables the service providers to create customer loyalty and retain them in business. CRM also has positive impact on the sales and profits of the firm.. This strategy is built upon three vital factors such as trust, commitment and mutual understanding between the supply chain members.



**6.4. Demand Management (Yongji Shou 2013, Syed Habibollah et. al., 2018):** Demand management is a methodology used to forecast, plan and manage the demands for products and services. It deals with identifying and forecasting the demand in the market and attempting to bring trade-off between customer requirements and available production capacity. In service industry as the customer requirements are heterogeneous it is very difficult to assess the demand. Demand management enables the service provider to understand its capacity, productivity, future potentials to provide prompt services to their customers.

**6.5. Service Delivery (Smith et. al., (2011) Syed Habibollah et. al., (2018):** Service delivery implies dismissal of services to meet the customers demand at a price they can afford. It enables the service provider to plan and manage customer order, network to deliver the order, delivery lead time, mode of delivery, infrastructure of the firm and its capacity to render prompt services at a lower cost.

**6.6. Capacity and Resource Management (Yongji Shou (2013), Manoj Hudnurkar et.al.,(2014) Syed Habibollah et. al., (2018):** Capacity and resource management deal with arrangement of facilities needed such as infrastructure of the firm, skilled labour force and assets to render services to the customers. The objectives of service supply chain management is to improve the efficiency of the firm, generate more revenue, offer higher quality services and retaining existing customers. These objectives can be accomplished by utilising the capacity and the resources of the firm economically and effectively.

**6.7. Top Management Commitment (Taco van der Vaart et.al., (2008), Khizer Hayat et. al., (2012) Amit Kumar Marwah et.al, (2014):** Decisions of top management have great impact on the whole supply chain process. The various policies and strategies formulated by top management relating to utilisation of resources, IT, organisational culture, training and development of employees and lean production affect supply chain coordination. Overall coordination of activities in service supply chain depends on the commitment at the top level management.

## 7. Conclusion

Service sector is considered as a soft sector of the economy and gained its importance recently. Many a time services appear to be vital for smooth and successful functioning of the business units. The aim of service sector is on time delivery of services to the end users. This can be accomplished only if there is a proper co-ordination between the parties involved, availability of the required data, competence, knowledge of the parties etc. Therefore, it is important to identify the vital components of supply chain management which can be applied in service sector to improve organisational performance in order to render quality services to customers. An extensive review of literature on supply chain management is undertaken. Consequently, information sharing, customer relationship, supplier relationship, demand forecasting, service delivery, top management commitment and support are identified as key production supply chain components to be used in service industry to improve the service delivery performance.

## 8. Limitations

This study projects only the theoretical view of the supply chain factors to be applied in service sector for improving its overall performance, based on the secondary data from literature. An in depth

analysis is needed to be undertaken to find the correlation of these factors with the organisational performance of service industry.

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