



An Analytical Study On E-Commerce For Sustainable Development In India

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Abstract:

E commerce has brought a revolution in providing an effective marketing experience to the consumers. The growth of e-commerce in India has transformed the way of shopping, offering convenience to a broad consumer base. The increasing focus of consumers on preferring online as well as eco-friendly products and services has created a huge impact on the e commerce platforms. However, challenges such as meeting increasing demand and ensuring sustainability need urgent attention. This research aims to explore sustainable solutions for the increasing demand in Indian e-commerce, considering environmental and social impacts. This study provides a detailed analysis of the challenges and opportunities or methods by which the emerging e-commerce practices are trying to achieve sustainability.

Keywords: emerging trends of e commerce, sustainable development, green consumerism.

Introduction: E-commerce is growing really fast in India. It's changing how people buy things, making it easier for them, and giving new chances to businesses. India's e-commerce has grown rapidly due to changing consumer behaviour and increased internet usage. The challenge lies in efficiently and sustainably handling the higher volume of products. Sustainable practices are crucial to minimize environmental impact and ensure long-term profitability. But, this growth also brings some problems, especially in keeping up with the growing demand and doing things in a way that doesn't harm the environment.

Objectives:

1. To identify the emerging trends of Indian e-commerce to meet growing demand.
2. To identify challenges faced by e-commerce in sustainable demand fulfilment.
3. To explore innovative solutions for efficient and sustainable e-commerce operations.
4. To suggest the ways of using e-commerce as green-ecommerce.

Literature Review: This review looks at what we know about Indian e-commerce right now, the problems it's facing, and how we can make it better and more sustainable. E-commerce in India has become really big, thanks to more people using the internet and smartphones. A report says that by 2026, the e-commerce market in India could be worth \$200 billion. The need to educate people about their shopping preferences keeping in mind its impact on environment and sustainability is required **(Grondy's ,2021)**. The focus should be on increasing green consumerism. Although to meet the increasing demand and supply, it's not very easy to shift entirely on eco-friendly or organic products and services. A study found that online shopping can be worse for the environment than buying things from regular shops. Things like using less packaging and eco-friendly transport can save money and make customers happy. But, we also need to think about the challenges, like small businesses might find it hard to pay for these changes, and some customers might not want to pay more for eco-friendly products. The e-commerce industry in India has the potential to grow exponentially, but in order to speed up its development, regulators must divert their attention on the supply side. **(ShreyNougarahiya et al.,2021)**. The introduction of e-commerce has revolutionized the way businesses operate, with significant implications for sustainable development **(Revinova, Svetlana,2021)**. According to the sources, the development of e-commerce has had a huge impact on various aspects of the economy and society. At this stage, almost all economies take e-commerce as an important development point **(Aburaya,2020)**. The study shows that e-commerce is more than just the purchase and sale of products and services over the internet, but rather a much broader concept of transformations in the way of doing business and communicating with stakeholders. It is recognized that e-commerce has contributed to employment, economic vitality, and enhanced transaction efficiency. In addition, e-commerce has also brought about positive effects in specific industries, such as promoting market transparency and price discovery in the circulation of agricultural products. Furthermore, e-commerce has played a significant role in the digital market and has become the main mechanism for implementing the new type of economy. However, it is important to note that the level of e-commerce varies across countries, particularly in developing nations **(Arora,2019)**. Recent research shows that India's last-mile emissions per delivery of 285 grams carbon dioxide (gCO₂) are much higher than the global weighted average of 204 gCO₂. In fact, the research found that five Indian cities – Delhi, Mumbai, Kolkata, Bangalore, and Chennai – release more carbon dioxide from last-mile delivery than the entire People are now more aware of how their choices affect the environment.

RESEARCH METHODOLOGY

Research design: Descriptive Research method was utilized in this research.

Data Collection: Information was accumulated through secondary sources like journals, newspapers and websites.

CHALLENGES IN THE WAY OF E COMMERCE

Despite its potential benefits, there are certain challenges and risks associated with e-commerce. These challenges include issues of security, consumer demand analysis, and the risk of cybercrime. Other problems include delay in delivery, maintaining warehouses, inaccessibility at rural areas because of network issues. Some people in villages still don't have good internet or know how to use it. This makes it hard for e-commerce to grow in these areas.

Current scenario and Future of e-commerce in India-

People are thinking more about the environment when they shop, and businesses are trying to sell things that are good for the planet. Online shopping is also joining in by offering eco-friendly options. This is not just good for nature but can also make businesses more money. Many sellers online now have products that are better for the environment, and websites are giving rewards to customers who choose these options. Young people, like millennials, really care about supporting brands that care about the planet. When they shop online, they look for things that won't harm the environment. Online shops are now making special sections with catalogues full of these green products. They not only sell eco-friendly things but also promise to deliver them in a way that's good for the planet, using materials that can be recycled. Some new Indian online markets are also joining in by selling products that are good for the environment, from toys to personal care items to electronics.

Examples of Green Initiatives by few e-commerce platforms in India-

Amazon is the world's largest corporate purchaser of renewable energy and are on a path to powering our operations with 100% renewable energy by 2025.

Google is helping more than 500 cities and local governments globally reduce an aggregate of 1 gigabyte of carbon emissions annually by 2030.

Flipkart, for example, plans to transition its entire last-mile fleet to electric vehicles by 2030 as it aims to achieve net-zero emissions by 2040. It has also been trying to use less and sustainable packaging. In 2021, the company announced that it had eliminated single-use plastic packaging from its supply chain.

Dunzo, a last-mile delivery firm for groceries and other essential items, is relying more on micro-fulfilment centres. These small and often automated storage facilities are found in places close to end-customers. Their increased use can cut carbon emissions by reducing the need for long-haul transportation while also reducing costs.

As a partner to such Indian businesses, **DHL Supply Chain India** supports their e-commerce expansion in a sustainable manner. DHL Supply Chain India will convert its whole intra-city fleet to green fuel or electric vehicles by 2025.

SCOPE OF STUDY

The emerging trends of e-commerce in business is swiftly growing, providing countless chances for companies to enhance customer satisfaction, streamline operations, boost decision-making, and foster creativity. By embracing AI technologies, businesses can achieve a competitive advantage and unlock fresh opportunities for progress and prosperity.

DATA ANALYSIS AND INTERPRETATION

Statistics show that the world wide artificial intelligence market in commerce is projected to hit \$190 billion by 2025, demonstrating the increasing usage of AI technologies in e-commerce. 70% of companies intend to boost spending on AI technologies in the upcoming year. 45% of senior managers predict that e-commerce will make a notable difference in their sector within the following five years focusing on the sustainable development goals.

SUGGESTIONS & CONCLUSION:

To make online shopping better for the environment, everyone needs to work together. The government can help by making new rules, investing in better ways to move things, and ensuring everyone can access the internet. Companies doing online shopping should use smarter ways, like using less packaging and working with delivery companies to cause less pollution. People should know more about how their choices affect the environment, and online shops can make it fun by giving rewards and discounts for making greener choices. Even though there are some challenges like power issues and not everyone knowing about online shopping, we need to solve these problems for online shopping to be better. Especially during the COVID-19 pandemic, things got harder. Since the way products move from one place to another is crucial for online shopping, it's important to use clean energy, reduce waste, and use electric vehicles to lower pollution. Switching to eco-friendly packaging, using drones and electric vehicles for delivery, and reducing our carbon footprint are important steps to make online shopping greener, especially in India.

Sustainable Platforms: These days the e-commerce platforms are trying to switch to sustainable business models, few platforms are:

Sustainable Production: Manufacturing things in a way that's less harmful for the Earth is called sustainable production. This depends on the brand choosing materials and methods that's good for the environment. It also matters if the brand makes things that last longer, so there's less waste. Eco-friendly products keep people safe from harmful chemicals used in regular production. Online shops are also trying to use materials from local sources to reduce pollution from transportation.

Sustainable Packaging: Using packaging that's good for the environment is also a priority for online businesses. This means using materials that can be recycled or

reused, like paper or corn starch. Some businesses even deliver products in natural packaging, such as cloth bags or glass jars, to reduce their carbon footprint and save on transportation costs. Online shops are also trying to use less packing and eco-friendly labels to reduce garbage and pollution.

Sustainable Distribution: Fast shipping is crucial for online shopping, but it can harm the planet. Businesses are working on ways to make shipping eco-friendlier by using methods that produce fewer emissions.

Making e-commerce more sustainable involves three key aspects: first, being environment friendly, by creating products and processes that don't harm nature; second, making sure everyone is economically stable by creating a global market that works well and using resources wisely; and third, treating people fairly by meeting their needs and promoting cultural growth. In the world of online businesses, there are opportunities like saving money with new technology and reaching more customers, but some businesses being small and not knowing the benefits of e-commerce to how to use it effectively, find it difficult to reposition themselves. Striking a balance between these three aspects – the environment, the economy, and people – is crucial for ensuring a sustainable and beneficial future for e-commerce. Other significant changes to make the whole process better for the environment, companies are doing things like using electric vehicles for deliveries, using renewable energy, managing waste better, and supporting sellers to learn about sustainability. They are also teaming up with others in the industry to find new and better ways to make online shopping sustainable.

Taking in account the greater demands of green consumerism and changing the path of e-commerce, the reduction in the number of carbon footprints through sustainable and minimalistic production is the accelerator behind the flourishing of the e-commerce business.

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