

Environmental Impact of Rapidly Growing E-Market Place



George Cheriyan
Director, CUTS International



Simi T.B
Policy Analyst,
CUTS International

E-commerce is growing by leaps and bounds in India and the recent reports suggest that the last quarter of 2020 alone saw a 36 percent growth in its order volume¹. Various factors like the emergence of global supply chains, rise in international trade, rise in sales of smartphone and personal computers, increased penetration of internet and better network coverage coupled with restriction in movement at public places due to the threat of pandemic, all contribute to this sudden surge. According to experts, it is expected that the country's e-commerce would further rapidly increase from four percent of the total food and grocery, apparel and consumer electronics retail trade in 2020 to eight percent by 2025.²

From a consumer perspective, the increase in online transactions, the improvements made to ensure safe and secure transactions, wide choice of products available at affordable and discounted prices and fast delivery of goods purchased have significantly encouraged a great number of consumers, both urban and rural, to make full use of services of e-commerce for their benefits. It allowed manufacturers to keep their business going inspite of lockdown and travel restrictions and provided small and medium

industries, local artisans, craftsmen, and even local provision stores, an even playing field to compete with established brands.

Infact during this time of pandemic and uncertainty, the e-commerce industry is seen as a lifesaver by almost all households as it is because of this industry that the basic needs of most people could be met with. Consumers had the privilege to buy their most essential items sitting safely at home, which were even unavailable at local markets due to surge in demand.

Realising the true potential of the sector in economic growth, the government too since 2014 has been introducing various initiatives such as Digital India, Start-up India, Make in India, Skill India and Innovation Fund to accelerate e-commerce in India. Such sustained efforts for the growth of e-commerce have already created huge employment opportunities, with a 22 percent rise in workforce in the sector in the year 2020 alone.³ Now various reports estimate that it has the potential to further create one million jobs by 2023.⁴ This spike in growth within the sector is not just limited to Indian market; consumers across the world have started realising the true potential of the e-commerce industry and are accommodating it conveniently to their needs.

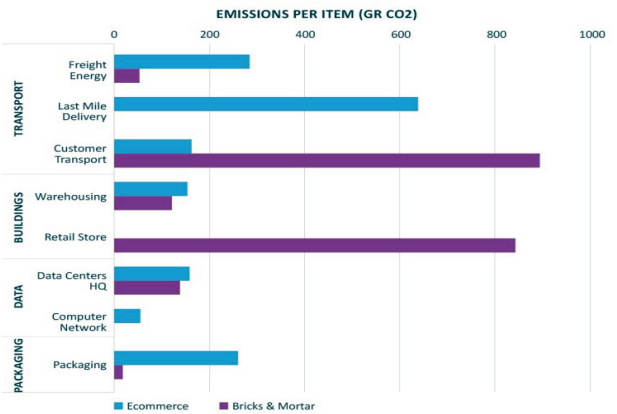
Use of digital technology to efficiently sell a product by the manufacturers themselves to the consumers without involvement of any middlemen has proved beneficial both to the manufacturer and the consumer. It helped reduce the overall cost of the product and lessened the burden of distribution and record keeping, apart from helping to keep up with changing consumer needs.

The sector has thus proved itself to be a bridge between the digitalisation of our society and the transition to a more robust economy. However, there are downsides too that the sector brings along with its growth, which cannot be ignored. The exponential growth of e-commerce has paved the way for increased concern on the impact of the sector on the environment. While there is a general perception that e-commerce is a sustainable practice as business is carried out without physical commuting and a physical store, it is important to keep in mind that there are studies and reports that point out how the sector contributes to many harmful practices that negatively impact the environment.

The discussion below provides brief insight into the impacts of e-commerce on the environment.

Positive Impacts

Along with its huge economic benefits, the sector contributes to the betterment of our environment in its own ways. According to various studies, e-commerce can lower the environmental impact of shopping and contribute reducing the greenhouse gas emissions. Certain studies have even gone further by coming up with figures in percentage to show how carbon-efficient e-commerce is when compared to regular retail stores. For instance, according to a US based financial service and investment management firm, greenhouse gas emissions for e-commerce are 17 percent lower when compared to shopping done at a normal store.⁵



The benefits outweigh as e-commerce companies rely less on physical stores thereby consuming less energy and having more flexibility to ensure both efficient logistics and warehouse. A bricks and mortar retail shop consumes more land space and typically requires a lot of lighting and other high energy consuming electrical gadgets and systems to regulate the temperature and ventilation inside the shops to maintain comfort and enhance the consumers' shopping experience. This type of high energy consumption is not required for a warehouse of an e-commerce company. According to a study by St Gallen University, while the energy consumption related to buildings results in 170 g carbon dioxide equivalent with online shopping, due to the energy needs of warehouses; it results in 1,180 g carbon dioxide equivalent with offline shopping, due to the need to run both warehouses and physical stores.⁶

Besides, e-commerce platforms provide consumers the luxury of purchasing products at the convenience of home without the necessity to personally commute. He gets the products delivered at the doorstep thereby significantly bringing down the number of people and vehicles on the road. Therefore, e-commerce saves 4 to 9 times the traffic it generates otherwise for shopping by physical stores. E-commerce deliveries in urban areas such as Paris, Berlin and London where the study was conducted generate 0.5 percent of total traffic while physical stores generate 11 percent.⁷

So the number of such commuters and associated traffic congestion can further be reduced if more such shopping transactions are conducted online, like it is being carried out these days during the lockdown period. This would help the consumer save more from his monthly fuel consumption, which of course would reduce the dependence on fossil fuel and emission of greenhouse gases thereby resulting in less air and land pollution.

Another most important environmental benefit, especially for Indian consumers, is more options, the facility to choose products of different brands through e-commerce purchase. This would help environment conscious consumers to purchase sustainable products more easily, which are otherwise largely unavailable in the local stores in India. It is undeniable that e-commerce or online advertisements have to some extent contributed in raising awareness about sustainable options among youth who are generally seen to be willing to spend more on such items.



Adverse Impacts

On the other hand, there are some adverse influences of the environment due to the increased dependence on e-commerce. Responsible consumption has almost gone for a toss as consumers sitting at the comfort of their homes always show an inclination to purchase more than they actually need. Wide variety of choices, attractive discounts, free delivery and various other promotional features from time to time attracts the gullible consumers. Such increased production and excessive consumption of consumer goods especially electronic items contribute significantly towards piling up of more waste. Both over consumption and subsequent increase in waste have its own environmental repercussions. Likewise, when such products are later discarded as waste they are again transported to either end up in landfills emitting greenhouse gases or to incinerators generating more pollution as they burn.

Amazon in its annual sustainability report released last month claimed that its activities emitted the equivalent of 60.64 million metric tons of carbon dioxide in 2020. Last year it was 51.17 million metric tons and therefore there is

an increase of nearly 15 percent this year.⁸ This growth in emissions is largely due to the ongoing pandemic induced growth of its business. Such increased online purchases therefore mean increased packaging and complex delivery. One could often witness that even when a consumer purchases various products as a single order, the order is split and the products are delivered as individual packages by different sellers, resulting in excessive use of plastics, paper, tapes and cardboards for packaging.

Also, such packaging is usually done several times bulkier than the product inside with several layers consisting of plastic covers, papers, bubble-wraps and air packets for the safety of the products as well as to fill the void in the box and cardboard cartons. Such multi-layered packaging is always justified by service deliverers as to protect the product from any damages all throughout its journey from the sellers table to the buyers door step. Though most of these materials are recyclable, in a country like India with a poor record of handling waste and recycling, such materials often end up in landfills or drains causing hardship to the people and the surrounding. Besides materials like bubble wrap and air packets, though technically recyclable, often clog recycling machinery and cause a whole host of problems. Seeing such menace, recently the National Green Tribunal (NGT) had directed the Central Pollution Control Board (CPCB) to conduct environmental audit and recover fine from Amazon and Flipkart, the two leading e-commerce giants in India, for violation of environmental norms and expressed its displeasure at lack of action against excessive use of plastic in packaging by the companies.⁹



Besides, to deliver these packages the companies depend on increased use of transports. Often it is seen that products are

delivered to the same address at different point of time in different packages, all from a single order. Such unsustainable practices defeat the possibility of accruing any environmental benefits when delivered as a single package. Such practice also negates the benefit caused by the consumer who abstained from commuting. The situation gets even worse when the consumer decides to return a product he purchased to the seller as this means even more transportation and repacking. Almost 25-30 percent of the products ordered online are returned and replaced every year according to various studies.¹⁰ Often this happens in online shopping as the consumer gets carried away by flash and discount sales wherein, they hardly get sufficient time to decide if they really want the product or not. Besides they also do not get the opportunity to personally evaluate the products before getting them delivered.

At the same time, the rise in the sale of counterfeit and fake products online is also a matter of concern to the environment. Studies show that almost a third of e-commerce consumers are getting fake products delivered. Other than the very short life span of such products, its disposal later proves to be a challenge to the environment as often the composition of such products remains unknown making it difficult for safe disposal. Safe and secure disposal of such products is critical to ensure the environmental risks are mitigated, but often this proves to be costly and technically complex. At the same time, the rise in the sale of counterfeit and fake products online is also a matter of concern to the environment. Studies show that almost a third of e-commerce consumers are getting fake products delivered. Other than the very short life span of such products, its disposal later proves to be a challenge to the environment as often the composition of such products remains unknown making it difficult for safe disposal. Safe and secure disposal of such products is critical to

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Sustainable E-commerce is the Future

E-commerce companies like any other business establishment have a responsibility to take care of the environment. They need to be held accountable for the repercussions of their activities. Since online shopping will only further grow due to the ongoing pandemic, companies themselves seriously need to find ways to tackle concerns related to packaging. Multiple products from a single order should always be bundled up at a common logistic centre and then transported and delivered to the final destination. More importantly, such companies also need to fulfil their Extended Producer Responsibility (EPR) under the Plastic Waste/E-Waste Management Rules, 2016, and establish themselves a system for collecting back the e-waste, and plastic wastes that are generated.

Meanwhile efforts should also be taken to encourage research on developing sustainable packaging. Current practices are inefficient, so more investment and research in coordination and support of all relevant stakeholders become vital. This should be supported with strong advocacy and policies for innovative packaging and a sustainable approach towards a circular economy.

Since consumer behaviour too has a greater effect on the environmental impact of e-commerce distribution, it is vital that the consumers are educated to opt for sound consumer choices. Products should display carbon foot print, that means the total greenhouse gas emissions generated by a product, from extraction of raw-materials, to end-of-life, which will help consumer to make informed sustainable choice. Customers who choose speedy delivery or those who buy single items from different places also contribute

towards increasing the carbon footprint. They should be made aware of the impact of their purchase and delivery decisions, enlightened more about responsible consumption and safe disposal of waste. The government's recent initiatives to link local grocery stores with e-commerce is also a welcome move from an environmental perspective as it encourages consumption of local produce and local products. If such a partnership model could be successfully developed, it can to a larger extent address the issue of transportation and heavy packaging as the products could be delivered to the consumers from a more nearby location.

Ultimately, it is important to keep in mind that e-commerce has changed the way we shop for the better, and continues to offer new opportunities even during this difficult time of pandemic. It certainly needs to be encouraged and promoted but definitely not even at the slightest cost of the environment and well-being of the people.

Source:

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