

GST and Supply Chain Functions: A Scenario Analysis



Ashutosh Mohan

Associate Professor,
Institute of Management Studies,
Banaras Hindu University,
Varanasi, India



Arun Kumar Deshmukh

Assistant Professor,
TAPMI School of Business,
Manipal University,
Jaipur, India

Abstract

The study explores and identifies various practices of supply chain and its influence on retail firms' economic status in Post-Goods and Service Tax (GST) era. The study also tries to find out the differences of operations in organized and unorganized retailing in Indian context. The study incorporates the in-depth analysis of local retailers' stiff resistance, profitability for back-end unorganized suppliers and value offers to ultimate consumers' issues. On the basis of proposed work, researcher will encapsulate a winning formula for organized and unorganized retail sector in India in post GST era and specifically for less developed part of the country. The research is based on the review of existing literature on Goods and Services Tax and its business impact.

Keywords: GST, Supply Chain Functions, Scenario Analysis.

Introduction

The policy factor responsible for the existing complex tax system in India was the dual governance structure i.e., compliance to central and state authorities. With tax levying power conferred to both central and state led to the creation of multi-layered system which in turn brought inefficiencies in the system. In order to bring about a change in the existing system, introduction of the Goods and Services Tax or GST was introduced by GOI. Thus, FICCI (2017) calls it the next Big Bang economic reform that is going to transform the existing system to a great extent. This way, the nation is going to experience a phenomenal change in its existing logistics and supply chain structure specifically in procurement, forward logistics or distribution, and warehousing decision which are presently designed keeping the state level tax escape mechanism and not the operational efficiencies into account. Also, because the system is going through a transition from previous origin-based taxation to destination based taxation (Cognizant, 2012). The businesses are now expected to reorient their existing structure so as to leverage the economies of scale and scope, location and other business relevant factors. Hence, GST opens the door to revisit the logistics and supply chain function for reforming the business and marketing strategies of Indian retailers so as to identify the possible ways to get their businesses GST ready. The businesses which are agile enough to streamline their existing system in sync with the GST will gain the first mover competitive edge in terms of service levels and cost.

As the proposed study is exploratory-cum-diagnostic kind of research work, which explores how GST will impact supply chain function of a business. It presents a scenario analysis using a macroeconomic vis-à-vis microeconomic perspective based on the existing literature. The present study is predominantly conceptual and emphasizes on the modus operandi of GST in India and its probable ramifications.

Review of Literature

Supply chain management is emerging into consumer driven value chain management, which in addition to pursuing efficiency improvements, recognizes the importance of consumer needs and attempts to capture the subtleties of consumer value as source of differentiation and supply chain competitiveness (Christopher, 2005). According to Hau L. Lee (2001), managing demand for the total value maximization of the enterprises and the supply chains is the "competitive battleground" of the twenty-first century. The mentioned studies are revealing the importance of customer driven supply chain management to gain competitive advantage.

According to Panchal et al. (2016) - the supply chain challenge for companies lies in redesigning their networks end-to-end along with

E: ISSN No. 2349-9443

optimizing their sales and operations planning. Companies must do a comprehensive evaluation of their existing supply chain and associated business processes in order to identify how they can achieve better economies of scale and adopt better processes in order to drive down costs and better serve customers. From the perspective of legal and tax compliance, companies will also have to redesign their business processes to adhere to the rules set by GST. This will require them to invest in redesigning their systems and further change management within their organization. Companies will also have to engage with their supply chain stakeholders such as suppliers and logistics service providers in order to create a common platform for working together post-GST implementation

Anitha (2016) highlighted that the successful implementation of GST could reduce transportation cycle times, enhance supply chain decisions, lead to consolidation of warehouses etc. which could help organizations to reach its potential in terms of service and growth. Tata Strategic Management Group highlighted that supply chains will therefore see a major shift in their operations. In pre-GST era companies were planning their procurement, distribution, and warehousing decisions on the basis of tax avoidance mechanism at state level and not on operational efficiencies of economies of scale, scope, and location and other relevant factors for businesses.

Deloitte (2017) maintains in one of the interviews that -there is no doubt in coming to a conclusion that the GST reform has made every consumer facing business to revisit their financial model. This has resulted in planning strategies with specific reference to supply chain mechanism, technology platform, and cash impact on account of change in effective rates. On an overall basis, the outlook post-GST is promising to be positive for the consumer business industry.

The concept of supply chain inculcated in business and marketing strategies of the retailers are catching fast attention under the GST regime. The applicability of these type of practices in the Indian retail sector is still in the fancy stage that is why the availability of literature on aforesaid dimensions in Indian retail sector is limited or missing.

In one of the studies of CRISIL (2016), it was clearly pointed out that several firms have begun altering their supply chain decisions and others are likely to do it during the post stabilization phase of GST execution. This is going to be a catalyst for the logistics industry in India. Companies are expected to migrate from existing multiple warehousing strategies to hub and spoke model due to uniformity of tax structure across geographies. The trends reveal that now, business decision will be focussed on SC efficiency and not on the state-wise tax arbitrage. This may turn out to be a great business opportunity for organized big warehousing firms across key locations. Palil and Ibrahim (2011) evaluated the introduction of GST in Malaysia and maintains that the introduction of GST in developing economies differs significantly from that of its implementation in a developed economy. The initial rates were maintained to its

Asian Resonance

lowest, however, the responses from the business and markets are mixed. The study revealed that in spite of rates as low as 4%, it caused burden on middle income group due to significant rise in the prices.

Scenario Analysis

From 1 July 2017, India has stepped into the much-awaited GST regime (country's single largest tax reform since independence). GST will integrate country's economy which is roughly worth \$2 trillion and a vast customer base of 1.3 billion into one common market. GST is applicable to all businesses (supply of goods and services, trading, profession, vocation etc). It is time for businesses to gear themselves up to this new indirect tax environment. Major overhauls will be required in business processes, IT and ERP programs, staff training and marketing to incorporate the new taxation rules and regulations so that businesses are equipped to avail the benefits of and comply with the GST regime which will eventually lead them to remain competitive and compatible with its environment.

India opted for —Concurrent Dual GST model. The need for a Dual-GST model is based on the following premise:

1. At existing framework, both levels of Government i.e. Centre and State, as per Constitution holds concurrent powers to levy tax domestic goods and services;
2. The proposed Concurrent Dual-GST model would be a dual levy imposed concurrently by the Centre and the States, but independently;
3. Both the Centre and State will operate over a common base, i.e. the base for levy and imposition of duty/tax liability would be identical.

An Economic Scenario

In an emerging economy, almost all economic activities are depend on logistics and supply chain function. The Indian economy is also evolving through the interaction of infrastructural advancement, technology, entrance of new service providers, and advances in regulatory framework. Albeit, few challenges are crippling the ability of supply chain in India severely i.e., poor technology and paucity of skilled labour; dominance of unorganized sector in warehousing space (approx. 90%). At the same time, another ancillary of SC is transportation industry, is also fragmented with small or marginal fleet owners. More than 70 percent of truck ownership is with marginal fleet owners of 1-5 trucks. The World Bank's logistics performance index (LPI) evaluates the logistics friendliness of countries based on qualitative and quantitative inputs such as quality and competence, infrastructure, tracking and tracing and so on (ET, 2018). The ranking reveals enhancing performance of India although has a comparatively poor ranking. The impact of GST can be analysed from various perspectives, however, the present study takes two of them as dominant, A. macro- economic impact and B. Micro-economic impact.

The Macroeconomic Impact

The GST was described as "good and simple tax" by our Hon'ble Prime Minister Mr. Narendra Modi which is going to reboot the entire Indian economy. It was major economic reform in general and tax reform in

E: ISSN No. 2349-9443

particular happened post-independence which made a complete overhaul of the indirect tax regime. Thus, the overall impact on Indian economy can not be undermined.

With the shift in GST regime, three macroeconomic factors are likely to be affected. They are Inflation, GDP growth, and the fiscal deficit. Both government and industry were quite hopeful for expansion of tax base and reduction in tax related moral hazards such as tax evasion which will in turn have a favourable impact on the overall economic growth. The predictions of economic survey reveal that India's GDP is going to hover between 6-8% in 2018-19. However, there was a little dip in the GDP figure during 2016-17 as an immediate effect of GST implementation. (Cognizant 2012; ET 2018, and PwC, 2017) The recent figures are indicating favourable outcomes for GDP as the growth has risen significantly in the first quarter ending i.e., Jan-Mar 2018. Also, the available statistics show that GDP growth rates kept increasing by 0.7 percent point in almost each subsequent quarters of 2017-18. Experts were predicting that manufacturing is going to badly hit by new GST regime while real growth predictions have different story to narrate i.e. the sector is growing at 9.9%. The plummeting figures of GDP are water bubbles which is expected to grow between 7-7.5% in 2018-19 as a consequence of

Asian Resonance

simplification of tax structure which strengthen the 'one nation one tax concept.

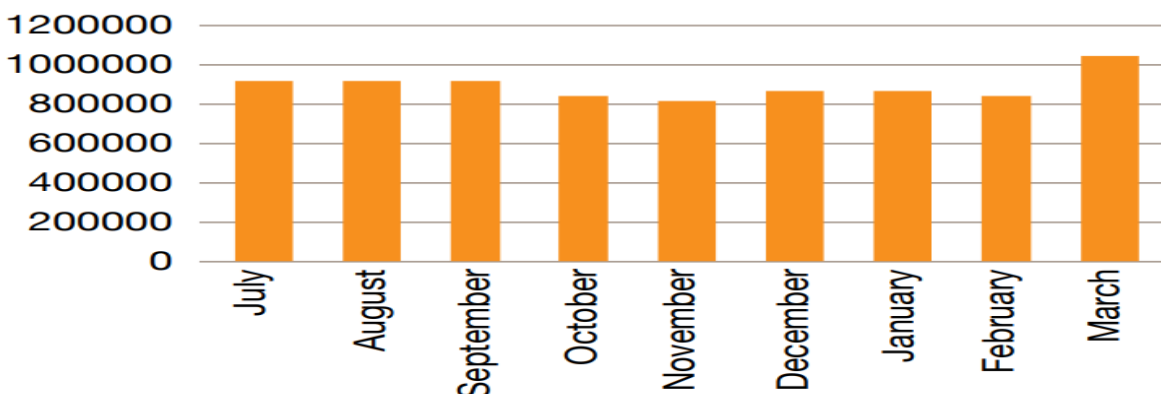
Impact on Inflation

The studies so far clearly could not establish a correlation between inflation and GST. Some experts were claiming that after the implementation of GST inflation may dip, however, no explicit evidence is seen in the economy. The consumer price index was at a low of 2.5% in July 2017 and moved up to 5.2% in December 2017, which took a plunge to 4.3% in March 2018 and again shot up to 4.6% in April 2018 (ET, 2018). Almost 50% of articles account for close to 50% of the GDP, however, its impact is less significant when compared with WPI. Since WPI is also moving in tandem with CPI it can be established conclusively that GST has impacted the inflation in the country.

Impact on Revenues and Fiscal Status

With a GST roll out, the government has expected to have considerable escalation in the revenue collections. However, a sharp decrease was observed after gradual collections during the initial quarter of its implementation (Vide figure 1). The reason attributed for this can be increase in the tax rates of several mass consumption goods and transitional credit claim processing.

Figure 1 Gross Revenue Collection during 2017-18 (in INR Million)

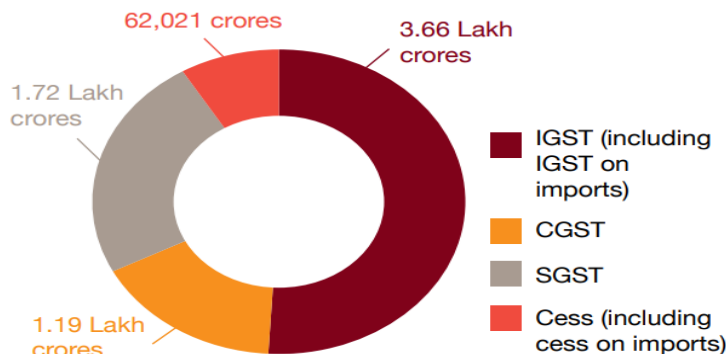


Source: Pib.nic.in

Moreover, in April 2018, the revenue collection crossed the INR 1 Lac crore figure for the first time (ET, 2018 and PwC, 2018, Delloite, 2018), however, in May 2018, the figures again plummeted to INR 94,016 crore (PwC, 2018). The average monthly collections for 2017-18 fell short of government expectation i.e. INR 90,000 crore.

Yet the collections during the first year of its implementation were fair enough to help government to achieve its fiscal deficit target for the year (came down from 3.53% to 3.5%)

Figure 2. GST Revenue Collection for July'17 to March'18 (Type wise)



Source: Pib.nic.in

E: ISSN No. 2349-9443

The GST tax type wise collections presented in *figure 2*, reveals domestic vis-à-vis import collections for the nine months post-GST roll out. The IGST figures also include the imports has the lion share i.e., INR3.66 lac crores followed by SGST with INR 1.72 lac crores, CGST with INR1.19 lac crores and cess amounting INR62, 021 crores. Moreover, during March 2018 after reconciliation, the IGST between SGST and CGST component, the SGST collections were around INR 2.91 lac crores and CGST collections were close to INR 2.49 lac crores.

Microeconomic Impact of GST

The impact of GST on various business functions have to be studied in order to assess its effectiveness at the same time, its potential influences on an individual firm. This will enable the policy makers to chalk out their plans in order to strengthen the framework and facilitate the business to perform more efficiently. With the implementation of GST, the two major functions affected directly are logistics and supply chain, and marketing. The present study focusses on the former.

Impact on Logistics and supply chain

The GST has brought about many changes, and companies have used this opportunity to create value for their businesses across their procurement, manufacturing, distribution and logistics functions.

Besides the macroeconomic impacts, firm level of micro level influences of GST can not be avoided. Businesses have been experiencing plethora of changes in their existing business model in general and specific functions such as supply chain in particular. Businesses are taking this as an opportunity for value creation in across their supply chain functions such as procurement, manufacturing, logistics, warehousing and distribution. Likewise, the supply chain finances are also getting redefined in a way that now businesses began to classifying them as fiscal (state and central taxes) and non-fiscal (costs pertaining to transportation, warehousing, inventory etc.) especially the costs. With the introduction of GST, SC costs and efficiencies not just encompass tax optimization strategies (ET, 2018), but the value proposition is also visible across all touchpoints described below;

Sourcing or Procurement

The cost of supply has reduced significantly due to GST like unified tax system and credit availability which paved way for negotiation opportunities in raw material sourcing. The studies have reported a reduction in cost ranging between 3-5% across various categories through re-negotiation.

Manufacturing

According to ET (2018) as the excise duty is now subsumed under GST which is under budgetary support scheme. Therefore, firms having manufacturing hubs in Jammu & Kashmir and North Eastern region are enjoying the benefits. Therefore, majority of the FMCG companies

Asian Resonance

have their manufacturing operation located in these excise free regions.

Distribution

India could become a unified tax country because of the abolition of Central Service Tax (CST) on the interstate transactions. Thus, distribution has benefitted it massively due to implementation of the GST. Because of GST, the distribution cost has come down by 8-12% as the storage points were consolidated and inefficient nodes in the SC were removed. This has also helped firms attain efficiency in managing their working capital through well chalked out plan for inventory and service levels.

Business Logistics

The supply chain decision are gradually becoming strategic in nature with its impact on interstate serviceability, and infrastructure availability in addition to consolidating their warehouses and shutting their inefficient nodes for cost reduction during the GST regime. Using this as an opportunity, many firms are planning to enter into strategic alliance with third or fourth party logistics providers which will enable to leverage their huge multi user setting, multi-modal hubs and dedicated freight corridors.

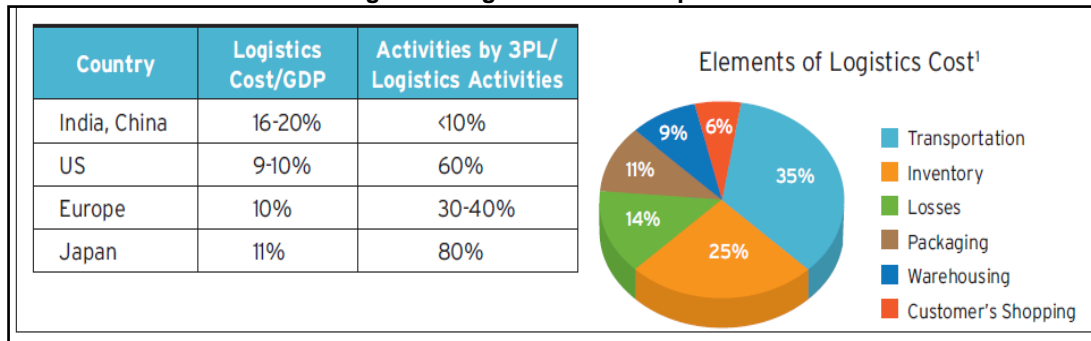
In order to re-engineer the supply chain in tune with the present GST regime, a serious long term planning is needed. As a result, besides the development of infrastructure, GST is supposed to be a key impetus for the attainment of efficiency in supply chain, innovation, development of operating models and growth in logistics industry over the coming decades (ET, 2018 and PwC, 2018).

Warehousing

In the recent past firms were deploying huge capital in building and managing different warehouses to bypass the then fiscal regime. The multiplicity of warehouses in supply chain led to additional administrative costs, utility service and required technology to manage them which in turn led to upsurge in the overall cost of goods sold (COGS).

From the technological point of view, connecting and maintaining multiple warehouses through ERP system is very costly. Perhaps this is why many SMEs maintained distance from the tech implementation in anticipation of profit in long run. Instead they could not prevent from investing in the technology at all and for ease of access and availability they invested even more in some cases. Such unstandardized application of tech processes across different hubs lead to inefficiency especially in people related processes. Due to such a differential tax regime, several Indian companies fall in this inefficiency trap. In the new era of taxation i.e., GST, the major driver for new business model is the logistics and supply chain cost and not the fiscal costs. Therefore, firms have started adopting lesser but strategically placed warehouses and brought in the efficiencies.

Figure 3: Logistics Cost Comparison



(Source: Cognizant, 2012)

Having analysed the inefficiencies due to the presence of multiple stocking hubs, firms should also analyse their inventory carrying costs trade-offs. Conventionally, businesses carry too heavy inventory to meet the demand coming from various geographies, however, it does not happen all the times because of demand oscillations due to market forces which further lead to an upsurge in holding cost. Using this as an opportunity, the firm may seek the benefits of the new tax regime by using the services of 3 or 4PL providers in India. The recent past data reveals that India has the highest logistics cost to GDP (*vide figure 3*) as compared to the other countries. The major contributors in the cost which accounts for approximately 70%, are transportation, inventory, and warehousing (Cognizant, 2012). Due to this, firms preferred multiple warehouses so that they could economize their fiscal costs vis-à-vis the logistics cost to a great extent. But, now, with GST in place, the emphasis is shifted from fiscal to logistics and supply chain cost minimization (PwC, 2018). Initially, during the transition phase the cost of goods sold (COGS) may not change much but gradually, in the long run, it will come down with the new stock point consolidation process. In this way, this is going to be an integrative or win-win deal for the firms as well as the customers in a way that firms will enjoy reduction in the top line (costs) and its resultant effect on its bottom line and customers will get better prices.

The consolidation process can be understood well with a hypothetical case of some consumer goods manufacturer which is manufactured in a part of Western Uttar Pradesh due to raw material and manpower availability but majority of its customer base lies in other neighbouring states such as Madhya Pradesh, Maharashtra, Gujrat etc. In order to meet the demand of their customers in central and western India better, they decided to establish a centralized warehouse in Indore so that they can move goods conveniently from Indore to Western part of the India. In previous regime, suppose if no unit of goods were in the state of Madhya Pradesh, they will have to pay various taxes and again taxes will be levied when the goods reach the destination states hence leading to double taxation or tax on tax which is referred to as cascading effect. Because earlier regime did not have provision of input tax credit on taxes paid in other states. Therefore, during pre-GST era, firms could not decide to have such centralized warehouses due to multiplicity of taxes and were compelled to set up warehouses in Maharashtra and Gujrat besides the existing warehouse in MP so as to prevent from the

previous taxation regime. Now, GST being a destination based tax hence companies are setting up centralized warehouses, in this case Indore and operating on hub and spoke model to facilitate their distribution. Hence, the new trade off for business at macro and micro level is- tax or fiscal optimization or efficiency optimization.

Conclusion

The present paper reveals that the new tax regime of GST is impacting the economy at both macro and micro level. The micro level analysis covers its influence on the supply chain functions such as transportation, inventory and warehousing, logistics etc. The business have begun focusing on efficiency optimization through effective demand planning and better inventory management. The other advantages firms can experience after GST roll out can be improvement in the quality of service and service levels with a better trade off with cost, price negotiations across SC will take place, more flexibility in the manufacturing can be seen, opportunities of business expansion, space optimization through consolidation of storage points of warehouses. Though implementation of GST in India is at the nascent stage, the benefits observed hitherto are exemplary. It is equally beneficial to all the stakeholders keeping initial resistance aside. It is expected that over the time, the nation will build its learning curve to adjust with new system and certainly experience the advantages of being a common market.

References

- Anitha M.N. (2016): "Impact of Goods and Service Tax (GST) on Logistics Sector in India". *SSRG International Journal of Economics and Management Studies*, 3 (5), 79-82.
- AT Kearney Report. (April 2014) "Supply Chain 2025-Trends and Implications for India".: 1-38
- Cognizant (2012) *India's Goods and Service Tax: the Case for Distribution Network Redesign*
- Deloitte Research Report. (January 2017) "Goods and Services Tax: Industry Insight Impact on the Retail industry.": 1-18.
- Deloitte Research. (2006) "Consumer Business Digital Loyalty Networks: Increasing Shareholder's Value through Customer Loyalty and Network Efficiency." *Deloitte Research*,:1.
- ET (2018). *The Economic Times A Summit on SCM and Logistics-V edition*. <http://www.et-supplychain.com/images/et-supply-chain-summit-whatepaper.pdf>

E: ISSN No. 2349-9443

- Hee, M. A. G., & Khorana, L. (2010). *An Assessment of the Introduction of Goods and Services Tax in Malaysia and its Implications on the Merchant Shipping Sector and Maritime Supply Chain*. Centre for Maritime Economics and Industries (MEI). Retrieved from <http://www.mima.gov.my/mima/wp-content/uploads/gst>, 20.
- Hee, M. A. G., & Khorana, L. (2010). *An Assessment of the Introduction of Goods and Services Tax in Malaysia and its Implications on the Merchant Shipping Sector and Maritime Supply Chain*. Centre for Maritime Economics and Industries (MEI). Retrieved from <http://www.mima.gov.my/mima/wp-content/uploads/gst>, 20.
- Indian Retail Forum. (2015) "India Retail Report." Images Multimedia.
- Kawle P. And Aher Y.L. (2017) "GST: An Economic Overview: Challenges and Impact Ahead." *International Research Journal of Engineering And Technology*. Vol. 4, issue 4: 2761-2763.
- Kishore, P. (2012). *Administering Goods and Services Tax in India: Reforming the Institutional Architecture and Redesigning Revenue Agencies*. *Economic and Political Weekly*, 84-91.
- Kour M., Chaudhary K., Singh S., and Kaur B. (2016) "A Study on Impact of GST After Its Implementation." *International Journal of Innovative Studies in Sociology and Humanities*. Vol. 1, Issue 2: 17-24.
- Lambert D.M., Knemeyer A.M. and Gardner J.T. (2004) "Supply Chain Partnerships: Model Validation and Implementation." *Journal of Business Logistics*. Vol. 25 No. 2: 21-42.
- Langerak F. And Verhoef P.C. (2003) "Strategically Embedding CRM." *Business Strategy Review*. Vol. 14 No. 4.: 73-80.
- Lavanya V., Kumar P., and Reddy N. (2017) "Impact of GST on Automobile Sector." *International Journal of Emerging Research in Management and Technology*. Vol. 6, Issue 6:126-130.

Asian Resonance

- Lee H.L. (2001) "Ultimate Enterprise Value Creation Using Demand Based Management." *Stanford Global Supply Chain Forum*,.
- McCluskey M., Bijesse J. And Higgs L. (2006) "Service Life Cycle Management", *AMR Research*.: 1-3.
- Palil, M. R., & Ibrahim, M. A. (2011). *The impacts of goods and services tax (GST) on middle income earners in Malaysia*. *World Review of Business Research*, 1(3), 192-206.
- Panchal M., Gopal R., and Raj A. (Oct. 2016) "GST Impact on Business Strategy of Pharmaceutical Companies". *BioSpectrum-An MM Active Publication*.,: 53-57.
- PwC (2018) 365 days of GST: a historic journey. <https://www.pwc.in/assets/pdfs/india-services/indirect-tax/365-days-of-the-gst-a-historic-journey/a-historic-journey.pdf>
- PwC (2018) PwC Perspective: The Future of Indian Supply Chain <https://www.pwc.in/assets/pdfs/india-services/indirect-tax/365-days-of-the-gst-a-historic-journey/a-historic-journey.pdf>
- Rajpal A. and Jagtap S. (2017) "GST: Impact on the Supply Chain." *Technopark Perspective*. Vol. 2: 1-29.
- Rao, R. K., & Chakraborty, P. (2010). *Goods and services tax in India: An assessment of the base*. *Economic and Political Weekly*, 49-54.
- Tierney S. (2003) "Tune Up for Super Efficient Supply Chain with A Traingle". *Journal of Logistic Management*. Vol. 11 No. 2.: pp – 45-56.
- Treacy M. And Wiersema F. (1995), "The Discipline of Market Leaders: Choose Your Customers, Narrow Your Focus, Dominate Your Market." Addison Wesley Publishing.
- Vickery S.K., Jayram J., Droge C. And Calantone R. (2003) "The Effects of An Integrative Supply Chain Strategy on Customer Service and Financial Performance: An Analysis of Direct Vs. Indirect Relationships." *Journal of Operations Management*. Vol. 21 No. 5.: 523 – 539.