

Blockchain Technology: The Future of Sustainability in the Retail Sector

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Introduction

Sustainability initiatives have seen relatively little success in the fashion industry as fast fashion has replaced the traditionally two-three season fashion paradigm (Manning, 2018). However, many consumers and professionals realize that the state of the world is declining and that change must be adopted. The problem, however, is that it is difficult for consumers to compare brands in the saturated market to make conscious sustainability decisions. This paper will propose an alternative to eco-labelling, the current marketing tool used by companies to inform consumers of their sustainability initiatives.

Literature Review

The fashion industry is one of the world's largest consumer industries, and concerns are rising over environmental and social conditions, especially with increased cost of labor, and increased scarcity of material and energy as resources (Eder-Hansen et al., 2017). Industry leaders are calling for more accountability across the industry and a great deal of research has been done regarding sustainability in retail and apparel. While there has been relative success in the integration of sustainability initiatives in other markets, success in the apparel industry has been rather limited. Ritch (2015) in a research study found that participants had insufficient knowledge of fashion production, particularly as the retail environment did not bring attention to issues in sustainability, and thus didn't find sustainability in the fashion industry relevant. While some sustainability concepts are well-known, others still need to be disseminated. This dissemination will raise awareness and provide consumers with the option of adjusting their purchasing habits to parallel their moral ideology (Ritch, 2015). Koos (2011) identified ecolabeling as the most popular promotional material that companies use to draw focus to their environmental claims. Horne (2009) worked to present a classification of ecolabels, assess ecolabel schemes, and discussed the potential of sustainable consumption practices that could be introduced by ecolabelling. Use of hang tags paired with a third-party ecolabel caused consumer attitude toward the brand and buying intentions to increase (Ma et al., 2017). Consumers, both sustainable and non-sustainable shoppers, are likely to use sustainability labels if they find the information useful and easy to understand (Ma et al., 2017). D'Souza's study (2004) highlights that ecolabels are more effective if they are certified by third party organizations, and may be a vital promotional tool if utilized correctly. Accuracy or inaccuracy of label information will impact trust between the brand and consumer. If properly applied, certified ecolabels can increase credibility, competitive advantage and communication. The influence an ecolabel has over the consumer is still relatively weak; ecolabels only apply to a limited number of goods on

the market, a plethora of labelling systems are used, and credibility is tarnished as a majority of supply chains have little to no transparency (Koszewska, 2011). Ma, Gam, and Banning (2017) found that use of sustainability labels could be improved by increasing awareness of sustainability issues and providing information through a standardized system.

Purpose and Theoretical Underpinnings

Advances in technology, particularly Internet of Things (IoT) and Blockchain, can provide the apparel industry with revolutionary changes. The need for consistent ecolabelling sources could be realized industry-wide by utilizing Blockchain technology, and could serve to validate a company's sustainability claim by introducing transparency to a retailer's supply chain. This study aims to investigate potential consumer interaction with Blockchain data and the effect this will have on sustainability initiatives. Understanding the potential of Blockchain data on consumer perceptions of sustainability can support and validate growth in the application of Blockchain data. In turn, this application could potentially lead to a revolutionary change in consumer culture.

Research Design

A research model is proposed to understand the effect of Blockchain data on the three elements of ecolabels, and the resulting impact on consumers' intention to buy compared to the outcome of the traditional ecolabel. An online survey will be administered by the panel company, Qualtrics. The sample size will consist of a total of 198 respondents, with 66 respondents making up two different experimental groups and 66 respondents in a control group. Half of each group (33 respondents) will be split between male and female consumers. An equal number of each gender will be included, as previous research has found that while neither gender makes more sustainable choices than the other, the motivating factors may be different (Meizen- Dick, Kovarik, & Quisumbing, 2014). Additionally, a screening question will be used to identify shoppers who currently make sustainable purchases in other industries (such a food or chemicals), as these consumers are more likely to be the early adopters of sustainable goods offered in other industries (D'Souza, 2004). Respondents will be given the definition of sustainability and Blockchain. They will be asked to conduct the survey after being shown an artificial label and corresponding artificial Blockchain data.

Expected Outcomes and Implications

It is expected that consumers provided with the blockchain data will find the data more effective as it is backed with more information. They will become more knowledgeable about sustainability as they are able to see the impact of the initiative on the supply chain. As transparency is gained, consumers may place greater trust in the business from which they purchase. These increases can provide businesses with a new marketing tool that will help differentiate them from a saturated market.

Additionally, businesses working with blockchain data will be able to identify inefficiencies in their supply chain, which can help determine if any necessary changes should be

made. As consumers try to make conscious decisions based on the effect their purchase will have on the environment and society, businesses should try to position themselves within the consumer's moral interests. Companies that are early adopters with this technology may be able to attract loyal customers as they will be seen as altruistic and cutting-edge. Furthermore, this will present a great opportunity for business to highlight a specific part of their supply chain or product that may differentiate them from their competitor. Like most technology, it is expected that consumers who are early adopters would utilize the data, and the growth in use will be concomitant with its popularity. Companies could amplify growth by creating an advertising campaign to introduce the technology to a wider population. Companies might introduce efforts to inform all employees as to how the technology works, and how the consumer might benefit from its use.

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