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## Towards Higher Consumers' Trust in Supply Chain Transparency

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**Abstract:** Transparency is becoming an important part of business as consumers are starting to ponder over their lifestyle and eventually thinking about the products they buy. With more consumers getting aware of their products every day, a growing demand of transparent supply chain is forming, however transparency is a precondition of trust. The area of concern is consumers' trust in supply chain transparency. This is framed with literature about existing blockchain and labelling solutions regarding transparency. The method in this research-in-progress is a conceptual convergence of arguments combined with a research idea of supporting consumers' trust in supply chain transparency through reviews. It is argued that this solution provides higher trust than solutions based on blockchain and/or labelling. The contribution of this research-in-progress is a conceptual outline of a B2C platform illustrating a solution for the research idea.

**Keywords:** Supply chain; Transparency; Trust; Platform; Consumers; Products.

### 1 Introduction

Consumers' opinion about a business and its products has always been a crucial part of maintaining and growing trustworthiness of businesses. Nowadays, transparency is reaching a pivotal role in industrial and manufacturing fields, especially consumer products. As a result, it is a fundamental aspect to consider in supply chains. Anzalone (2020) in Forbes states that "... a supply chain is the sum of all participants in the production process from raw materials through refinement, design, manufacture, and transportation for all sorts of products." A plethora of suppliers being part of supply chains in today's world, the view and visibility of the products from origin to consumers' table is almost practically impossible without devising a workable solution. In a world of extremely complicated supply chains and too complex networks, it is not easy to win consumers' trust.

## **2 Consumer's demand for a source of supply chain transparency**

Researchers at the MIT Sloan School of Management found that consumers may be willing to pay 2 % to 10 % more for products from companies that provide greater supply chain transparency (Bateman & Bonanni, 2019). According to this study, discerning consumers value information about working conditions in a product supply chain, and this growing consumer segment seeks information on product ingredients and materials, where products come from, and the conditions in which they were produced.

### *Consumers' buying behavior shifting towards sustainability*

Consumers are constantly changing buying behavior and these days a shift towards a more sustainable lifestyle is observed. This fact can have an impact on businesses with non-sustainable practices and products. Research shows that today's consumers are becoming more conscious about what products they choose regarding sustainability, eco-friendliness, and health factors as a result of protecting themselves and the environment from being further harmed. Based on Futerra's new survey of over 1,000 consumers in the USA and UK they "... discovered that 96 % of people feel their own actions, such as donating, recycling, or buying ethically, can make a difference. And over half believe that they personally can make a big difference" (Townsend, 2018). They argue, if a brand is not helping consumers improving their environmental and social footprint, then it will be in danger of disappointing 88 % of its consumers. This fact points to absolute consumers' demand for access to the aforementioned information.

### *Consumers' trust in the transparency of supply chains*

Supply chain transparency requires businesses to know what is happening upstream in the supply chain and to communicate this knowledge both internally and externally (Bateman and Bonanni, 2019). Doorey (2011) argues that transparency can be an incentive for factories to change their current behavior positively by gradually be less harmful. According to Doorey, factory disclosure of suppliers' identity can improve labor practices. As a result, being transparent about production processes can both provide authentic product information and improve labor conditions. There are also other benefits in disclosures on supply chain activities. According to The Association of Chartered Certified Accountants' report (2011, p. 5), this assists consumers in making more informed decisions on their purchases and the environmental and social impacts of the products they use. Based on this report, the other benefits relate to innovations such as sustainable packaging, designs that facilitate recycling, and reduction of environmental and economic costs for both suppliers and consumers.

Engaging with supply chains can be an effective means of disseminating knowledge on sustainability and thereby creating wide-ranging sustainability improvements (Ibid, p. 8). To address the benefits of sharing product information with consumers, Estlund (2009) mentions that policymakers perceive mandatory disclosure both as a helping factor for consumers in their decision-making process and for producers to improve their performance. From this point of view, transparency in production processes has to some point been the focus for policymakers as well as corporations to influence behavior. To this end, a Forbes article states that "... online browsers are wondering why they can't track goods bought over the internet" (Webb, 2015). According to this article, it is getting more crucial for modern businesses to share relevant information with consumers who are beginning to ask where their products come from and who made them? However, we argue that the trust dimension from the consumers' perspective is not only coupled to the

transparency aspect; trust is partly decoupled from supply chain transparency. This is because transparency might be a precondition for trust; however, transparency is not providing trust per se, because there is no guarantee that transparent information is correct. Observing the surface does not reveal the truth in-depth. Trust is normally dealt with through independent reviews on platforms such as Truspilot.com. Therefore, a definite need is realized here, and that is a need for a place where consumers can find complete information about products, with the power of satisfying their expectations of finding and accessing this information easy, fast, and free. Webb (2015) suggests if this expectation of the consumers is not fulfilled it can create major trust issues between consumers and manufacturers. Following this argument, the research idea is that reviews can provide higher consumer trust in supply chain transparency in comparison with blockchain and labeling solutions. This is formulated with the following research question:

Why blockchain and labeling are not sufficient in assuring consumer trust in supply chain transparency? And can reviews support this lack of trustworthiness?

The method of this early research-in-progress is a conceptual convergence of arguments. The long-term goal is to develop a B2C platform for higher consumer trust in supply chain transparency with the ambition of making consumers more aware of the brands and businesses they are feeding and at the same time help the consumers make an educated choice of products to protect their health and the planet from being harmed further.

### **3 Touching upon current solutions**

To support a trust function, one existing solution is based on blockchain. Blockchain solutions are already adopted in the movement of products from producers to suppliers, to stores, and to consumers (Reilly, 2020). According to Reilly (2020), this works with distributed ledgers and helps to keep and store encrypted information which in some cases can be accessed by consumers. Information that is stored in blockchain can be verified by authoritative users across a relative network and cannot be changed or deleted. One of the examples operating in the online world within the industrial and manufacturing field since 2014 is “Provenance.org”. As stated in Forbes: “This project aims to provide a blockchain-based provenance record of transparency within supply chains” (Marr, 2018).

#### *The problem with blockchain*

There are some issues to address regarding the sole dependence on blockchain fulfilling the trust aspect. We argue that blockchain - if used as a single supportive tool - cannot satisfy the unmet consumer demand of assuring trust regarding products' supply chains. Since there is no assurance that the information that enters the blockchain is correct, a blockchain solution does not guarantee the trustworthiness of the information for consumers in a platform. The only guarantee is that the stored information is kept there – even if it is incorrect information. To this end, the PWC's Global Blockchain Survey in 2018 “... found that 45 percent of companies investing in blockchain technology believe that lack of trust among users will be a significant obstacle in blockchain adoption” (Ali, 2020). However, we are not arguing that blockchains are not effective in providing trust by means of a transparent supply chain if the consumer has trust in the providers of the information stored in the blockchain. Although information cannot be changed or deleted in a (secure) blockchain, the information validity still depends on the information provider.

This paper makes no claims about how information validity can be examined using blockchain; nonetheless, the approach that we take here considers blockchain as a relatively expensive infrastructure compared to a review system.

### *The problem with labeling*

Another existing solution addressing consumers' concerns about products is related to product labels. We argue that many people struggle to find sustainable products. One reason is the confusion they might have faced in buying such products, wondering which product is a better choice or even the best available one according to their preferences and needs. According to ecolabelindex.com, there are more than 450 registered eco-labels. To this point, we argue that there are problems with current labeling for consumers relying on labels to buy a product: For a typical consumer, it is almost impossible to keep track of all the eco-labels as it makes the decision-making more complex as consumers mostly do not have enough information about standards behind a specific label. Consumers may also look for more than is included in a label. Moreover, different labels have different demands of standards from brands and/or businesses, and to this end, it is a problem that labels can create a safe image because consumers may not have a correct understanding of what is actually labeled, and this can imply fake trust. Another problem is the complexity of the labeling market where a labeling system normally covers only a few of many sustainable aspects of a product and its supply chain.

Moreover, there are additional concerns to the labeling system such as how and from where the product was transported, how it was made, the production process and working conditions in the business, the CO2 footprint, and the possibility of recycling the product. These factors are extremely complex and that is why we argue that labeling cannot cover them all. Furthermore, the results of the choices and preferences may be different for every type of consumer-based on location, situation, and available products. This information is based on supply chains of products that businesses seem to be reluctant to share with consumers and as a result, it is rarely mentioned on the labels or anywhere with consumers.

According to what we argued, when a consumer looks for information before buying a product, they need to search and ask around. Businesses are not satisfactory in showing transparency in their supply chains. This can be feasible by sharing product lifecycle and product journeys. We argue that transparency is not only a way to communicate to consumers or a marketing method for businesses, but if considered from a business ethics perspective, it can be acknowledged as consumers' right to have access to information about supply chains including production processes, ingredients, and origin of raw materials, the suppliers, work conditions, etc. However, due to the extensive volume of this information, it is not possible to mention them all on labels. That claims a need for an online transparency platform that digitalizes the whole process of inserting, keeping, saving, and sharing information with consumers.

## **4 A solution**

Through investigating possible solutions to provide trust in the transparency of supply chains, we suggest another approach that might operate more effectively and to some consumers probably be perceived more appealing. Our approach is using what we term a trust-function in which trust is generated as a function of consumer and expert reviews. Coming to the platform that we propose as a feasible solution here, the necessary step in approaching transparency is to require businesses to disclose their supplier's name,

identity, and the country of origin so consumers can access this information about a product. We argue that the suggested platform will provide transparent information to consumers so that they can build and support trust within a given community through expert and user reviews.

Since one important consumer driver is to increase consciousness about sustainability, eco-friendliness, and health aspects of products; the first iteration of a platform solution relates to the power that such a platform can have in creating an actual positive effect on producers by potentially increasing the safety of their products for the consumer's use as well as protecting the environment from harmful products and/or by-products through supply chain transparency. The platform is aimed to leave a positive effect in attracting and maintaining consumers' trust in businesses, brands, and the products available on it.

Figure 1 illustrates a solution where an example of a product is shown (red area). The product supply chain (journey) is illustrated to the right (green area). This is shown together with the expert (professionals – blue area) and consumer (users – violet area) reviews.

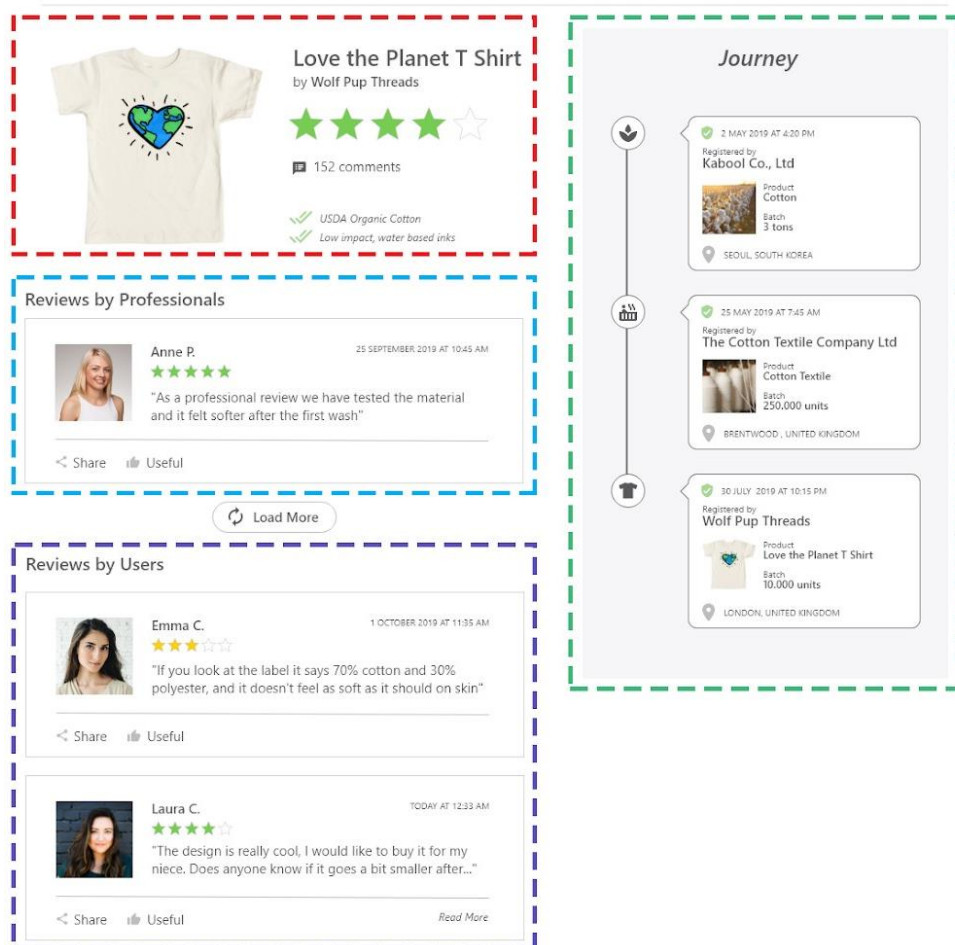


Figure 1 A B2C platform solution. Cropped from Malukas et al. (2019, p. 49)

To make the problem clear, it is necessary to address the consumer's pain. Consumers are always looking for products according to their preferences, namely quality, price, features or attributes, sustainability factors, etc.

The platform is intended to provide the trustworthiness of supply chain transparency through a review system. Such a platform will probably bring solutions to previously mentioned problems regarding blockchain and labeling. Through integrating product information and supply chain sharing with reviews, it will be more convenient for a consumer to access all information without much effort. One of the main goals is to create social pressure for businesses to make the information about their production, products, logistics, and supply chains transparent – and the provided information must accommodate the potential user and expert reviews. Moreover, reviews will serve not only for rating the products but also for creating a community.

## **5 Conclusion**

This paper provides a conceptual argument to find a solution for the consumers' lack of trustworthiness in supply chain transparency. The argument is based on finding problems with existing solutions of blockchain and labeling, which are not sufficient in providing consumer trust since they can contain incomplete or incorrect information about supply chains. In contrast to the non-satisfactory solutions, we suggest that by means of a B2C platform it could be possible to integrate the product information with reviews. Consumers can build and support trust within a given community through expert and consumer reviews.

## **6 Areas for feedback and development**

Please, share experience on any existing platform solutions addressing the integrated issue of transparency and trust. And how do you see the effect of current auditing systems and "eco" labels helping this?

Please, provide any experience and knowledge regarding blockchain and labeling in assuring the transparency of supply chains.

Please, reflect on the possible impacts of the suggested platform on businesses, the consumers' health and the environment.

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