Sustainable Development in E-commerce

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Abstract

Sustainable development in the e-commerce industry nowadays very important issue because it's related to the environment. In recent times e-commerce industry booming all over the world due to covid-19 and other factors. Sustainable development means development that meet their current needs and wants not at the cost of future generation ability to meet their needs or wants. This research article mainly focuses on how e-commerce growth negatively affects the environment & what should be the probable strategy to cope with the negative effects of e-commerce.

Keywords:

Sustainable development, E-commerce, Global warming, Bioplastics, Online Retailer.

Introduction: - Sustainable development in e-commerce refers to the practice of conducting online business in a way that is economically viable, socially responsible, and environmentally friendly. This can involve a variety of measures, such as reducing the environmental impact of transportation and logistics, using eco-friendly packaging materials, and supporting sustainability initiatives through charitable giving or other means. By adopting sustainable practices, e-commerce companies can not only reduce their own environmental footprint, but also contribute to the overall sustainability of the global economy. Any development in the world must take care of the future generation's needs and wants we can say sustainable development. Due to the growth of the e-commerce industry all over the world, serious problems are coming to the surface like excessive use of plastic creating the problem of soil pollution in the world, second e-commerce industry contributing more carbon dioxide to the environment due to their package delivery system that causes air pollution in the environment. Both these important issue creates a lot of future problem for the future generation. As we all very much informed about the present situation of the earth, our planet year by year warmer, south pole and north pole ice are melting due to emission of corban dioxide, greenhouses gases, etc. in the atmosphere of the earth that leads global warming, unpredictable pattern of weather cases heavy loss to farmer We all know that the average temperature of the earth day by day increasing due to greenhouse gases, carbon dioxide, etc. soil getting polluted due to excessive use of plastic in the packaging of delivery packages causing serious environmental threats. According to some important statistics about the e-commerce industry regarding plastic.

According to the recent statistics, the global e-commerce plastic consumption market is worth 10.26 billion dollars in 2020 and is expected to jump to $21.78 billion by 2026 a CAGR of 13.2 %. These huge numbers reflecting the growth of the e-commerce industry create the biggest plastic crisis in the world because the more the use of plastic more the problem of dumping that leads to the soil, and ocean pollution on the planet. According to recent statistics, around 2 billion tons of plastic waste are created all over the world. This plastic waste mostly cardboard boxes, plastic packing, & Styrofoam peanuts dump into the oceans. That creates a serious environmental problem for any country in the world. Due to the e-commerce industry activity environment of our planet get day by day more polluting, let's take the example of America, around 165 billion packages are shipped in the country that exactly equal to 3 billion trees. These one billion trees can cover up to 3500000 hectares of land in America. This is just a small example of the unstainable development of the e-commerce industry in America. What about India, China, and other big countries. Everywhere there is the same story happening all over the world.
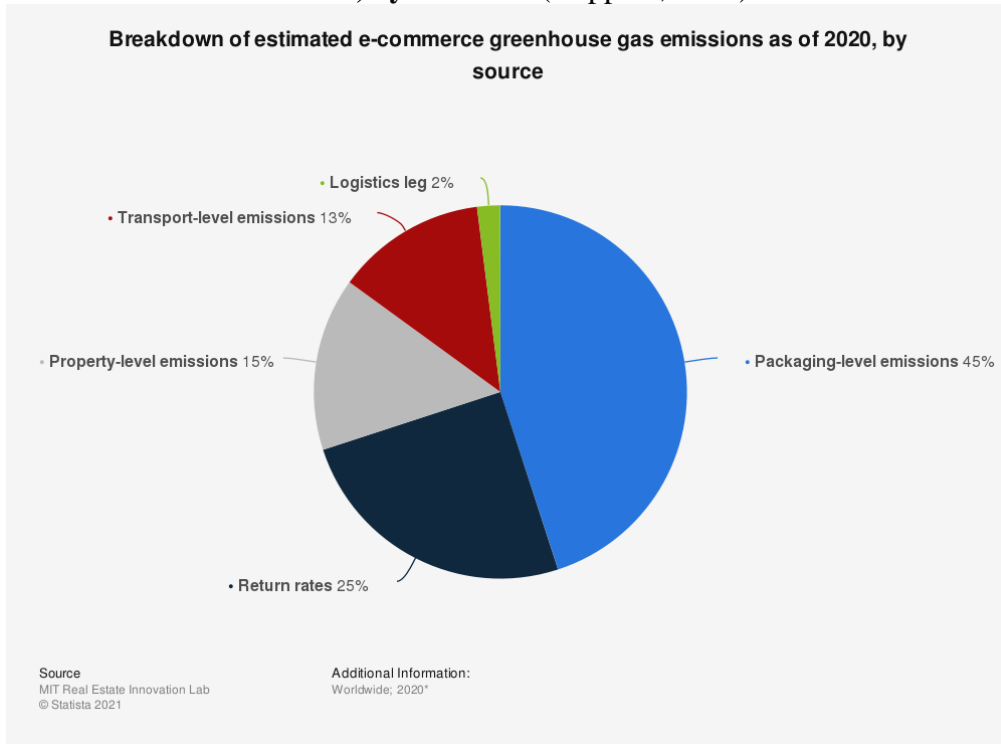
E-Commerce Industry:

(Keenan, 2022) Global retail sales growth will continue to rise and take up more retail market share. According to eMarketer, online retail sales will reach $6.17 trillion by 2023, with e-commerce taking up 22.3% of total retail sales. Latin America saw $85 billion in eCommerce sales in 2021, up 25% from $68 billion in 2020. The Indian eCommerce market is expected to grow to $111.4 billion by 2025, up from $46.2 billion in 2020. Russia, the UK, and the Philippines saw more than 20% eCommerce sales growth in 2021.

E-commerce Growth & and its Impact on the Environment: -

As online retail sales are increasing, the sustainability of the e-commerce industry is becoming more relevant. The undeniable ease of having products delivered has its environmental impact: just commercial road transport and shipping account for 30 and 10 percent of transportation CO_2 emissions worldwide, respectively. E-commerce retailers will have to simultaneously ensure a greener supply chain and satisfy more demanding consumers expecting fast and low-cost delivery. (Coppola, 2021)

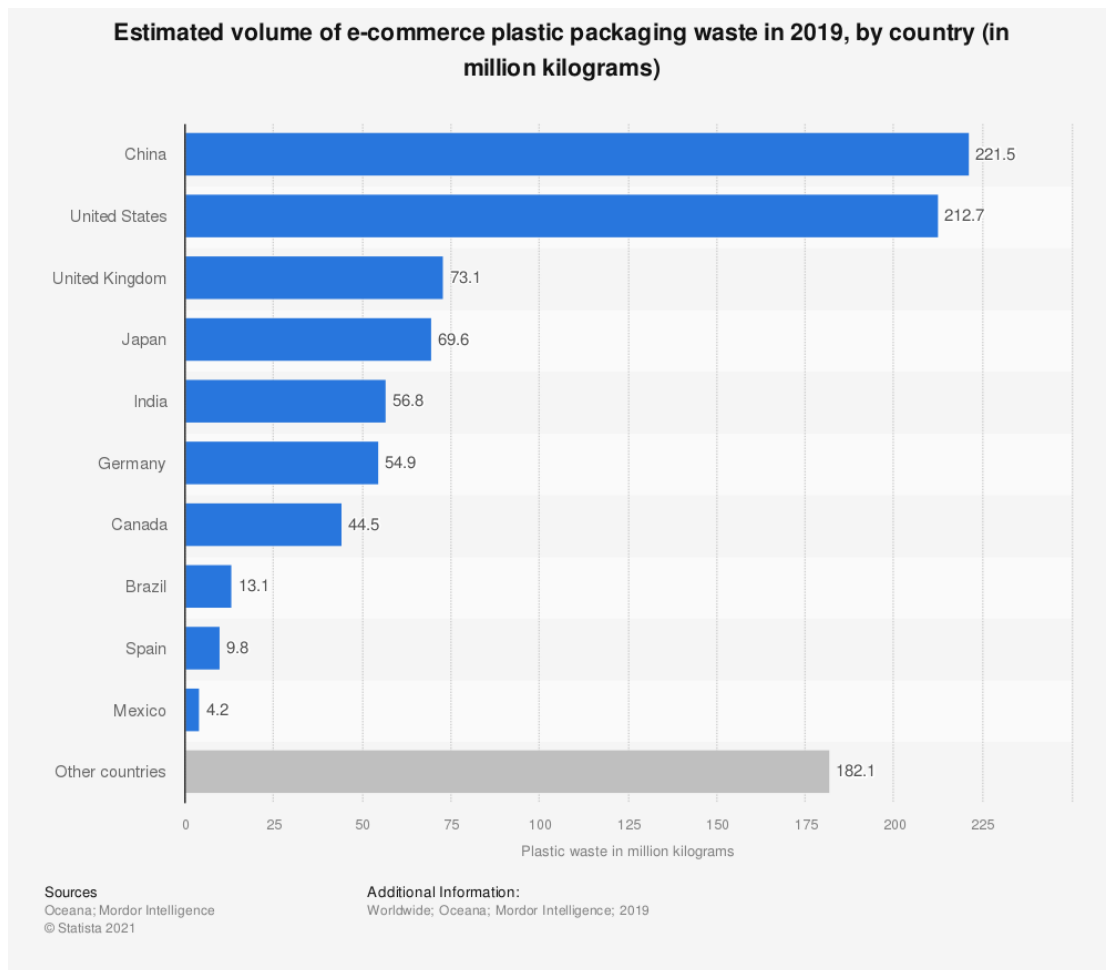**E-commerce emissions breakdown 2020, by source: -** (Coppola, 2021)

According to the Above graph 45% of CO_2 emissions from packaging related to the e-commerce industry worldwide in 2020. This is a serious thing about the e-commerce industry creating trouble worldwide and causing the main culprit for global warming.

E-commerce plastic packaging waste 2019, by country:

(Oceana & Intelligence, 2019)

In 2019, China and the United States were the main e-commerce polluters regarding plastic packaging. The Chinese e-commerce industry produced 221.5 million kilograms of plastic packaging waste, while the United States was responsible for 212.7 million kilograms, Same case with India stands 5th in e-commerce plastic pollution. That same year, the estimated worldwide amount of plastic packaging waste produced by e-commerce activities reached 942 million kilograms.

Estimated volume of e-commerce plastic packaging waste in 2019, by country (in million kilograms)

Country	Plastic waste in million kilograms
China	221.5
United States	212.7
United Kingdom	73.1
Japan	69.6
India	56.8
Germany	54.9
Canada	44.5
Brazil	13.1
Spain	9.8
Mexico	4.2
Other countries	182.1

Plastic waste in million kilograms

Sources
Oceana; Mordor Intelligence
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Additional Information:
Worldwide; Oceana; Mordor Intelligence; 2019

Success Story in Sustainable E-Commerce in the world: -

- In Germany, online retailers combine orders to reduce shipments by 63% simply using the optimum order management system they have developed. For reducing the carbon emission in the country.
- In Switzerland, online retailers do not charge any extra payment if orders consumers order climate-friendly products from online shops and resulting 26 % increase in climate-friendly product orders in their country. Swiss online retailers use compostable packaging technology to reduce their carbon footprint.
- In India Myntra & Edamame company uses eco-friendly packaging for their customer, company does not use plastic while sending the package to its valuable customers.
- These are a few cases that inspired other online retailers to use environment-friendly business practices that minimize the carbon footprint and increase sustainable business practices.

The sustainable solution for E-commerce industries to reduce carbon footprint: -

1. Climate Friendly Transportation Solution:

Today fast delivery of the parcel is a more common feature of all e-commerce companies. Around 8% of carbon emissions come from freight transport. The use of online shopping all over the world increasing like a rocket speed leads heavy carbon footprints increases. A probable solution is to use Environment-friendly carriers which include DHL, FedEx, Blue Dart, Express bees, etc. Companies offer a low carbon footprint delivery system like a paperless system, use of e-vehicles, use of eco-friendly shipping options, etc.

2. Use Sustainable Packaging Boxes:

Use small boxes to ship the goods to customers this step not only help the company to save packaging cost & waste but also save space on the transport and make more environmentally friendly shipping. Around 30% carbon footprint of the e-commerce industry comes from packaging that's why packaging is the most important dimension in sustainable development. The E-commerce industry must work toward the use of

single-use plastic should be avoided and instead use recycled paper and other eco-friendly materials for packaging and shipping the goods to customers. Collects plastic from which is no proper waste disposal or recycling. And use them to create new recycling shopping boxes for shopping new parcels to the customers worldwide that will reduce the 60 % carbon emission.

3. Energy Efficiency:

Sustainable development is not possible just using recycled paper & plastic, companies need to think beyond the packaging & shipping of parcels to the customers. Companies also need to focus on their business operation should be environment friendly. Their offices, production houses, and storages house must use renewable energy sources to perform their business operation and reduce their carbon footprint. Use more solar energy, use more led lighting technology in the offices, use Artificial intelligence to minimize the use of energy and save the cost, and archive sustainable development objectives.

4. Provide 100% satisfaction to the customer:

The biggest problem of the e-commerce industry is a large number of customers intentionally or non-intentionally returning the shopping packages to companies that cost the company too hard as well as increasing the carbon footprint in the world. According to some statistics around 70-billion-euro cost of return to e-commerce companies and 15 million tons of carbon dioxide 2 million tonnes of landfill waste are created every year in the USA alone. E-commerce industries think about their free return policy to the customer. A company should only offer a free return to the serious customer.

5. Adopt Bioplastics:

Bioplastics are derived from corn, straw, sawdust, and other such sources, and are more sustainable – though more expensive – than traditional synthetic plastics. This is because they're biodegradable and can break down over time much more quickly compared to plastics derived from petroleum products.

Conclusion:

Sustainable development in the e-commerce industry must need an issue nowadays because the popularity of e-commerce among the consumer in the peak now. Now everyone wants to shop online thanks to technology (Internet penetration, Smartphone uses, etc.) but every boon has some curse also. Due to this phenomenal growth in e-commerce causing global warming, pollution is the cost of this development. Every person who lives on this earth must be accountable for global warming so consumers and retailers must take utmost care, their actions should not harm the planet earth's environment. The E-commerce industry must compile environmentally friendly business practices so that this beautiful plant will survive for the future generation.

Sustainable development in e-commerce refers to the practice of designing and operating an online retail business in a way that minimizes negative environmental and social impacts, while promoting economic prosperity. This can include a wide range of activities, such as reducing energy consumption, using environmentally friendly packaging materials, and supporting fair labor practices.

There are several ways that e-commerce companies can contribute to sustainable development:

1. Reducing energy consumption: This can be achieved through energy-efficient data centres and transportation systems, as well as by encouraging customers to choose eco-friendly delivery options.
2. Using environmentally friendly packaging materials: E-commerce companies can reduce their environmental impact by using recycled or biodegradable packaging materials, and by encouraging customers to reuse or recycle packaging.
3. Supporting fair labor practices: E-commerce companies can ensure that the products they sell are made under fair labor conditions, and that their own employees are treated fairly.
4. Promoting sustainable products: E-commerce companies can use their platform to promote and sell products that are made sustainably, such as products made from recycled materials or products that have a low environmental impact.
5. Overall, sustainable development in e-commerce involves finding ways to balance economic, social, and environmental goals in order to create a more sustainable and equitable future.

Regenerate response

References
1. Coppola, D. (2021). *Sustainability in e-commerce - statistics & facts.* USA: Statista.
2. Keenan, M. (2022, January). *Global Ecommerce Explained: Stats and Trends to Watch in 2022*. Retrieved from https://www.shopify.in: https://www.shopify.in/enterprise/global-ecommerce-statistics
3. MARKETING, P. (2021, March 20). *How eCommerce Packaging Can Increase Sustainability*. Retrieved from https://www.pearltechinc.com: https://www.pearltechinc.com/2021/03/30/how-ecommerce-packaging-can-increase-sustainability/
4. Oceana, & Intelligence, M. (2019). *Estimated volume of e-commerce plastic packaging waste in 2019, by country.* Oceana; Mordor Intelligence.