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Sourcing Sustainability: The Impact of Dead Stock Fabrics and Zero Waste Fashion

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Sourcing Sustainability: The Impact of Dead Stock Fabrics and Zero Waste Fashion

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ABSTRACT

In an era of heightened environmental awareness, the fashion industry faces a pivotal moment. 'Sourcing Sustainability: Dead Stock Fabrics and Zero Waste Fashion' examines two promising strategies for reducing the industry's ecological impact. Dead Stock fabrics, surplus materials with potential, offer a unique opportunity to cut waste and preserve resources. This paper explores their economic, environmental, and ethical aspects, as well as their potential to stimulate creativity, support local economies, and promote circular fashion. Additionally, the study delves into zero waste fashion principles, including design practices, environmental benefits, and potential challenges in mainstream adoption.

Keywords: Sustainable practices, Waste reduction, Creative design thinking, Environmental consciousness

Introduction

In the ever-evolving world of fashion, the pursuit of sustainability has emerged as a critical imperative. The fashion industry, with its significant environmental footprint, stands at a crossroads, facing an urgent call for transformative change. This research paper, entitled "Sourcing Sustainability: Deadstock Fabrics & Zero Waste Fashion," seeks to investigate innovative approaches at the nexus of environmental stewardship and fashion innovation. We focus on two particularly promising strategies: the use of deadstock fabrics and the adoption of zero waste fashion design principles.

The fashion sector is expanding, yet the prevalent model of affordable, fast fashion carries with it a considerable ecological cost. While some brands are pioneering efforts to minimize waste, enhance recycling efforts, and promote upcycling, achieving greater sustainability in fashion requires a concerted effort from both consumers and the industry at large.

Today's mass production and consumption paradigm often results in significant waste, a trend that the fashion industry mirrors. The quick turnover of fashion trends encourages a cycle of continuous purchasing, leading to a situation where many items are barely used before being discarded. This cycle is exacerbated by the growing demand for fast fashion, which, in turn, amplifies the industry's environmental impact. The negative consequences of this cycle are evident throughout the fashion supply chain, from the cultivation of raw materials to the disposal of garments that are no longer in use. As awareness of the darker side of fashion grows, so too does demand for change (*Debbie Moorhouse, 2020 Jul 24*).

Among the strategies poised to address these sustainability challenges, the use of deadstock fabrics and the implementation of zero waste fashion design principles stand out. Deadstock fabrics—surplus materials from production processes—offer an opportunity to reduce waste by repurposing what would otherwise be discarded. Zero waste fashion design, meanwhile, challenges designers to create garments that leave no material unused, thus minimizing the environmental impact of production. Together, these approaches represent viable paths toward a more sustainable fashion industry, highlighting the potential for innovation in reducing waste and promoting environmental responsibility.

1. Deadstock Fabrics: A Sustainable Resource

Amid the growing concern over excessive clothing production, with some reports estimating that up to 100 billion new garments are produced annually, the issue of surplus unused or "deadstock" fabric in manufacturing mills warrants critical attention (*Sustainability 101: What is deadstock fabric, 2023*). Deadstock fabrics—leftover fabric rolls from fashion designers and garment manufacturers—constitute a significant resource. Without proper intervention, these materials are destined for waste, yet they embody a substantial opportunity for repurposing by other designers and makers. Known interchangeably as overstock, surplus, or jobber fabric, these resources share the common fate of potential wastage, offering instead a sustainable alternative for sourcing materials.

Deadstock fabrics emerge as an excellent choice for those seeking to enhance the sustainability of their sourcing practices. It's crucial to recognize, however, that these fabrics typically come in limited quantities and may not always align with conventional standards of perfection. Nevertheless, they represent a valuable avenue for waste reduction. The term "deadstock" itself was popularized by fashion insiders in the early 2000s, a period marked by growing awareness of textile waste and its environmental implications. This shift in consciousness led many companies to either donate their excess fabric to charitable organizations or sell it at discounted prices, reflecting a significant evolution in the perception of deadstock fabric, especially from a sustainability perspective (*Kochar, 2021*).

Understanding the distinction between deadstock and vintage fabric is crucial. Deadstock fabric refers to unused or excess material from fashion designers, manufacturers, and textile mills—essentially, new fabric that hasn't been utilized in production. In contrast, vintage fabric denotes recycled material that has been previously owned, often imbued with historical and aesthetic value (*Sustainability 101: What is deadstock fabric, 2023*). This differentiation highlights deadstock fabric's unique position within sustainable fashion, offering unused resources a second chance at utility, in contrast to vintage fabric's cycle of reuse and historical significance.



Figure 1. Deadstock fabrics



Figur. 2. Example of use of deadstock fabrics

1.1 Reasons Behind the Existence of Deadstock

Deadstock fabric arises due to several key factors that contribute to its accumulation in the fashion and textile industry. These include:

- Excessive Ordering by Brands: Often, fashion brands may overestimate their material needs, leading to an order of quantities larger than required. This precautionary measure, intended to avoid shortages, can result in a significant surplus of materials once production is complete (*Fletcher, 2014*).
- Overproduction by Textile Mills: Textile mills, aiming to ensure efficiency and meet potential demand, might produce more fabric than ordered by their clients. This overproduction, although done to manage uncertainties in supply and demand, contributes to the accumulation of unused fabrics (*Gam, 2016*).
- Manufacturing Imperfections: Errors in dyeing, printing, or other processing stages can render fabrics unsuitable for the intended final product. These imperfections, ranging from color mismatches to flawed prints, lead to the classification of such materials as deadstock (*Munkedal & Bailey-Cooper, 2021*).
- Quality Control Rejections: Materials that fail to meet the stringent quality standards set by brands or regulatory bodies are rejected. These rejections could be due to various reasons, including texture inconsistencies, durability concerns, or deviations in fabric composition. Rejected materials that didn't meet the Quality standards (*Mastronardo, 2021*).

2. Zero Waste: An Integral Approach to Sustainability

Zero waste fashion embodies a sustainable approach to creating clothing that ensures no fabric is discarded. This methodology might involve crafting garment patterns so meticulously that each piece of fabric is utilized fully, resembling a fabric version of puzzle assembly. Alternatively, it could mean designing clothes in a manner that generates "leftovers" shaped in ways that are practical for crafting smaller items. Furthermore, zero waste fashion may refer to brands that follow conventional cutting techniques but commit to repurposing every piece of leftover material – either by incorporating them into new products or recycling them into fresh fabric.

The manifestation of zero waste fashion varies among brands and individuals who embrace this eco-conscious principle, but its essence revolves around the complete elimination of waste during the clothing manufacturing process.. (Allende, 2022)

Zero waste fashion's appearance and implementation may vary widely across different brands and individuals committed to minimizing waste, yet its foundational aim is consistent: to reduce or eliminate waste in clothing production. Although the term "zero waste" might seem modern within the context of the fashion world, the ethos behind zero waste fashion is deeply rooted in history. In the era before the mass industrialization of fabric and garment creation, squandering materials during clothing construction was generally discouraged. Many traditional garments from diverse cultures were fashioned with zero waste principles in mind. For instance, the Japanese Kimono and the Indian Saree are notable examples. Similarly, in ancient civilizations such as Greece and Rome, apparel often comprised simple, efficiently cut shapes like draped rectangles, which minimized fabric waste. Unfortunately, the rise of fast fashion led to a temporary eclipse of these sustainable practices in Western culture. However, a growing focus on sustainability across various sectors is now reviving the appreciation for and application of low-waste methodologies in fashion. (Allende, 2022)

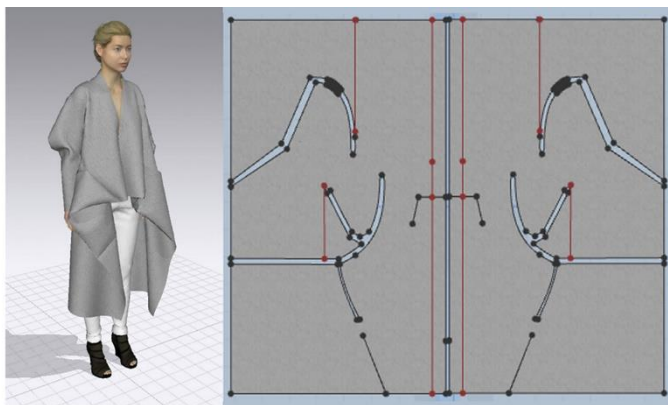


Figure 3Holly McQuillas use of zero waste



Figure 4Runway
Zerowaste

3. Methodology

The research paper "Sourcing Sustainability: The Impact of Dead Stock Fabrics and Zero Waste Fashion" employs a mixed-methods approach to explore the multifaceted impact of deadstock fabrics and zero waste principles within the fashion industry. This methodology section outlines the steps taken to investigate these sustainable practices, including their economic, environmental, and ethical implications.

Literature Review- A comprehensive literature review was conducted to gather existing knowledge on deadstock fabrics and zero waste fashion. This review covered academic journals, industry reports, and case studies, focusing on historical practices, current trends, and future prospects.

Quantitative Analysis- An environmental impact assessment was conducted to quantify the reduction in waste and carbon footprint achieved through the use of deadstock fabrics and zero waste practices. This involved calculating the potential savings in water, energy, and raw materials.

Experimental Testing -An experimental approach was used to create garments using deadstock fabrics and zero waste techniques. This process involved:

Design and Creation, designing patterns that maximize fabric use and creating a series of garments to test the feasibility and aesthetic appeal of zero waste designs.

Performance Testing, evaluating the durability, comfort, and overall performance of the created garments compared to those produced through conventional methods.

4. Testing

Utilizing draping in the development of new garments or collections entails a meticulous process that blends creativity, technical prowess, and a keen eye for detail.

Incorporating the concepts of zero waste and deadstock fabric aligns with the wider ideals of sustainability, minimalism, and responsible consumption. Within the realm of Scandinavian zero waste fashion, draping emerges as an essential technique for crafting garments that significantly reduce environmental impact and waste. This method not only conserves resources but also encourages innovative design approaches, ensuring that each piece of fabric is used to its fullest potential, thereby embodying the essence of sustainable fashion.

Material Selection - The project began with a focus on sustainable and eco-friendly materials, selecting fabrics with a minimal environmental footprint, such as deadstock fabrics, and considering the material's life cycle from sourcing to disposal.

Zero Waste Design Principles - After familiarizing with the concept of zero waste, the conceptualization process started. The goal became to create patterns that generate little to no fabric waste, involving strategic placement of pattern pieces to utilize fabric efficiently.

Conceptualization - Embracing simplicity, functionality, and a connection to nature became a priority, considering how the garment aligns with values of longevity and timeless design.

Draping Session- The draping process began with an emphasis on zero waste principles, aiming to use the entire fabric without generating significant scraps. Innovative methods to fold, pleat, and layer fabric were explored to create the desired silhouette while minimizing waste.

Modularity and Versatility - Modularity was integrated into the designs, creating garments with modular components that can be mixed and matched to extend the lifespan of the wardrobe. **This approach aligns with the Scandinavian emphasis on versatility and practicality.**

Minimalist Aesthetics - Minimalist aesthetics were embraced during the draping process, focusing on clean lines, simple silhouettes, and a subdued color palette. This approach not only aligns with Scandinavian design principles but also contributes to timeless and enduring fashion.



Figure. 6. Shkurte Ejupi`s design using zerowaste and deadstock fabrics



Figure. 5. Donika Rexhepi`s design using zerowaste and deadstock fabrics





Figure. 7. Zana Maxhuni's design using zerowaste and deadstock fabrics.



Figure. 8. Edonita Telaku's design using zerowaste and deadstock fabrics

5. Conclusions and Practical Recommendations

Reduced Textile Waste: The utilization of Dead Stock fabrics and the implementation of zero waste fashion design principles have a significant impact on reducing textile waste within the fashion industry.

Cost-Efficiency: The adoption of these sustainable practices can lead to cost savings for fashion brands.

Environmental Benefits: Both Dead Stock fabrics and zero waste fashion design contribute to environmental sustainability.

Consumer Appeal: Sustainable practices, such as the use of Dead Stock fabrics and zero waste design, resonate with environmentally-conscious consumers.

Innovation and Creativity: Embracing sustainability in fashion design fosters innovation and creativity.

Economic Viability: The cost savings associated with these sustainable practices can contribute to the economic viability of fashion brands.

Long-Term Sustainability: The findings suggest that the adoption of Dead Stock fabrics and Zero Waste Fashion Design principles offers a pathway to long-term sustainability in the fashion industry.

Based on our findings, we propose practical recommendations for the fashion industry:

Fashion brands should actively incorporate sustainable practices like utilizing Dead Stock fabrics and zero waste fashion design principles into their operations.

Consider investing in and sourcing Dead Stock materials, which are not only environmentally friendly but can also offer cost savings compared to new textile production.

Fashion brands should recognize their role in environmental conservation and prioritize the reduction of their ecological footprint.

Incorporating Dead Stock fabrics and sustainable design practices reflects a commitment to ethical and responsible fashion.

Encourage designers to explore innovative approaches in sustainability. Sustainability can foster creativity and innovation in design, offering opportunities for unique and appealing products.

Implement mechanisms for tracking and assessing the impact of sustainable practices on cost savings, waste reduction, and consumer appeal.

Understand that the adoption of Dead Stock fabrics and zero waste fashion design principles offers a pathway to long-term sustainability and economic viability in the fashion industry.

Opens Pathways for Further Research:

Exploring the adoption of Dead Stock fabrics and zero waste design in fashion opens numerous research opportunities. Key areas include assessing the long-term effectiveness of these sustainable practices, their influence on consumer purchasing behavior, and the market reception of innovative sustainable materials. Additionally, examining the supply chain transparency, especially in sourcing Dead Stock materials, and the economic implications of adopting eco-friendly practices offers insights into the profitability and cost-efficiency for fashion brands. Environmental impact assessments of these practices, the role of policy in promoting sustainability, technological advancements aiding sustainability, the impact of educational initiatives on fostering a sustainability mindset, and a comparative analysis of global sustainability practices in fashion, are crucial. This research can deepen understanding of sustainability in the fashion industry, identifying strategies to minimize environmental impact while maintaining economic and consumer appeal.

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