The Force behind E-Commerce

[1]Mr. Rahul Malkani, [2]Dr. Suchismitaa Sengupta
[1]ECFY Consulting Pvt. Ltd. – WebXpress
[2]IES Management College and Research Centre, Mumbai

Abstract: *E-Commerce is big. It is here and now and is poised to stay. It turns out that its impact on business and the economy at large is big as well. This case outlines the mutual influence that ecommerce and allied industry have had on each other. It further showcases how innovations in allied industry have resulted in ecommerce deliver a better service to its customers. The scope of this case is set for within the country of India. It also shows how the regulatory measures can influence ecommerce in a big way to improve the service level as well as greater co-ordination, integration of the supply chain functions for optimization.*

I. Introduction

E-Commerce entered the Indian market at a time of slump – both economically and technologically. It not only sustained but also created a market for industries that were not in existence previously. The industries that flourished include Small-scale manufacturers, Internet and Infrastructure, Logistics service providers, and Technology companies providing solutions to the other stakeholders.

Among all other the one industry that benefited the most was logistics. In retrospect, it is also true that logistics is the biggest contributor to make ecommerce a success. The reason is that in both cases from the very beginning they embraced modern technologies to operate with.

The focus in this case will be to understand the dynamics of this success in detail and on the mutual growth that logistics, ecommerce, and technology have brought to each other. It also describes on how the logistics will technology to shape the ecommerce in the coming future.

II. Mutualism

The faster one moves the higher the velocity of the entity. This law of physics is applicable to business as well. The more the e-commerce industry grew, the more it gave a chance of its allied industries to grow along with it. However, over a period of time, something unexpected happened, the allied industries grew so big that they resulted in a measurable growth for the e-commerce industry.

(Fig. 1) Source: Author's Creation
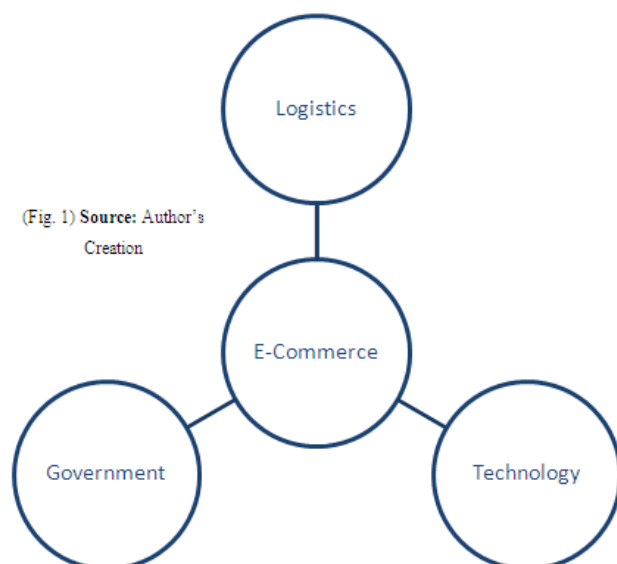
This case is divided into three sections enlisting how the three major allied contributors have helped the e-commerce companies to grow even further than what they already are at.

The information in this case is gathered from primary sources and is made available here for representative purpose only. The data is for the intention to provide support to the general observations and ideas in the industry today.

Impact of the Logistics Industry
The may not be apparent, but the supply chain is the backbone of the e-commerce industry, just as it is with any other format of retail. They provide the means and bandwidth to enable e-commerce retailers to conduct business. From warehousing to long distance delivery to last-mile delivery to even returns of products,

all is achieved because their logistics partners do the needful with a high degree of precision, agility, and consistency.

III. Reengineering Logistics

There were huge hurdles faced when the e-commerce logistics was compared to its traditional counterpart. Unlike the latter, the new format needed agility unlike ever before. In logistics, goods need to be made available to the customers; unlike the traditional format though the goods were brought to a middle ground; in e-commerce logistics the goods are delivered to the customer directly.

The may not seem too difficult, but it is. When the retail outlet is, say, a mall all products under consideration are directly shipped to the storage area of that mall. The work then shifts to the "inside logistics" department that manages placement and availability of the products. Their role is to ensure that the shelves are replenished whenever needed. Customers visit in person to physically pick the goods they need, which is referred to as the brick and mortar system.

In the case of e-commerce logistics, the destination and techniques used to reach them are entirely different. Here unlike traditional logistics the customers can be at any location while shopping and the destination of purchase can be entirely different. For instance, the buyer may be at office but the destination may be the buyer's home. But it goes much further; there are thousands of such customers that visit a single vendor daily. For each customer his or her respective products have to be delivered individually. Stocking and replenishment take a whole new meaning. While it eliminates the middle stage, there is added complexity in the stages that stay in place. Warehousing needs to be technology driven with plans for replenishment that are days ahead from actual stocks so as to ensure the customer does not purchase the product that cannot be delivered.

Another complication that needed to be overcome is the factor of instant gratification. In a brick and mortar set up customers experience instant gratification since they leave with the product in their hands. In e-commerce logistics there is a waiting period before which the product reaches the hands of the customers. The longer customers are expected to wait, the more their dissatisfaction will be. Each player strives to reduce this time period with the combination of technology and technique.

The final challenge faced by both the logistics and e-commerce industries is the feel that the brick and mortar brings along. Customers can experience the product live before making a purchase decision. While it is not much of a problem in cases such as consumer electronics in which 360° views and high-resolution photographs, it is particularly aggravating to replicate the feel for the fashion items. While their display method may make them look accurate to a certain degree (photos of mannequins wearing them) how they will actually look on a given individual can never be experienced until the buyer physically tries it out. This may seem like a challenge for the e-commerce industry but it is more so for the logistics industry. With margins being less, if the buyer tests the product, it potentially means the cycle of delivery is repeated twice for the same income. It is also possible that if the buyer does not like the product and returns it; again two cycles. In both cases someone has to take the hit in income. It is always the e-commerce who faces the loss. This results in problems in gatherings funds, which in turn means that everyone losses in the long run.

Only after facing this is the situation did logistics companies decide to reengineer themselves and they did so dramatically. Here is how:

While the basics of logistics remained the same, there were there key areas that they worked upon to work best with e-commerce companies.

1. Separating their e-commerce operations from traditional logistics. It may seem simple but it is not. It implies that each has its separate specialities and as the learning curve increases, each entity's manpower has to be managed separately. Many players did in fact either expanded their portfolio or reinvent themselves to ride the e-commerce bandwagon. This change needed substantial investment, which was a huge risk (since there was no proof at the time that e-commerce was a wave and not a fad).
2. They had to embrace additional technology since their current systems just wouldn't cut in. This too was a substantial investment but without it no player would have managed to service the e-commerce industry right.
3. They came up with several ideas that ultimately enhanced the capabilities of e-commerce retailers. From easy Cash on Delivery to Instant Returns, as the logistics companies became better at what they did, the trust of end customers on e-commerce increased many folds. The more features that logistics had to boast so did their e-commerce partners.

IV. Contribution of Logistics

The following are case examples of logistics service providers who worked towards building a network for the e-commerce industry.

DotZot is a sister concern company of the Indian logistics giant DTDC. It was founded specifically as an e-commerce player. Since DTDC knew it was more of a long distance player it would not be able to serve the specific needs of e-commerce retailers. So it created a company DotZot to execute the last mile delivery. DotZot intelligently aligned DTDC's huge network of thousands of pin-codes to its advantage to reach to the main hubs that it serviced. In this manner when they set shop, e-commerce providers did not have to coordinate with many LSPs, they simply requested for deliveries and in case it was beyond the range of DotZot, it managed the state-to-state transfer via DTDC and the local delivery itself.
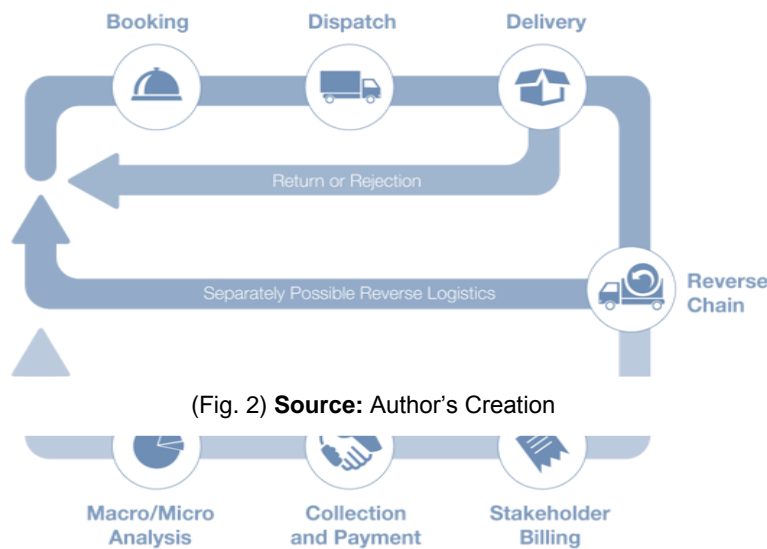
GoJavas is a sister concern company of Jabong.com an e-commerce retail giant. Jabong.com initially started by doing some of its own deliveries. When the logistics department grew in size and complexity it was spun-off into specialised company. The knowledge it gained during its early days is now benefiting other e-commerce companies as well since GoJavas not only serves Jabong.com but also many players. It is a logistics company like any other but has a deep understanding of the requirements of e-commerce players.

Impact of Technology

The logistics industry could only achieve the agility needed to serve the e-commerce industry because of the backing that was provided by technology. The backbone of this support has been the technology providers. Post the e-commerce boom, the technology industry has not only come out from its slump but also come up with innovative solutions specifically for the e-commerce industry.

Reengineering Technology

Technology that does not change with time becomes the very thing it was brought in to replace. The then technology would never have adapted to the dynamism of the e-commerce industry. The first problem was the fact that work was measured in days. Today, companies like Amazon.com even offer three hours delivery guaranty within New York for those who opt for the premium service. In an industry in which every minute counts, it was necessary for the whole process to be reconsidered.

The new process had to have reverse chain and return as an integral part of it.

Billing as a process had to be dynamic since end customers treat each and every entity of their shipment as separate.

If customers require alerts then that data must be share live and for free.

In short, since this is a Business to Consumer (B2C) the service levels have to be very high. The levels of margins are less and expectations are extremely high. To survive in this market the logistics players needed to be much more than financially established, they needed to have the technological expertise.

(Fig. 2) **Source:** Author's Creation

An enormous change was brought in with the dawn of the smartphone. It made technology such as GPS economical and easy to use. Most of the work has now shifted to phones. The heavy integration with services such as SMSes have made information sharing practical.

The final change that technology had to adapt was to have a high level of integration. Concepts such as the Internet of Things brought sense to the whole industry. The technology is not a product that LSPs purchase.

It is an integral part of them; an extension to their services. The e-commerce companies directly interact with the technology and not the LSPs on countless of occasions. This is the reason why the technology to be developed for this industry had to be open and interactive. Data means everything in the e-commerce industry.

V.   Contribution of Technology

Real-time Mapping Solution is the biggest aid to the e-commerce sector. A ton of real-time data has made retailers more reliably predict the estimated time of delivery to customers. They also study and rank the best partner for a given route. This helps e-commerce companies service their customers faster and better. The data has also helped companies plan for contingencies that may occur during transit.

Information Sharing is a big support for e-commerce companies. The details of transit can be highly reassuring for end customers. Instead of an "in-transit" status till the product is actually delivered companies can share the status of several stages of the process and now even show the product live in transit on a map. Companies such as Flipkart.com execute this very well. This is possible because each vendor can provide this data. It is more of a psychological factor than anything else. An analogy is the difference between a software progress-bar and a typical loading circle, in which the former at least indicates the level of progress than an in-progress indication to the users. The most impactful part of this is that the LSPs enable end customers to directly track their orders via a code.

Mobile Enabled Operations in which end customers get access to data and control of any given activity. From SMS alerts to quick tracking all options are mainly aimed at mobile for adding convenience. Some of the advanced options include cancelation of orders via an SMS that directly informs the LSP who intern informs the e-commerce company (this order is to help save effort and time of LSPs and money of e-commerce retailers). A recent option is mobile signatures that enable customers to virtually sign on the screen of the delivery agent's mobile device so as to save paper and end the operational cycle of both companies. Mobiles have led to instant data sharing.

Several unique improvements for the e-commerce companies include the ability to issues bills for each entity ordered by the end customer. Most customers tend to order multiple items at the same time. The problem arises when they wish to return only one or anything less than all at the time of delivery. Traditionally one bill consisted of all elements, now each entity has its own accounting – resulting in happier customers.

Other options include support for new trends such as Exchange of old products (most popular for mobile phones) and Try n' Buy (most popular in fashion items such as dresses and shoes).

VI.   Impact of Governmental Policies

The government has not only benefited from e-commerce but also contributed towards its progress. The way it has done so is by means of its policies. It is going to implement the Good and Services Tax (GST) shortly which will deeply impact e-commerce in the coming years.
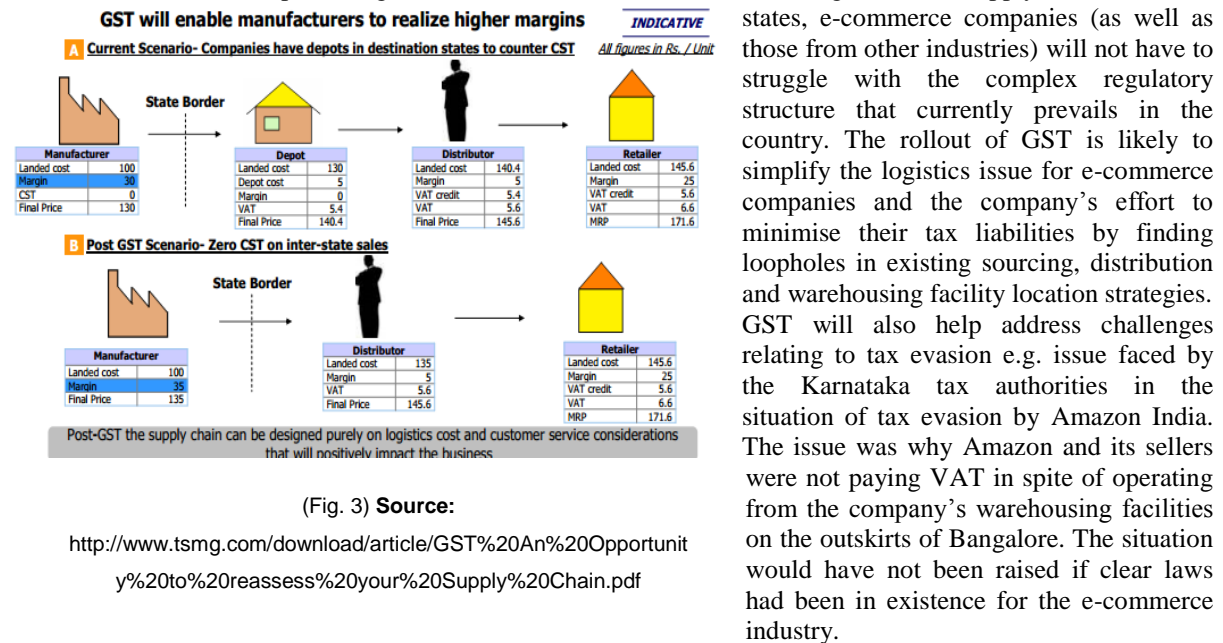
Goods and Services Tax (GST) is a major regulatory policy that will dramatically alter the service sector especially the Logistics, Transportation and Warehousing sector in India. GST is a comprehensive tax levy on manufacture, sale and consumption of goods and services at a national level, which is still under negotiation among the state governments. Introduction of GST will have a big positive impact on the e-commerce industry.

The co-ordination and integration of the supply chain functions are obvious for optimization although difficult to achieve due to the presence of different market and enterprise dynamics resulting inconveniences like non arrival of materials on time, failure of production facilities, sudden illness of employees etc. The supply chain of a manufacturing enterprise is a global network of suppliers, manufacturing units, warehouses, distribution centres and retailers that facilitate procurement of raw materials, distribution and delivery of final products to the end customers effectively. Very often deviations from the plans happen due to various controllable factors that lie within the scope of a supply chain function, which may be dealt with locally. The co-ordination of revision of plans across supply chain functions is possible by introducing Integrated Supply Chain Management that addresses coordination problems at the tactical and operational levels by using various Decision Support Systems (DSS) with the help of Quantitative Models.

GST once implemented, will resolve many supply chain issues that impact the e-commerce sector in a big way. The shipment and returns across chain will be done more efficiently and with lesser paperwork. The efficiency in the supply chain will also mean less transit time with quicker deliveries. Under GST Model, the companies will be able to execute more efficient supply chain strategies, with warehousing based on strategic

location rather than based on tax requirements (like Octroi). Most importantly, goods can be priced and margins calculated properly till the last mile connectivity with a uniform tax structure across India.

GST is a single comprehensive tax regime that will be applicable across the country on the sale, manufacture and consumption of goods and services. Since the same tax regulation will apply across different
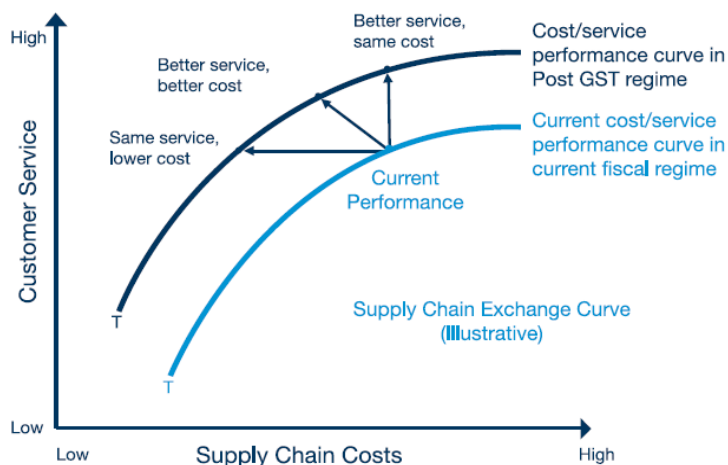

(Fig. 3) **Source:**

http://www.tsmg.com/download/article/GST%20An%20Opportunit
y%20to%20reassess%20your%20Supply%20Chain.pdf

states, e-commerce companies (as well as those from other industries) will not have to struggle with the complex regulatory structure that currently prevails in the country. The rollout of GST is likely to simplify the logistics issue for e-commerce companies and the company's effort to minimise their tax liabilities by finding loopholes in existing sourcing, distribution and warehousing facility location strategies. GST will also help address challenges relating to tax evasion e.g. issue faced by the Karnataka tax authorities in the situation of tax evasion by Amazon India. The issue was why Amazon and its sellers were not paying VAT in spite of operating from the company's warehousing facilities on the outskirts of Bangalore. The situation would have not been raised if clear laws had been in existence for the e-commerce industry.

Since Amazon operates on the 'marketplace' model and only provides a platform for buyers and sellers to transact (not engaging in any selling directly), its logic was that it should not come under the purview of sales tax or VAT (the website gets a commission from sellers for facilitating sales) and that only service tax was applicable to them. Conversely, its sellers, who were stocking their goods in Amazon's warehousing facility, were designating it as 'an additional place of business' breaking the state's VAT rules. Finally the state tax authorities had ordered Amazon to discontinue selling some products from its Bangalore warehouse by cancelling the licenses of about 100 of its sellers. As a result, the company had no choice but to cancel many orders for those particular products and accept losses.

Since long the ecommerce players have been in discussion with the government to bring about a change in taxation policy through the incorporation of Common Goods and Service Tax. With the implementation of GST, the industry expects price reduction of products sold online.

Selected benefits that the company including retailers can avail include:

- In the GST regime the tax paid by the logistics company can be offset later on in the chain, reducing the cost of outsourcing and providing an impetus to third party logistics players.
- Tax efficiency considerations will not overwhelm other factors in warehouse location decisions. This will allow rationalisation of the locations to improve supply service levels to the stores.

The nation-wide implementation of a dual GST signals the next generation of tax reforms designed to remove the barriers of trade through a common market in India and to accelerate the country's growth prospects. The nation-wide implementation of a dual GST signals the next generation of tax reforms designed to remove the barriers of trade through a common market in India and to accelerate the country's growth prospects. The dual GST will have a material impact on businesses.

(Fig. 4) **Source:** PWC Report

The taxable events under the dual GST regime would be significantly different from those prevalent under the existing excise and value added tax provisions. Besides, there will be major differences in terms of the tax base, the rates of tax, the manner of levy and collection thereof, the manner of utilisation of input tax credits etc.

GST is the need of the hour, which will definitely make the supply chain more cost-effective and in turn will translate into better value. E-commerce has a great future in emerging India, given the growth trajectory of Information Technology, changing lifestyle, growing confidence in online shopping, etc. As internet is growing multi-folds, so is the online shopping business. For its further expansion and enhancement, it is important for the Government to facilitate and recognize e-commerce like any other industry. Uniform GST and tax measures across states would like to play an imperative role to make e-commerce a success story in India. There is also a need to have better logistical infrastructures and facilities across cities to boost services and delivery by e-commerce companies.