

THE TRANSPARENCY IN APPAREL SUPPLY CHAINS: A SYSTEMATIC REVIEW

Sawani Madumali^{1,2}, Buddhi A. Weerasinghe^{1,2}, Amila Thibbotuwawa^{1,2}, H. Niles Perera^{1,2}

¹*Department of Transport Management & Logistics
Engineering, University of Moratuwa, Sri Lanka.*

²*Center for Supply Chain, Operations and Logistics
Optimization, University of Moratuwa, Sri Lanka.*

madumalipsb.21@uom.lk, buddhia@uom.lk, hniles@uom.lk, amilat@uom.lk

ABSTRACT – The emergence of complexity, volatility, and competitiveness has made the apparel industry thrive towards a fast-growing global market. As a result, transparency in the supply chain has become one of the most prominent demands of consumers nowadays. However, the available review studies have not predominantly focused on the transparency aspect in a broader perspective within the apparel supply chain. Consequently, a significant research gap was identified in systematic reviews focused on transparency in apparel supply chain research. In this concern, this study is conducted by bridging the studies coming out from the transparency in the apparel supply chain introducing four research clusters that were systematically derived through Scopus based on author keywords of the paper pool. In addition, the evolution of transparency in the apparel supply chain is critically analyzed based on the derived four clusters. Moreover, based on the findings and identified research gaps through literature, the review proposes future research directions in the scope of transparency in the apparel supply chain for the growth of the field.

Keywords: Transparency; Traceability; Apparel Supply Chain; Blockchain; Systematic Literature Review

1. INTRODUCTION

With the rising complexity of the textile and fashion industry, the current supply chain management systems are facing serious problems such as tampering of products, poor traceability, lack of real-time information sharing and unsustainable production practices [1]. This fragility in supply chains has enforced the apparel industry to adopt sustainable production processes. For stakeholders in the apparel supply chain, having traceability and real-time information sharing improves relationships, increases productivity, and reduces the risk and cost of product recalls, counterfeit, and unethical labor practices. In this regard, to fill up the gaps in information flow, feasible technical tools should be examined in greater detail to evolve better communication as such to enable traceability. Addressing aforementioned transparency issues, innovative tools and techniques have been explored such as blockchain that are enhancing traceability and transparency.

Based on the available literature, it was discovered that there is a rising frequency of publishing studies on transparency and traceability. However, through the investigation of review studies, it was revealed that the focus on the apparel supply chain has not been evaluated from a broader perspective of transparency. Hence, the lack of systematic reviews in the scope of transparency in the apparel supply chain was recognized as a major research gap, which is directing to a new scope to be contributed. Considering that, the aim of the study can be introduced: “Conducting a systematic literature review to discuss ongoing research and reveal potential areas for future research within the scope of transparency in the apparel supply chain”.

2. METHODOLOGY

As revealed by Perera, et al (2020) [2], Perera et al. (2019) [3], and Davarzani et al. (2016) [4], nine steps were followed in the systematic process. As the first step a thorough background search was conducted on the most significant papers following, their contributions and timeline, so as to define a Keyword Structure (KS). As the second step the Scopus database was used for searching the relevant papers using the defined KS. Then,

the search result was narrowed down to journal publications that are published in English as the third step. Once this step is completed, the comma-separated values (CSV) file is downloaded from Scopus. Inclusion keywords were used to extract relevant papers while exclusion keywords were applied in excluding irrelevant papers in the fourth and fifth steps of the systematic process. Then the paper pool was cross-checked with defined benchmarking papers: Bhaduri and Ha-Brookshire (2011) [5], Cheng et al. (2013) [6], Ma, Lee, and Goerlitz (2016) [7], Pérez et al. (2020) [8], Brun, Karaosman, and Barresi (2020) [9], Gonçalves and Silva (2021) [10]. For the next step, 70 papers were filtered in the finalized pool for the analysis. The recent trend in publishing within the scope was evaluated through a bibliometric analysis as the 8th step. As the final step, a further analysis was done to understand how the research is conducted in the domain by clustering them. Cluster analysis was generated based on the author keywords that were included by the authors of each paper.

3. RESULTS AND DISCUSSION

3.1. Bibliometric Analysis

The bibliometric analysis clearly indicates a rapid growth in publishing under the scope of transparency in the apparel supply chain. 51.43% of the papers out of all the relevant peer-reviewed journal articles are published within 2020, 2021 and 2022 recording a trend within the scope. This trend publishes more focused research on niche areas deeply. Further significant points pertaining to publication trends are critically analyzed under the bibliometric analysis.

3.2. Cluster Analysis

Using the four equations developed by Van Eck & Waltman [11]; Equation 1: The association strength normalization, Equation 2: The total weight of all edges in the network, Equation 3: VOS mapping technique – minimization function and Equation 4: VOS clustering technique – maximization function, four research clusters were revealed based on author keywords of the paper pool which was derived through Scopus

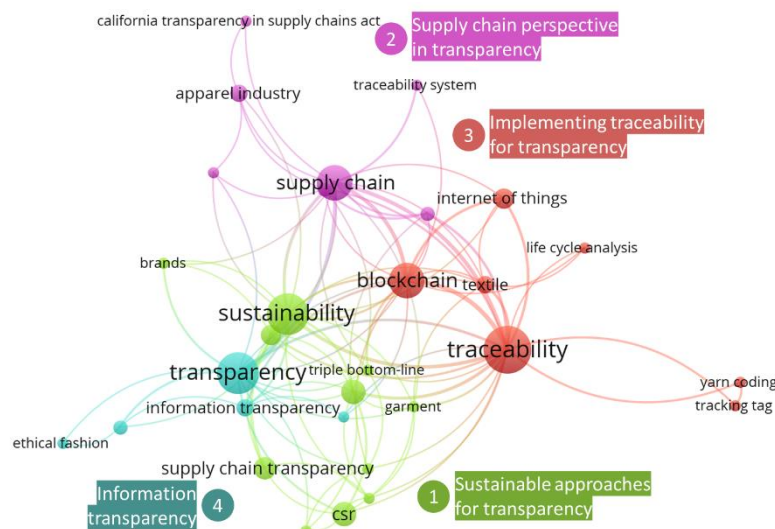


Figure 1. Research clusters - Transparency in the apparel supply chain

systematically: 1) Sustainable approaches for transparency, 2) Supply chain perspective in transparency, 3) Implementing traceability for transparency and 4) Information transparency as shown in Figure. The available research is critically reviewed under each cluster.

Moreover, the evolution of transparency in the apparel supply chain is discussed based on the derived clusters. In summary, the scope of transparency in the apparel supply chain has been moved towards niche areas such as ethical fashion, life cycle analysis, blockchain and modern slavery evolving from broad scopes such as

supply chain management, fashion industry and social responsibility. Finally, based on the findings and identified research gaps through literature, the review proposes potential future research directions.

4. CONCLUSION

Ethical fashion, life cycle analysis, blockchain, and modern slavery are the key areas that research has been focused on recent years. Future studies must be conducted based on an understanding of research directions within or beyond the four research clusters identified in the study. More systematic reviews in the scope of transparency in the apparel supply chain are required to provide a comprehensive understanding of the state-of-the-art.

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