Conceptual Reverse Logistics Model used by Online Retailers Post Covid-19 Lockdown

Purvi Kushwaha

Retail & E-commerce Managemen, Symbiosis University of Applied Sciences, Indore
Super Corridor, Near Airport, Bada Bangarda, Indore, Madhya Pradesh 453112, India

ARTICLE INFO

Corresponding author:
Purvikushwaha2000@gmail.com

ABSTRACT

Coronavirus disease (Covid-19) is an infectious disease caused by a newly found coronavirus. Coronavirus 2(SARS-CoV-2), caused an illness known as Covid-19, which was similar to SARS and was characterized usually by fever and breathing symptoms. World Health Organization in March 2020 declared Covid-19 as pandemic. Social distancing is the only measure in the absence of any vaccine to reduce the spread of this virus so many countries including India are going under lockdown. In the lockdown, the Government ordered closure of all the brick-and-mortar businesses. In this time of crises customers have only choice to purchase essential products from e-commerce portals. Prime Minister Narendra Modi announced that essential items could be purchased through e-commerce portals, all e-commerce businesses were instructed by the Ministry of Consumer Affair to take proper precautions and hygiene in their entire supply chain process. This paper suggests a model to incorporate hygiene in reverse logistics for online retailers post lockdown.

SARI PATI

Penyakit Coronavirus (Covid-19) adalah penyakit menular yang disebabkan oleh virus corona yang baru ditemukan. Coronavirus 2 (SARS-CoV-2), menyebabkan penyakit yang dikenal sebagai Covid-19, yang mirip dengan SARS dan biasanya ditandai dengan demam dan gejala pernapasan. Organisasi Kesehatan Dunia pada Maret 2020 menyatakan Covid-19 sebagai pandemi. Jarak sosial adalah satu-satunya tindakan tanpa adanya vaksin untuk mengurangi penyebaran virus ini sehingga banyak negara termasuk India melakukan penguncian. Dalam penguncian, Pemerintah memerintahkan penutupan semua bisnis. Di masa krisis ini, pelanggan hanya memiliki pilihan untuk membeli produk penting dari portal e-commerce. Perdana Menteri Narendra Modi mengumumkan bahwa barang-barang penting dapat dibeli melalui portal e-commerce, semua bisnis e-commerce diinstruksikan oleh Kementerian Urusan Konsumen untuk mengambil tindakan pencegahan dan kebersihan yang tepat di seluruh proses rantai pasokan mereka. Makalah ini menyarankan model untuk memasukkan kebersihan dalam logistik terbalik untuk pengecer online pasca penguncian.

INTRODUCTION

In year 2019, a pandemic closely related to SARS coronavirus emerged in Wuhan, China. The Indian Government later announced a never-happened-before national lockdown to control the spread of Covid-19 from March 24, 2020 for next 21 days in every state, district, and villages. Under this lockdown, a panic button was triggered across the country as citizens started rushing towards nearby shops to purchase groceries and other essential items. To reduce the stress among the citizens PM Modi tweeted on his official twitter on March 24, 2020 that there is no need to panic all the essential items namely medicines, groceries etc. would be made available in all the states through online portals.

During Lockdown Government allowed all e-commerce platforms to sell essential goods and services. E-commerce platforms like Zomato, Swiggy even e-commerce giants Amazon is also delivering health care products, grocery and other high priority products. According to a latest research by Ipos, 11 of the 12 markets surveyed by them stated consumers are more frequently purchasing products online that they would normally purchase in- store.

During lockdown, the sales of online groceries increased as large number of consumers have shifted to online mode due to convenience, safety and hygiene. All the delivery personnel follow zero contact delivery and consumers preferred online mode of payments in order to curb the spread of virus. A recent survey conducted by LocalCircles platform showed that 52% consumers feel online grocery services are useful during lockdown period. The study also showed 32% of shoppers place one or more orders for groceries and other essential items every week since the lockdown first started. The e-commerce shopping percentage are in Vietnam (57%), India(55%), China(50%) and Italy(31%).

Once the lockdown gets over the life would not be the same, we all will have "new normal" because as people will still have a fear of coming in contact with coronavirus and government also have strict social distancing norms. Customers would avoid going to traditional brick-and-mortar stores this is why we hope post lockdown e-commerce would flourish. In order to run businesses without any hassle all the stores have adopted e-commerce as their alternative mode of business. Nowadays customers can purchase groceries online through Swiggy and Zomato. All the fashion and lifestyle brands are available on various websites or on their own apps.

Reverse logistic is the process of returning the products back to the point of origin for recycle, returns, repairs etc. A major hindrance that e-commerce companies would face post lockdown is to maintain hygiene in their reverse logistic cycle. This paper suggests a model to maintain hygiene in reverse logistics for online retailers, which they can use, post lockdown.

Review of Literature

E-commerce (Electronic commerce) involves buying and selling of goods and services, or transfer of funds or data, through Internet (Bhat et al., 2016). E-commerce transactions would include the purchase of online books (from Flipkart), music purchases (music download in the form of digital distribution such as Spotify), and customized liquor (Banda, 2019). Customer can purchase products that are not available in the traditional markets but through e-commerce, consumers can get a wider range of products that they can purchase from retailers all over the world (Khan, 2016).

The major factors responsible for the growth of e-commerce in India, are growth retail industry, the emergence of "Digital India campaign" and growth of internet users (Gupta, 2020). As per the information note prepared by the WTO Secretariat on 4 May 2020 stated, that e-commerce can be an important tool/ solution for consumers during this pandemic. Reverse Logistics Executive Committee defined reverse logistics as movement of raw

materials, semi-finished and finished goods from the point of consumption to the point of origin, in order to properly recycle, reuse and dispose. Reverse Logistics in e-commerce is something that cannot be ignored.

Reverse logistics provides a strong interface to enhanced customer satisfaction (Xu and Jiang, 2009). Reverse logistics is a crucial process of e-commerce supply chain, as they have to handle huge number of return product transactions on daily basis. The main reasons of reverse logistics in e-commerce are first- inconsistent information or false information about product size, colour, material, texture etc. through product image or description. Second- competition as there are various online retailers available. Businesses use various tools to attract customers, for example, they set return policy service to attract consumers. We still cannot avoid returns because there is a gap between virtual and reality (Chen et al., 2016). It is important for companies to consider reverse logistics as, there are high rate of returns and this eventually leads to huge losses (Wang et al., 2013). Various retail companies use centralized returns canters (CRCs) to process returned product. All the products are collected by the store and later on are shipped to the CRC's. Retailers enter all the information about each product and its condition into their information systems, and pass on the collected information to the CRC. When an item arrives at the CRC, a decision must be made about the further movement of the product. The condition of each item is studied, and on the basis of the study conducted a decision on disposal or recycling of the product is made (Rogers and Tibben-Lembke, 1999).

E-commerce profitability would reduce from 8%-15% due to reverse logistics in e-commerce. Major e-commerce giants like Amazon, Flipkart etc. conceptualize on the spot trial and return on minimum number of products like garments and shoes this will help them adequately reduce their reverse logistics cost (Gupta, 2020). Reverse

logistic systems can generally be of two types- self-supporting and by employing some third party. With regular development and advancement in e-commerce, the third-party reverse logistics companies would provide lot many benefits to e-commerce wholesalers and retailers (Wang et al., 2013).

Reverse Logistics in E-commerce

In a brick-and-mortar store, we always a choice of "no returns" signage but can never have this option if you are an online retailer and in fact average return rates of online orders are 30 percent, whereas it is just 8.89 percent in brick-and-mortar stores. There are many reasons such as incorrect product delivery, wrong product attributes, damaged product, delay in order delivery etc. due to such reasons reverse logistic becomes obligatory for online retailers. The cost of reverse flow of products are usually much higher than, the original cost of the product. Return products add up 8%-10% of cost price of the product. The increase in the product cost is due to various factors like shipping cost, CGST & SGST, product size and weight, base delivery rate etc.

In the mentioned figure 1, backward product or material flow can either be because of unsold stock due to slow sales or they can be damaged, obsolete or else they might be introduced into the cycle by end- customer through returns as they might be of wrong size, colour etc. Many a times various retail partners also return the product if they get damaged during transit. Other type of products that are a part of reverse flow can be those, which are being taken for re-manufacturing or are being re-positioned.

Hygiene Factors in Reverse Logistics post Covid-19

While purchasing any product related to grocery, we follow all the necessary precautions. Stores these days have thermometer checks for the delivery personal, they are going for contact less delivery and have urged consumers to use mobile wallet. Consumers are also following precautions such as they leave the purchased packed products outside for 24 hours before touching them this can only be
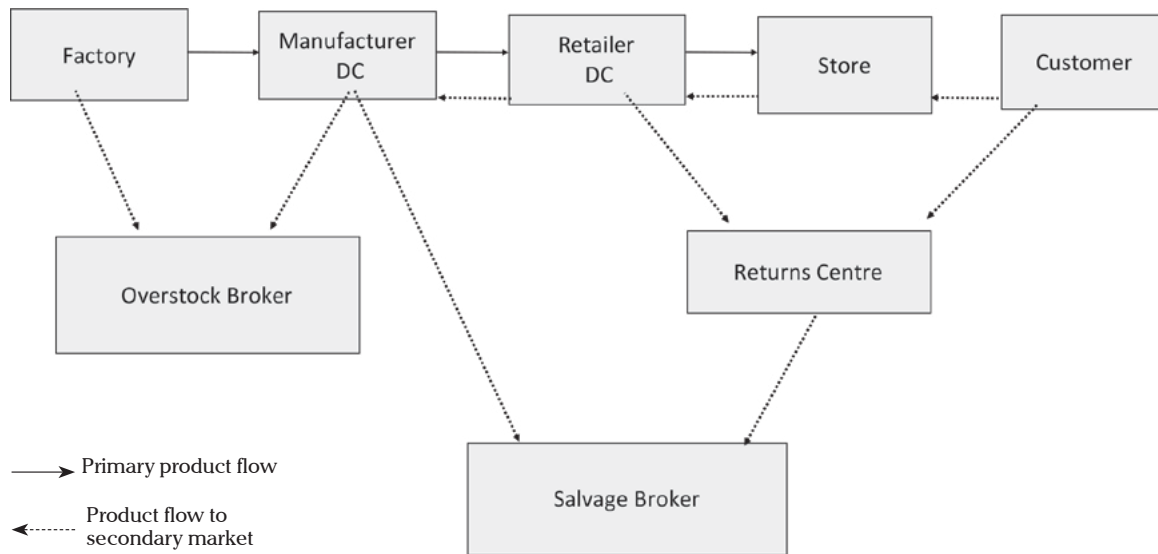
Figure 1. Network Structure of Reverse Logistic

possible for non-perishable items. For perishable items such as fruits and vegetables we can keep them in warm salt water for around two hours this method will remove pesticides and at the same time kill bacteria and viruses, later on we must wash them with clean water properly. It is very important to wash hands with soup properly after doing any of the steps mentioned above.

From June 8, 2020, the country is gearing up for "Unlock-1". All the major e-commerce websites will start their delivery in this "new normal". In the coming time hygiene will be given utmost importance from the beginning of the supply chain and until the item is received by the end user i.e. customers. Now in this unlock-1 people will start with the purchase of non- essential goods like apparels, footwear, books, electronic items, toys etc. At the same time, we cannot imagine e-commerce without returns so a question arises what will be the consideration of hygiene factors when it comes to reverse logistics.

Considerations for safe and hygienic Reverse logistic
Hygiene factors post Covid-19 in reverse logistics will be a major hindrance for e-commerce retailers

but, few considerations that they can adopt for a safe flow of returned goods are-

• Companies can come up with new return policies with rules such as the return time period can be reduced to 1 week, products such as cosmetics, lingerie/underclothes, face masks, hand sanitizers/hand wash would not be accepted for returns.

• Wearing gloves and facemask should be mandatory for delivery salesperson.

• Temperature check of the customer while returning the items for example, if a customer has fever in that case the company can urge the consumer to return the item after fortnight.

• On the spot trial for some product category such as footwear, electronics or toys the delivery salesperson will provide gloves to the consumer so that if the product were going to be returned it would be safe.

• If the any of above mentioned product has to be returned by the customer delivery salesperson will first use sanitize spray on the product then he will put it inside a cardboard box and lastly sanitize the box using some disinfectant.

• No contact return can be materialized by creating Ultraviolet tunnel for return items before sending the product inside the tunnel
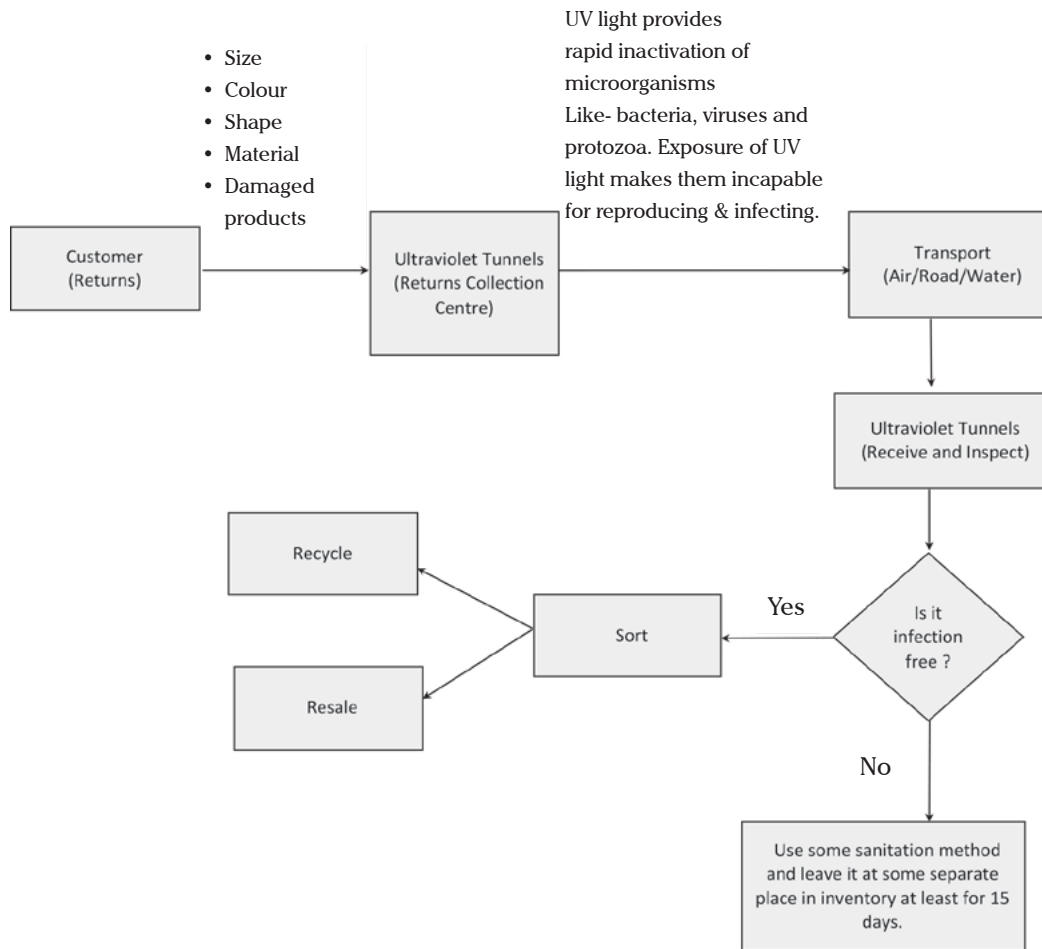
Figure 2. Post Covid-19 E-commerce Reverse Logistic Cycle

double packaging will be done and that packaging will be sprayed by disinfectant spray. Customers can opt for either directly deliver their returns or call the delivery personal.

- Drone return can be used as a reverse logistic option for small or lightweight products.

Reverse logistic is very crucial cycle for any business especially e-commerce. In order to reduce the spread of Coronavirus we must take all the necessary hygiene precautions for this we can use "no contact UV tunnel" concept as an example that can be used in e-commerce post Covid-19. Figure2 explains this reverse logistic cycle with "no contact UV tunnel". Customer is returning a product it can be for various reasons such as- wrong size, colour, material etc. The customer will take the product to the return collection centre there will be

either two options for the customers they can call the courier delivery personal or they can directly take the product. This whole process is going to be contactless, once the product has reached at return collection centre the product would be pushed to the UV tunnel. UV lights will provide rapid inactivation of viruses, bacteria and protozoa.

Now all the products would be transported to inventory after reaching the inventory there with again passed through the UV tunnel and it will be inspected thoroughly if we found some infection, after doing some initial sanitization product will be placed at some isolated place in the inventory for minimum 15 days. If the products were infection, free as per the requirement it would be pushed to the resale cycle or moved for recycling.

CONCLUSION

The study made an attempt to identify and analyze the challenges of working from home in the persistent covid-19 environment; and changes in these challenges in the persistent pandemic environment. Based on the finding of the study can be concluded that, of all the statements indicating the challenges only 7 statement are considered as higher level of challenges such as- scheduling time to work and family, more time taken to finish the work, lack of all infrastructure at home, increased mental stress, fear of job loss, lack of supervisory support from higher authority and lack of face to face interaction. Other statements indicating the challenge of working from home are changed to moderate level of challenges such as- Choosing outfits for the day, low internet speed, challenge of working with pets, pressure of kids, pressure of spouse, fear of salary cuts, decreased social life and feeling of loneliness are changed over.

Further, it is also concluded that, there is a significant difference between married and unmarried employees in the challenges they faced; and there is also significant difference challenges faced by different educational background IT employees.

Future Scope

We can study various other methods that can be used to maintain hygiene in the reverse logistics post Covid-19. Retails can use questionnaire survey to get the feedback from the users about changes that can except in the reverse logistic cycle. ∎

REFERENCES

Bhat, S. A., Kansana, K., & Khan, J. M. (2016). A Review Paper on E-Commerce. Asian Journal of Technology & Management Resesarch [ISSN: 2249–0892], 6(1).

Khan, A. G. (2016). Electronic commerce: A study on benefits and challenges in an emerging economy. Global Journal of Management and Business Research.

Lingling-Chen, Wei-Li, & Huiying-Zhan. (2016). The Analysis of Reverse Logistics Model in the E-commerce Models. International Journal of Grid and Distributed Computing, 9(9), 173-184.

Tibben-Lembke, R. S., & Rogers, D. S. (2002). Differences between forward and reverse logistics in a retail environment. Supply Chain Management: An International Journal, 7(5), 271–282. doi:10.1108/13598540210447719

Wang, W., Liu, Y., & Wei, Y. (2013). Research on management strategies of reverse logistics in e-commerce environments. In LISS 2012 (pp. 321-326). Springer, Berlin, Heidelberg.

Xu, J., & Jiang, Y. (2009). Study of Reverse Logistics in the E-commerce Environment. International Business Research, 2(1), 128-130.

https://www.sakaltimes.com/art-culture/coronavirus-outbreak-order-online-follow-rules-47900(Browsed Date- June 11,2020 Time: 3:30 PM)

https://ithinklogistics.com/blog/a-complete-guide-on-e-commerce-reverse-logistics/

(Browsed Date- June 12, 2020 Time: 2:00 PM)

https://economictimes.indiatimes.com/industry/services/retail/online-demand-for-non-essential-items-low/articleshow/75665531.cms(Browsed Date- June 12,2020 Time: 2:30 PM)

https://www.indiatoday.in/india/story/pm-modi-coronavirus-national-lockdown-panic-buying-groceries-essential-items-1659291-2020-03-24(Browsed Date- June 12, 2020 Time: 4:00 PM)