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Apparel Product Purchase Process In Conventional Versus E-Commerce Apparel Retailing Websites Context: A Case Study

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Abstract:

The development of electronic retailing has issues in the supply chain (SC), particularly regarding environmental sustainability. This research reviews and contrasts the environmental impacts of electronic and conventional apparel retailing. This research uses secondary sources, including recent newspapers, industry statistics, articles, and environmental regulations. Even though environmental sustainability awareness started in the 20th century, this study examines the recent ten years' sources to find better results. The analysis summarizes the components of the SC line in electronic retailing that are most important. The components include packing of apparel products, transport of apparel products, return of apparel products, and disposal of apparel products. Findings present that speedy transport, plastic usage for packing apparel, and frequent apparel returns can harm electronic retailing. In addition, the research article suggests problems and remedies for the apparel electronic retailing context. As a result, the apparel industry has evolved to adopt sustainable practices with fewer adverse environmental effects. Further, this study contributes to the environmental impacts of conventional versus electronic retailing apparel firms concerning carbon-di-oxide emissions, apparel waste, and transport resource use.

Keywords*: Apparels; Electronic apparel retailing websites; Environmental aspects; Social Science, Firms planning and development.*

Introduction

On a daily basis, companies try new and fascinating strategies to increase sales. Firms invest billions on novel marketing campaigns, more attributes, customized services, and innovative technology [1]to render their products more accessible and appealing to consumers. Electronic retailing websites that are easy to navigate are a boon to shoppers who are short on time and would otherwise have to make a special visit to the store. The apparel market features mainly business and informal wear, along with affordable and luxurious necessities and prestigious designer names. The global market for apparel and footwear predicts to grow again in 2025. The forecasts anticipate the value of the worldwide apparel market at close to USD 2.0 trillion by 2026. The global expenditure on the apparel and footwear market expects to grow at a CAGR of +36.5% between 2022 and 2028, according to projections. Thus, this growth is forecasted to reach USD 4 billion by 2028 (Statista, 2023). Since there is an enormous growth in electronic retailing. Electronic retailing firms invest more time and money into developing and improving their apparel

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electronic retailing software to keep up with the rising demand. Firms invest more time and money into developing and enhancing their electronic retailing software to keep up with the high demand. Electronic apparel shopping has changed the way people buy apparel in a big way because it is so easy and easy to get. Before the 1990s, just two seasons affected the apparel industry: summer and fall (Bhardwaj, and Fairhurst, 2010). Because of the spread of mass transmission and the democratization of information, people got to wear new styles of clothes throughout the year. Apparel Firms, which make "low-priced apparel lines that replicate present luxury design trends," have risen to prominence in the past 20 years due to advancements in information gathering, production, and e-retailer sales. As apparel retailing becomes more accessible and affordable, consumers are more likely to make impulse purchases that lead to excessive clothing waste (environmental crisis). Sustainable apparel retailing is growing to offset the industry's environmental damage (Fletcher, 2012). These include apparel materials and techniques used to make apparel, packing and shipping waste and pollutants, and consumers' disposal choices. A firm can adjust more than its product to decrease its environmental impact. Firms must carry materials safely. Packing, transport, and post-purchase actions like a return or discarding of a product all increase the carbon-di-oxide emissions. Modern technologies and methods are helping fashion businesses handle logistic issues and promote sustainable business practices and environmental sustainability.

Apparel electronic retailing cuts certain pollutants but raises others, complicating its environmental impact. Apparel electronic retailing either reduces resource use or increases wastage by generating new and quicker resource requirements. Electronic retailing environmental impact divides into primary, secondary, and tertiary consequences (Tiwari, and Singh, 2011). Laptops and smartphones are the main impacts of IT systems. Electronic retailing indirectly impacts transport, packing, and other basic operations considered secondary consequences. Lastly, electronic retailing influences consumer behavior and the environment. Electronic retailing environmental impacts have gained increased attention, yet understanding is still limited, and earlier conclusions must be made more transparent. Electronic retailing apparel's environmental impact investigates further. Thus, this study sought to answer the following: (1) Is apparel electronic retailing environmentally friendly? (2) How the firms have mitigated environmental electronic retailing industry impact? This study's analysis, methods, and findings are based on a comprehensive literature review. It streamlines this paper.

Research methods

This research is descriptive. This research collects data on how electronic retailing affects consumers purchasing behavior and how that influences assessment gathered from current publications. The data on how apparel e-tailing affects apparel firms' environmental effects were collected and analyzed. This study's secondary approach included review articles, newspaper reports, industry statistics, and environmental regulations. This research uses sources from the past ten years because apparel retailing has changed significantly since its foundation in the 1990s. Since apparel electronic retailing promotes quick fashionable changes, this research data information before 2010 may no longer be relevant or may mislead by not addressing current problems and remedies. This investigation finds firm responses to societal or commercial pressure to decrease environmental electronic retailing's impact. It discusses firms' environmental activities. The issues inhibiting online apparel retailers from implementing extra eco-sustainable SC analyze in-depth, along with prospective remedies. This research includes a variety of apparel firms, from small-scale target market firms to large multinationals. It determines if the apparel firms can be sustainable throughout all stages of the SC process.

Analysis and Findings

Firm's speedy response and Trend towards fast pace of Apparel electronic retailing

Before the early 1990s, the core of apparel concentrated on essential items, except for high fashion, and design features mostly stayed the same (Bhardwaj, and Fairhurst, 2010). The SC of conventional apparel continued to wane in the former of the 20th century, while fast apparel retailing began to gain popularity. Imports of fashionable women's clothing, such as items with eye-catching colors or unusual textures, started to rise during the 1990s. Outsources of firms encourages this transition (Karpova et al. 2021). Buyers in the US and other advanced economies shifted away from cheap and bulk apparel manufacturing. Apparel electronic retailing requires warehouse management systems, central manufacturing techniques, improved transport networks, and a quick response (QS) strategy (Christopher et al. 2004). The QS method accurately matches supply and demand, decreasing the need for clearance sales to shift unwanted goods (Bruce, and Daly, 2006). Without clearance sales, buyers are more inclined to pay the retail price. Reduced lead periods allow designers and producers to monitor trend lines closer to when the apparel products sell, which means the products they SC are more in line with the current popular trends. Because of this, there are now multiple "seasons" per year in which stores entirely revamp their product lines due to the increased frequency with which they must replenish their stock. QS has drastically lowered apparel pricing. Firms outsourced production to low-income economies to minimise expenses. In the US, especially in the production employee wages $15 an hour but in India, and Bangla, it is 80 cents, and 40 cents respectively. Conventional retailing plans seasons a year ahead using historical information. Long lead times result in incorrect predictions, and conventional apparel firms have seen markdowns of over 30%. The conventional approach takes significant lead times and makes simple apparel latest designs (Cachon, and Swinney, 2011).

Electronic retailing and SC

The SC is a network engaged in various upstream, midstream, and downstream processes essential to creating, distributing, and consuming a good or service. Its goal is to transform raw resources into a final product through the coordinated efforts of numerous distribution points. Today's Firms depend heavily on their information systems for streamlined internal communication and sharing information with their SC partners. The use of several distribution points to sell the products is a modern phenomenon in the SC of the retail apparel market, which evolved just in the past decade. Multichannel distributors are becoming more prevalent as firms see value in selling products in multiple channels, most commonly electronic retailing and conventional stores. Consumers can browse a limitless assortment of products faster and simpler online; product descriptions and recommendations provide additional information. Electronic retail shopping is convenient because one can browse and buy anytime, anywhere (Mokhtarian, 2004).

Comparing the environmental impact of conventional stores and electronic retailing

Electronic retailing and conventional retailing provide the same SC process till distribution. After distributors make products, buyers transport them to the warehouse hub, which will be the nearest one for all retailers. In conventional retailing, customers must buy products at the store and take them home. E-retailers can ship worldwide without a warehouse. After receiving an online order, the distribution hub processes and packages it independently, then mails it to the receiver with other individually packed goods. The "last mile"—the transport session and packing of products from warehouses to their final destination—varies widely across e-tailers and shops, affecting the environment differently (Edwards et

al. 2010). To understand environmental electronic retailing impact, all aspects must be examined (Tiwari, and Singh, 2011). Packing, transport, returning, and waste are the secondary and tertiary segments.

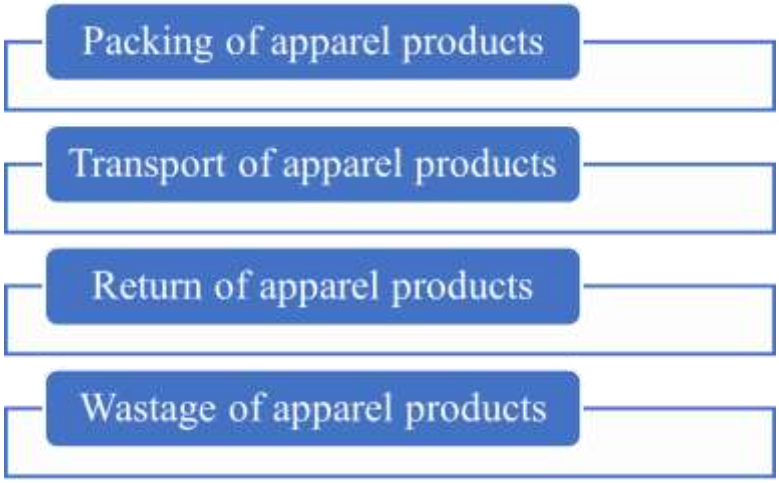

Figure 1 Four Aspects of Environment Impacts in Electronic retailing.

All four aspects of environment impact in electronic retailing are discussed below.

Packing of apparel products

Many materials used to pack products are not biodegradable (Environmental Prot. Agency 2015), so packaging, including the containers used to transport orders online, accounts for 30% of US wastage. One of the packing's primary functions is to protect its contents from harm in transit. Packaging reduces product damage and ensures delivery. Maintaining brand familiarity and advertising the product generally a main goal for retailing. In conventional retail, design their product packaging to stand out from competitors and assure safety is very important. However, in electronic retailing, the goods flow directly from the fulfilment center to the buyer, so appearance is not a primary concern. In electronic retailing firms' values see in product packing. 66% of buyers think a firm's packing reflects its service experience because the caliber and quantity of materials used indicate how much attempt it will put into safeguarding the apparel product. Hence, it reaches securely at anyone's doorway. Some firms' product packing adds to e-shopping's waste, although the appearance is essential for brand reputation and promotion. Firms packing accounts for 22% of electronic order discharge of carbon-di-oxide emissions, according to 2011 estimates (Business insider, 2013).

One shipment with a 100 grams carton box and 33 grams of insulation emits 181 grams of carbon-di-oxide emissions. In conventional retailing, plastic bags produce less than 11 grams discharge of carbon-di-oxide emissions and are employed equal to fifteen times for any purchasing trip (Van Loon et al. 2015).

Dennis, the head of the Fibre Box Organization, says that the demand for cartons in electronic retailing is increasing more than in other sectors. Fibre Box Organization is the reprocessing firm's strongest supporter of a sustainable environment. Fibre Box President Dennis said electronic retailing is the fastest-growing market for cartons. The non-profit Fibre Box Organization represents North American packing manufacturers (Richtel, 2016). Dennis says that 90% of the company's products were recycled. Additionally, he says recycling a carton does not reduce its environmental impact. Thus, this is considered a

problem for apparel retailing sectors for which this study provides remedies in the discussion session.

Transport of apparel products

Physical distribution includes all operations that move items from manufacture to purchase. These stages include warehousing apparel products, regulating the flow of SC, selling apparel products, then transporting products. Firms must use faster, costlier transport to meet consumers' growing need for speedier delivery. 78% of consumers want internet orders processed within 24 hours due to high-speed transportation systems. Consumers indirectly pressure firms to utilize environmentally damaging methods to carry the shipment process from the SC to a desired location.

Environmental electronic retailing impact also includes home delivery. Electronic shopping increased UK package transport kilometers by 40% over ten years (1999 - 2009). Due to their size and city driving, delivery vans produce many carbon dioxide emissions. The final stretch of shipments in internet retail releases 30% less carbon dioxide emissions than conventional stores (Weber et al. 2009).

This study compared the carbon dioxide emissions of apparel electronic retailing to conventional stores, considering the routes from the retail stop to the inventory and the consumers' place. E- retailing required investigators to estimate the carbon dioxide emissions of various paths. This estimation comprised transport from the main inventory to an outward hub, then to the inward hubs, then lastly toward the consumers' place. The result discusses electronic shopping reduces carbon dioxide emissions for consumers who travel more than 14 kilometres to the store. If they go less than 14 kilometres, the conventional retailer is the most power-effective alternative (Wiese et al. 2012). Conventional retailing generates 65% of its carbon dioxide emissions from consumer travel (Edwards et al. 2010). This travel is especially problematic for apparel shops because consumers tend to move far beyond more notable routes to their preferred apparel outlets, releasing more carbon dioxide emissions. Electronic retailing fails when drivers cannot deliver a shipment because the consumer is not home. Over ten years (1996 - 2006), 22% more homes had both couples working, making it less likely that a person would be able to pick up a shipment. About 1/5th, homeowners miss 12% of shipments (Fernie et al. 2010). According to the firm's policy, drivers must store shipments and try to deliver them the next day. Another study found that when a firm wants the customer to sign for the delivery instead of just leaving it at the doorway, 25% of deliveries fail (Edwards et al. 2010). Transport transit raises carbon-di-oxide emission intensity from 181 grams to 226 grams when 1/4th of delivery fails. Therefore, this poses a challenge for apparel retailers.

Return of apparel products

E- retailing apparel returns are 30%, compared to 9.96% of store sales (Shah, 2023). Fitting problems account for 17% out of 30% of electronic retailing apparel returns (Dua, 2023). E- retailing unique apparel variables, including the inability to touch, and try on the apparel product before buying it, explains the enormous gap between the two percentages. Thus, consumers typically need help finding fitting and appearance problems when the apparel product arrives. Online buyers face these problems; therefore, firms make returns easy. 72% of electronic businesses pay for shipment, return, or both, making buyers more likely to return their purchases. As electronic retailers continue to grow, reverse logistics will become increasingly critical as online stores learn to deal with higher rates of returning products and figure out how to route returns via the SC. The most environmentally friendly approach to returning an apparel product is to change its transport shipment paths. This

approach emits 362 grams of carbon dioxide emissions; however, if the consumer returns an apparel product to the retailer's physical place, their carbon dioxide releases above 4400 grams. This release includes a typical trip to a shopping outlet and back again. Mail-returned products cannot be combined. Delivery providers drive more miles for each product, decreasing effectiveness (Edwards et al. 2010). Thus, it creates a problematic situation for businesses that sell apparel.

Wastage of apparel products

Apparel fashion helps people communicate their emotions and social demands. Since apparel fashions have transformed quickly, one must keep up with trends to fit in socially. New generations are more in sync with rapid apparel fashion trends and prefer to buy numerous cheap clothes they expect to throw away within a few months. In contrast, older generations prefer only fewer, higher-quality apparel. Also, new generation is seen as excessively unsustainable products.

Apparel fashion, which combines quick production of apparel products and fast shipment with the planned obsolescence of modern apparel, leads to the wastage of products. Nowadays, apparel products develop to last just a specific period, after which people toss them out and buy new products. Every year, Americans throw away 68 pounds of apparel, which goes to landfills (Claudio, 2007). Apparel fashion, which accounts for 20% of apparel production, contributes to methane leaks and groundwater contamination (Niinimäki, 2010). Americans recycled approximately 34% of 254 million pounds of solid waste generated garbage in 2013. EPA denotes Environmental Protection Agency. According to the EPA, leather and textiles make up 9% of American garbage (Nicholas Gilmore, 2018).

Consumers are either packrats or purgers. Purgers prefer to get rid of unwanted products to keep their homes organized. However, packrats have a mental and emotional tie to their products and keep products they no longer need in the hopes of using them again (Marciniak, and Mohsen, 2016). New-generation apparel fashion has made it more likely to throw away apparel products. Due to increased availability, consumers have a less emotional connection to their apparel products and are more inclined to discard them than in old generations. Consumers now perceive their apparel as quickly interchangeable due to electronic retailing; therefore, holding on to outdated apparel is more expensive and undoubtedly less fashionable than ordering modern apparel.

Discussion

New Environmental Remedies Influence Sustainability

Due to a rise in consumers' sensitivity to the environment, firms face an increased need to incorporate sustainability initiatives in practices. Partnerships, strong associations, and regulating norms all contribute to these practices. The Sustainability Apparel Association (SAA) is a group of significant apparel firms that have merged with others to share knowledge on sustainability concepts and quantify their environment-friendly aspects to use the Higg Index (HI), which the association created in 2016. Firms calculate the retailer's final HI score during a SC process of business information in the online platform. Other retailers' scores are available to SAA representatives, and though they are confidential, firms may nonetheless evaluate where they rank among key rivals and aspire for improvements.

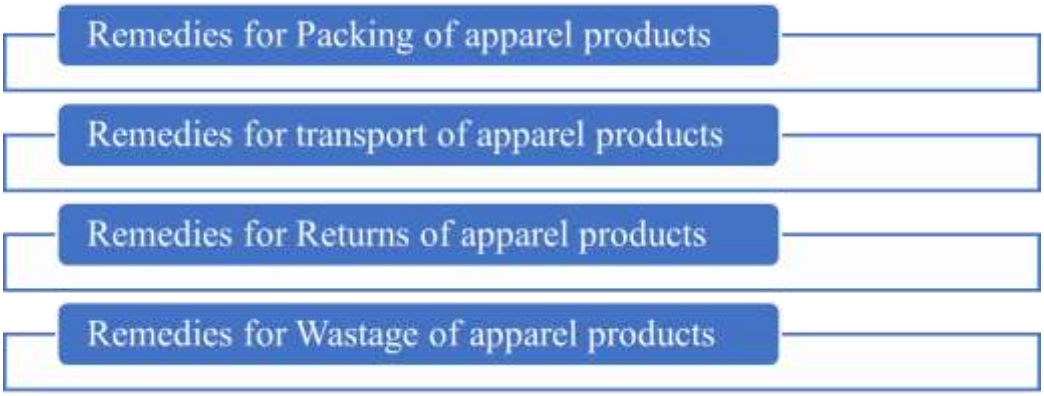

Figure 2 New environmental remedies influence sustainability.

The remedies are elaborated as follows.

Remedies for packing of apparel products

Consumers generally not consider the environmental influence for their special brands, from manufacturing to delivery, but they do sense the product in its package. Sealed Air found that 56% of electronic retailing consumers dislike the packing, with their top two complaints being the impossibility of recycling it and the complexity of disposing of it (Hannah Furlong, 2016). Some firms have discovered imaginative ways to reduce waste and increase reusable products to win over environmentally concerned consumers who are frustrated with product packing. The firm of All Countries' Clean Clothes System uses pure cotton from India, environmentally conscious and sustainable dyeing, and 100% recyclable materials envelope-like packing to avoid plastic products from the SC. Thus, it creates a problematic situation for businesses that sell apparel. That is why this remedy is so beneficial for apparel retailers to use 100% cotton bags; it allows them to demonstrate their commitment to environmental responsibility more clearly.

Remedies for transport of apparel products

United Parcel system (UP) in America and Canada approaches sustainability similarly. UP drove 150 million alternative fuel trips in America in early 2014, approximately up 60% from 2013. UP wants to cut its natural gas and diesel usage by 12% in early 2019 using propane, ethanol, biomethane, and electrical energy. UP intensifies progress, 2015. UP also uses route optimization applications to determine the quickest path for drivers, resulting in cost savings (Lin, and Ho, 2008). As a result, if apparel retailers adopt natural gas and electric vehicles, it helps them provide environmental sustainability more remarkably.

Remedies for returns of apparel products

Electronic retailing quickly embraces technology that improves consumer engagement and firm productivity. ASOS firm visualize fitting applications lets consumers compare the measurements of an apparel product they already possess to one they are considering buying on the website. They can then compare their apparel product to the internet item and choose the right size. ASOS firm cut returns by 50% by helping e-shoppers understand fit. Sustainable technologies can improve return management, but returns are unavoidable. The return percentage can be lower if electronic apparel retailers follow ASOS firm technologies.

Remedies for wastage of apparel products

Only 15% of worn apparel in the US is recycled or given; however, practically all textiles reprocess to avoid landfilling. For every 0.45 kilograms of apparel reprocessed, up to 1.81 kilograms of carbon dioxide emissions avoided (Recycling tech, 2017). Consumer-to-consumer selling is growing to reduce apparel waste. It makes designer brands more affordable, especially for youngsters. Poshmark is a renowned online second-hand retailer. This website features an app that lets people post apparel to sell, with daily uploads worth over $2 million. Sustainability marketing can boost second-hand usage. Marketers can emphasize second-hand usage principles, including environmental, to gain social attitudes.

Target retailers allow the consumer to purchase "luxurious products, kid's or women's apparel" for target store credit. Target will pay for UP shipping, or consumers can leave off their apparel at specific retailers. They will receive a confirmation email and a gift voucher for their charitable contribution. Target recycles apparel it cannot sell (Business Insider, 2015). Although the consumers for these websites are primarily youngsters and middle-income group individuals, it is also more probable that they will purchase a product on the internet. Thus, second-hand usage largely influences sustainability, which is considered the best way to reduce electronic retailing wastage in apparel.

Conclusion and Implications

This new topic of research on electronic retailing and sustainability is currently developing. These studies claim that SC and consumer behavior aspects affect results. Electronic retailing produces less discharge of carbon dioxide. However, the manner of transport and shipment management speed can change this. Consumer preference for relatively immediate delivery of electronic orders forces electronic retailers to choose between providing consumers with what they want and being environmentally friendly. The former improves sales and satisfies consumers. Firms frequently need to pay more attention to green SCs to attract and retain consumers, but in some cases, they can be win-win. This article suggests that while online buying is now more environmentally beneficial than conventional retailing, firms can still enhance their sustainability. E-tailers can customize their packing to their target audience by addressing the concerns of e-buyers. If products send in adequately sized cartons, and all plastic packing covers are recyclable, consumers will believe they support the environment and prefer to shop more. To accelerate shipment, firms generally split orders and send them separately, increasing packing, transport, and carbon dioxide emissions. E-tailers might provide buyers credit score for choosing a slower, more effective inventory management method. Advertising that awaiting below ten days for purchase is environmentally beneficial may motivate people to employ this business, but the majority will choose comfort to reduce emissions. Consumers who support sustainability receive store credits or other compensations. For instance, amazon prime members who choose no-rush shipping now receive benefits for future orders. Retailers and parcel transporters must redeliver packages due to a surge in unsuccessful shipments. UP lets users select delivery choices and sign for products online. Online consumers want ease and will subscribe once the benefits exceed the price. Saving delivery options with each electronic retailer account simplifies managing multiple distribution services. It gives the retailer more flexibility over how much time and effort they will invest in the deliveries.

Limitations and future research

This article analyses relevant research studies but does not collect primary data on electronic retailing SC line environmental impacts. Thus, the study needs more depth information on carbon dioxide emissions and resource use. Future research might obtain survey methods from apparel electronic retailing SC for more detailed results. Some firms

are honest about their environmental impact, while many are not. This situation impacts the researchers to contact firm executives or run their testing to evaluate facts to examine. As electronic retailing is increasing, it is crucial to assess its environmental impact.

References

Bhardwaj, V. and Fairhurst, A., 2010, Fast fashion: response to changes in the fashion industry. The international review of retail, distribution and consumer research, 20(1), 165-173.
Bruce, M. and Daly, L., 2006, Buyer behaviour for fast fashion. Journal of Fashion Marketing and Management: An International Journal, 10(3), 329-344.
Business insider, 2013, Here's How Online Retailers Can Increase Profits By Reducing Their Packaging | Business Insider India, Date of access: 27-01-2023. https://www.businessinsider.in/Heres-How-Online-Retailers-Can-Increase-Profits-By-Reducing-Their-Packaging/articleshow/23313825.cms
Business Insider, 2015, Target will now give you store credit for used clothes, Business Insider, Date of access: 26-01-2023. https://www.businessinsider.in/target-will-now-give-you-store-credit-for-used-clothes/articleshow/49458063.cms
Cachon, G.P. and Swinney, R., 2011, The value of fast fashion: Quick response, enhanced design, and strategic consumer behavior. Management science, 57(4), 778-795.
Christopher, M., Lowson, R. and Peck, H., 2004, Creating agile supply chains in the fashion industry. International Journal of Retail & Distribution Management, 32(8), 367-376.
Claudio, L., 2007. Waste couture: Environmental impact of the clothing industry. Environmental Health Perspectives, 115 (9), A449–A454.
Dua, T., How retailers are combatting e-commerce returns this holiday season, Digiday, Date of access: 27-01-2023. https://digiday.com/marketing/retailers-combatting-ecommerce-returns-holiday-season/
Edwards, J.B., McKinnon, A.C. and Cullinane, S.L., 2010, Comparative analysis of the carbon footprints of conventional and online retailing: A "last mile" perspective. International Journal of Physical Distribution & Logistics Management, 40(1/2), 103-123.
Environmental Prot. Agency 2015, Advancing Sustainable Materials Management: Facts and Figures Report, Date of access: 27-01-2023.
Fernie, J., Sparks, L. and McKinnon, A.C., 2010, Retail logistics in the UK: past, present and future. International Journal of Retail & Distribution Management, 38 (11), 894–914.
Fletcher, K., 2012, Sustainable fashion and textiles: design journeys (Routledge).
Hannah Furlong, 2016, Consumers Love E-Commerce's Convenience, But Not Its Cardboard - Sustainable Brands, Date of access: 27-01-2023. https://sustainablebrands.com/read/chemistry-materials-packaging/consumers-love-e-commerce-s-convenience-but-not-its-cardboard
Karpova, E., Kunz, G.I. and Garner, M.B., 2021, Going global: The textile and apparel industry (Bloomsbury Publishing USA).
Lin, C.Y. and Ho, Y.H., 2008, An empirical study on logistics service providers' intention to adopt green innovations. Journal of technology management & innovation, 3(1), 17-26.
Marciniak, R. and Mohsen, M.G., 2016, Post-Purchase Consumer Behaviour, Sustainability and its Influence on Fashion Identity. In Fashion: Tyranny and Revelation (pp. 203-219). Brill.
Mokhtarian, P.L., 2004, A conceptual analysis of the transportation impacts of B2C e-commerce. Transportation, 31(3), 257-284.
Nicholas Gilmore, 2018, Ready-to-Waste: America's Clothing Crisis, The Saturday Evening Post, Date of access:27-01-2023. https://www.saturdayeveningpost.com/2018/01/ready-waste-americas-clothing-crisis/
Niinimäki, K., 2010, Eco-clothing, consumer identity and ideology. Sustainable development, 18(3), 150-162.
Recycling tech, 2017, New Clothing Recycling Technology Aims to Reduce Clothing Waste. Planet Aid, Inc., Date of access: 27-01-2023. https://www.planetaid.org/blog/could-a-new-recycling-technique-help-save-climate-change
Richtel, M., 2016, E-Commerce: Convenience Built on a Mountain of Cardboard. The New York Times, Date of access: 26-01-2023. https://www.nytimes.com/2016/02/16/science/recycling-cardboard-online-shopping-environment.html
Shah, R., Fixing How Clothes Fit You Can Reshape Online Retail Logistics, Forbes, Date of access: 27-01-2023.
Statista, Fashion consumer spending in the World 2028, Date of access: 26-01-2023.

https://www.statista.com/forecasts/1161735/fashion-consumer-spending-forecast-in-the-world
Tiwari, S. and Singh, P., 2011, E-commerce: prospect or threat for environment. International Journal of Environmental Science and Development, 2(3), 211-217.
https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/advancing-sustainable-materials-management
Van Loon, P., Deketele, L., Dewaele, J., McKinnon, A. and Rutherford, C., 2015, A comparative analysis of carbon emissions from online retailing of fast moving consumer goods. Journal of Cleaner Production, 106, 478-486.
Weber, C.L., Hendrickson, C.T., Matthews, H.S., Nagengast, A., Nealer, R. and Jaramillo, P., 2009, May. Life cycle comparison of traditional retail and e-commerce logistics for electronic products: A case study of buy. com. In 2009 IEEE International Symposium on Sustainable Systems and Technology (pp. 1-6). IEEE.
Wiese, A., Toporowski, W. and Zielke, S., 2012, Transport-related CO2 effects of online and brick-and-mortar shopping: A comparison and sensitivity analysis of clothing retailing. Transportation Research Part D: Transport and Environment, 17(6), 473-477.
https://www.forbes.com/sites/rawnshah/2014/04/11/fixing-how-clothes-fit-you-can-reshape-online-retail-logistics/