International Journal of Research in Engineering and Science (IJRES)
ISSN (Online): 2320-9364, ISSN (Print): 2320-9356
www.ijres.org Volume 11 Issue 5 ǁ May 2023 ǁ PP. 161-181

Implementation of Blockchain Technology in a Donation Supply Chain

Nandhini Balamurugan, Shubham Rathore, Tejasvni Dhir, Suhani Bajaj, Tanmay Ghodeswar, Vedanth Kalla
[1]*School of Computer Science and Engineering, Vellore Institute of Technology, Vellore*
Corresponding Author: Nandhini Balamurugan, Shubham Rathore, Tejasvni Dhir, Suhani Bajaj, Tanmay Ghodeswar, Vedanth Kalla
Guided by
Dr. Java Subhalakshmi R

Abstract
The aim of this research paper is to explore the potential of the WeCover platform in addressing clothing insecurity in communities. This study will examine the challenges associated with traditional clothing donation programs and assess how the WeCover platform could address these challenges. The paper will also evaluate the potential effectiveness of the proposed WeCover platform in facilitating clothing donations and ensuring that they reach those in need. Finally, the study will explore the potential benefits of incorporating blockchain technology and local business involvement in donation programs.
By answering these questions, this paper seeks to provide insights into the feasibility and potential effectiveness of the proposed WeCover platform in addressing clothing insecurity and to identify areas for future research and improvement.
Keywords: *blockchain technology, supply chain management.*

Date of Submission: 26-04-2023 Date of acceptance: 06-05-2023

I. INTRODUCTION

WeCover is a proposed platform that aims to enable donors to donate clothes of specific type and size and receive credits in return, which can be redeemed for new clothes. The proposed platform aims to ensure transparency and accountability in the donation process by using blockchain technology. Additionally, the program incentivizes local businesses to participate by offering donors coupons for shopping at their stores.

1.2 LITERATURE SURVEY

S.NO.	TITLE	AUTHOR(S)	PROBLEM ADDRESSED	FINDINGS AND CONCLUSIONS	LIMITATIONS AND WEAKNESSES	HOW OUR RESEARCH CAN FILL THE GAP
1.	Blockchain and supply chain management integration: a systematic review of the literature	Maciel M. Queiroz, Renato Telles, Silvia H. Bonilla	This study identifies, organizes, and analyzes the literature on blockchains in the context of supply chain management (SCM) (blockchain-SCM integration), and it provides a research agenda for the future. This study intends to shed light on the primary present blockchain applications in SCM, the primary disruptions and issues	The electric power industry seems to have a relatively mature understanding of blockchain–SCM integration, demonstrated by the use of smart contracts. Additionally, the disintermediation provided by blockchain applications has the potential to disrupt traditional	The limitations of this study are represented mainly by the scarcity of studies on blockchain–SCM integration in leading journals and databases.	This Research paper helped us understand how blockchain works in supply chain management but gives us a scarce knowledge on how to culminate the two domains. This is the gap that we are looking to fill where we want to merge blockchain and supply chain management.

			caused by the use of blockchains in SCM, and the potential applications of blockchains in SCM in the future.	industries		
2.	The Impact of Blockchain Technology on Supply Chain Management: An Exploratory Study	Queiroz, M. M., Telles, R., & Bonilla, S. H.	Four major issues: traceability and transparency, stakeholder involvement and collaboration, supply chain integration and digitalization, and common frameworks on blockchain-based platforms, are critical for future orientation.	The main contribution of this study is a systematic review of extant studies and citation analysis to provide a better understanding about the trajectories and applications of such technologies.	Operational challenges such as how to determine whether blockchain adoption is required remain at the discretion of managers and practitioners. The use of blockchain should be carefully considered in terms of product (or service) characteristics, alternative surrounding technologies, and a firm's supply chain strategies. As the challenges of migrating from a legacy system to blockchain-based applications may influence the adopter's incentives, a careful consideration of implementation costs, technical limitations, barriers to entry, economic benefits, difficulties across multi-tier actors, and regulative compliance should be conducted before a final decision is made	This paper talks less about transparency and this is one of the void that we want to fill
3.	Using Blockchain to Ensure Trust between Donor Agencies and NGOs in Under-Developed Countries	Rehman, E., Khan, M. A., Soomro, T. R., Taleb, N., Afifi, M. A., & Ghazal, T. M	One of the promising areas of blockchain is the record-keeping of charity organizations' activities. A lot of attempts have been made to find a way for a proper charitable platform to run based on blockchain technology. According to some claims the current systems are unstructured, vague, and lacking in donor confidence. In the case of donations made to various individuals by NGOs, there is no adequate record keeping, and the presence of certain dishonest individuals within the charity organizations has caused donors to lose faith and trust in this social cause	In this research, a blockchain-based solution was proposed that would increase transparency and trust between NGOs and donor agencies in third-world countries. Some of the interesting objects and data structures that were used are: (i) an invalidation record that can be inserted into the blockchain to invalidate a previous transaction; (ii) a time-keeping table that each node maintains, to allow an entity, whether NGO or donor, to insert its records only if has participated as an		The study focuses on the challenges and limitations of traditional supply chain management practices, and it provides a detailed examination of the potential benefits of using blockchain technology in supply chain management. The authors propose a blockchain-based framework for secure and transparent supply chain management that addresses the challenges and limitations of traditional supply chain management practices.

				active member in the system; and (iii) a table of purposes, that lists a valid range of a sum of money, for a given purpose, and is also used to detect duplicate/fake claims of two distinct funds.		
4.	NGO Legitimacy: Reassessing Democracy, Accountability and Transparency	Rana Lehr-Lehnardt	Non-governmental organizations ("NGO")1 have enjoyed an unprecedented amount of influence on national as well as international fronts for the past couple of decades. A recent survey reveals educated Americans and Europeans trust NGOs more than they trust governments, corporations, and the media.2 Some scholars suggest that "[t]he rise of the nonprofit sector may well prove to be as significant a development of the latter twentieth century as the rise of the nation-state was of the latter nineteenth century."3 As their power augments, NGOs have become increasingly skeptical and critical of the power held by the United Nations ("UN") and by sovereign states. NGOs accuse these world powers of engaging in rule-making processes that are lacking in transparency, democracy, and accountability, thus lacking in legitimacy	We need NGOs. And we need NGOs that are professional, composed of highly educated and motivated individuals, just as we need the smaller NGOs that are run almost exclusively by volunteers who have not made a career of NGO work. But NGOs do need to change, largely because of their ever-increasing power, influence, and involvement in creating international (and national) policy and law. When NGOs are engaged in policy and norm creation, they should be held to a higher standard of democracy (representation), transparency, and accountability	NGOs, their vision and their work, should continue, locally, nationally, and internationally. But NGO members, governments, and members of the international organizations should rethink the role of NGOs, the relationship we want NGOs to have with locals, governments, and international organizations. We must evaluate what each partner in this sprawling partnership hopes to get out of it. It is easy to criticize NGOs because they have made mistakes, innocently and purposefully. But intentions are generally good; desire to improve lives is sincere.	This paper gives us an idea about how the NGOs work, how transparent they are. Doing the research on this we figured out that our research would help to make sure about how legitimate the NGO is.
5.	Intelligent Smart Contracts for Innovative Supply Chain Management	Bottoni, P., Gessa, N., Massa, G., Pareschi, R., Selim, H., & Arcuri, E	This paper proposes blockchains and smart contracts as enabling technologies for an innovative type of supply chain management, with the goal of achieving higher levels of collaboration between the companies participating in the	In this article, we have provided a framework to exploit blockchains and smart contracts as enabling technologies for an innovative type of supply chain management, aimed at achieving higher levels of		In this paper, we have seen how smart contracts help in supply chain management and its innovation and this paper helped us realise that we can implement this in order to keep the originality of the product that have been donated.

			chain, which in turn pays in the form of higher levels of profitability and economic health for the participating enterprises. Our proposal goes far beyond simply using blockchains as decentralized systems to track the origin and delivery of goods, which is what most of the current blockchain projects on supply chains are focused on. In fact, we introduce a type of smart contract aimed to solve two of the main problems that hinder the efficiency and effectiveness of supply chains, namely trust and coordination	collaboration between the companies participating in the chain. To this end, we have introduced the concept of Intelligent Smart Contract, namely a contract executable on the blockchain and characterized not only by "smartness," that is, automated execution on blockchain, but also by "intelligence," that is planning and optimization. We have then illustrated a specific instance of an intelligent smart contract, both from an algorithmic and an architectural standpoint, as given by Revenue Sharing, a methodology for supply chain management that can greatly boost the profitability of the supply chain for the benefit of all participants, but must be fully automated to achieve its full potential.		
6.	Blockchain Technology for E-commerce Industry	Bulsara, H. P., & Vaghela, P. S	The E-commerce industry is presently facing many unique challenges like security measures of the e-commerce system, transparency, trust, efficiency, etc. These challenges can be answered by the implementation of blockchain technology in the e-commerce industry	The traditional e-commerce industry is facing many challenges. These challenges are related to online transaction processing, data security, order and payment processing, transparency, etc. The potential answer to all these challenges may be given by upgrading e-commerce with blockchain technology. Blockchain technology can enhance the efficiency of the e-commerce industry. The paper has discussed the various applications of blockchain in areas	The challenge here is that maintaining all the characteristics of a e-commerce website	From this research paper we found out that challenges like online transaction, data processing and all is important therefore we are implementing using Blockchain

				of Payment, Security, Supply chain, Work automation with Smart contract, Ethical practices for transparency.		
7.	Blockchain Based Supply Chain Management	K. Nirantar, R. Karmakar, P. Hiremath and D. Chaudhari	Numerous supply chain issues result in huge financial losses for the food and pharmaceutical industries. They include fraud, stolen goods, the grey market, counterfeiting, and product recalls. The paper provides an overview of blockchain technology's potential and implementation on long term supply chain performance.	The drawbacks of the conventional supply chain were noted.. It proposes a blockchain based architecture for fabric supply chain at the organisational and operational level detailing the features to be kept in mind during implementation.	Untapped potential of the technology's integration, allowing for the connection and expansion of supply chain blockchain systems using external frameworks and complicated business logic.	Implementation and integration of blockchain for the supply chain system with sustainable business logic.
8.	Designing A Blockchain Based Supply Chain	Yingli Wang, Catherine Huirong Chen and Ahmed Zghari-Sales	This paper aims to address the problem of how academic understandings of concrete, real-world, end-to-end implementations are lagging behind, similar to many other new technologies, giving people very little data to comprehend the full significance of blockchain technology.	The paper details how blockchain is implemented in complex, multi-tier supply chain networks and provides insights into the design of such architecture using the DSR approach and business modelling theories.	This study only looks at a pilot programme for smart contracts. Future studies should investigate how such pilot programmes should be scaled up for widespread industrial adoption.	Addressing scaling issues for widespread adoption.
9.	The Proposed of A Smart Traceability System for Teak Supply Chain Based on Blockchain Technology	Sai Woon Sheng, Santichai Wicha	This paper aims to address the issue of smuggling teak, timber and other illicit activities or planting areas due to their high value.	The paper proposes a traceability system for verifying the validity of teak using Distributed Ledger Technology and Decentralised Applications to bridge the gap between professionals and blockchain.	Lacking in real world implementation and development and sustainability of blockchain in different fields of the market is not explored.	Real world implementation of the use of blockchain in a varying field of the market is explored.
10.	Blockchain technologies as enablers of supply chain mapping for sustainable supply chains	Sharfuddin Ahmed Khan, Muhammad Shujaat Mubarik, Simonov Kusi-Sarpong, Himanshu Gupta, Syed Imran Zaman, Mobashar	The difficulty of managing the numerous actors participating in supply chain networks results in a lack of visibility, transparency, and accountability in modern supply chains. The challenge of integration and sustainability is one that supply chains are	This study notes that the idea of a sustainable supply chain can be achieved by mapping upstream, midstream and downstream supply chains. It also suggests the use of blockchain technology to attain supply chain mapping.	The results' generalizability is limited and shaky due to the specific sector's focus.	Our research covers applications of blockchain technology in multiple sectors to achieve generalizability.

		Mubarik	increasingly dealing with.	sustainability and integration.		
11.	Information Traceability Platforms for Asset Data Lifecycle: Blockchain - Based Technologies	Brandín, Roberto; Abrishami, Sepehr	When considering deploying blockchain-based technology, the major drivers for change that need to be addressed are fragmented information, interoperability, transparency, and big data management.	This paper explores the challenges that IoT and centralized networks present and proposes blockchain technology as the solution which could support and maintain asset information without interruption at all stages. It also proposes the use of building information modelling, IoT and blockchain technologies in a three layer framework to further ensure traceability, data automation and information management.	Due to the absence of comparison with other studies and technologies, as well as the scant amount of empirical research and evidence, the study has certain drawbacks.	Extensive comparison with other studies have been undertaken.
12.	Blockchain and Its Impacts on Agri-Food Supply Chain Network Management	Kramer, Michael & Bitsch, Linda & Hanf, Jon.		The study analyses the differences between traditional and blockchain technology based food supply chain networks and proposes that supply chain management coordination mechanisms show differing characteristics based on the chosen blockchain platform type and that the choice of a certain type has an impact on the economic success of the business model.	Lack of analysis of smart contracts.	Research of smart contracts and their impact is undertaken.
13.	Traceability of Ready-to-Wear Clothing through Blockchain Technology	Juan José Bullón Pérez, Araceli Queiruga-Dios , Víctor Gayoso Martínez and Ángel Martín del Rey	This research paper addresses the issue of traceability and transparency in the supply chain of the ready-to-wear clothing industry. They argue that the lack of traceability and transparency in the clothing industry is a significant challenge, which can lead to a variety of problems such as human rights	The authors propose a blockchain-based solution for the traceability of ready-to-wear clothing that would allow all actors in the supply chain to have access to a secure and transparent record of a garment's journey. The authors also discuss the benefits	Technical barriers: Implementing a blockchain-based traceability solution in the ready-to-wear clothing industry can be challenging due to technical barriers such as a lack of standardization and compatibility among different blockchain platforms. Data quality and accuracy: Ensuring the quality and accuracy	This research gives a comprehensive case study of how to model a traceability system using blockchain wherein every block body is composed of transactions or, in our model, of the steps through which the manufacturing process passes. We take this and transform it from a supply chain to donation model and modify these transactions accordingly.

			violations, environmental degradation, and product safety issues.	of such a system, including improved product quality, enhanced brand reputation, and increased consumer trust. In conclusion, the authors highlight that blockchain technology can play a crucial role in improving the traceability and transparency of the ready-to-wear clothing supply chain.	of data recorded on the blockchain is critical to the success of the traceability solution. However, there may be issues with data accuracy and authenticity due to human error or malicious intent.	
14.	A secured tag for implementation of traceability in textile and clothing supply chain	Tarun Kumar Agrawal, Ludovic Koehl and Christine Campagne	This addresses the problem of traceability in the textile and clothing supply chain. The authors of the paper argue that traceability is essential to ensure the quality and safety of products, as well as to support sustainability and ethical practices in the industry.	The authors propose a solution that involves the process for manufacturing, encoding and validating an innovative two-factor secured tag to improve the traceability of textile and clothing products. The secured tag based on particle randomness includes information about the origin, processing, and transportation of the products, as well as relevant product specifications, such as size and material and is unclonable.	Cost: The implementation of the secured tag solution may be expensive, especially for small and medium-sized enterprises. Privacy and security: Protecting the privacy and security of sensitive information stored on the secured tag is a significant concern.	While the proposed secured tag is a novel proposition, it has certain limitations like abrasion, distortion and the fact that it's harder to implement on clothes that are only donated and not manufactured. Therefore, we stick to existing traceability measures within blockchain to track the donations that go through our website.
15.	Understanding blockchain technology for future supply chains: a systematic literature review and research agenda	Yingli Wang, Jeong Hugh Han and Paul Beynon-Davies	Lack of understanding: There is a lack of understanding about the capabilities and limitations of blockchain technology for supply chain management. Interoperability: Ensuring interoperability between different blockchain platforms and systems used in the supply chain is a significant challenge. Scalability: Scaling blockchain technology to meet the demands of large and complex supply chains is a major challenge. Privacy and security:	In conclusion, the authors provide a comprehensive overview of the challenges and opportunities associated with the integration of blockchain technology into supply chains and suggest a research agenda to address these challenges and support the development of practical and scalable solutions. The authors identify and organise the otherwise disjointed studies published on blockchains in	Regulation: The regulatory landscape for blockchain technology is rapidly evolving, and there is a need for greater clarity and consistency in regulations related to the use of blockchain in supply chains. Choice of Terms: This systematic review focuses on the diffusion of blockchain technology within supply chains, and great care was taken in selecting search terms. However, the authors acknowledge that their choice of terms may have excluded certain blockchain articles	We build on the principles brought forward in this literature review in our project by establishing traceability using blockchain in a cloth donation mechanism that delivers clothes to the underprivileged. The blockchain mechanism helps us make sure that the donation is actually delivered and also helps us incentivise the donors with blockchain credit.

			Protecting the privacy and security of sensitive information stored on the blockchain is a major concern.	such a way that their relevance to the supply chain management discipline becomes apparent.	from this review.	
16.	Blockchain-Based Secured Traceability System for Textile and Clothing Supply Chain	Tarun Kumar Agrawal, Ajay Sharma and Vijay Kumar	Traceability: The current textile and clothing supply chain management systems lack effective traceability, making it difficult to track the origin and journey of a product through the supply chain(complex, diverse, opaque and polluting). Counterfeit products: The current supply chain management systems are vulnerable to counterfeit products, which can negatively impact the reputation of brands and cause harm to consumers. Information transparency: The current supply chain management systems lack transparency and consistency in the information about products, making it difficult to verify the authenticity of products and ensure their quality and safety. Data privacy and security: The current supply chain management systems often suffer from data privacy and security issues, which can result in the unauthorized access and manipulation of sensitive information.	The authors propose a blockchain-based secured traceability system to address these problems and improve the traceability, transparency, and security of the textile and clothing supply chain. They use a use case example to conceptualise implementation for the same. The system uses blockchain technology using a multiple module approach to securely store information about products, enabling real-time tracking of products through the supply chain and ensuring the authenticity and quality of products.	Information Collection: Collecting and recording good quality information is a bigger challenge in the complex T&C supply chain. Actors at various supply chain stages are reluctant to share all the crucial information due to fear of competition, as they believe more transparency and openness will reveal their trade secrets to their competitors. On the other hand, information collection and recoding can be a tedious process and lack of motivation unless compensated by any incentive. Data standardization: Ensuring the standardization of data format and structure is important for the effective implementation of a blockchain-based traceability system. Moreover, blockchain adaptation and integration into the existing system can be a major challenge.	In our research, we take the proposed idea of establishing traceability using blockchain for textile & clothing supply chain and try to kill two birds with one stone. Namely, these are the social good of getting clothes to underprivileged people and supporting sustainable fashion practices by incentivising donation of clothes.
17.	Environmental sustainability in fashion supply chains: An exploratory case based research	Federico Caniato, Maria Caridi, Luca Crippa and Antonella Moretto	Environmental impacts of fashion production: The fashion industry is one of the largest polluters globally, with significant environmental impacts from the production of raw materials, textiles, and garments. Lack of transparency: The fashion supply chain is often complex and lacks transparency, making	The authors conduct case-based exploratory research to gain insights into the current state of environmental sustainability in the fashion supply chain and identify potential solutions to improve the sustainability of the industry. In conclusion, the authors suggest that the findings	Scope: The study focuses on a limited number of fashion companies(5) and may not reflect the challenges and opportunities faced by the entire fashion industry. Methodology: The methodology used in the study, including the case-based exploratory research design, may limit the generalizability of the findings. The authors	This paper especially focuses on the factors: the drivers that push companies to adopt ‘‘green’’ practices and the different practices that can be used to improve environmental sustainability. In our project, we establish social good as the driver and encourage users to donate clothes to the underprivileged, while securing this entire system using Blockchain.

			it difficult to assess the environmental impact of fashion products. Limited sustainability initiatives: There have been limited initiatives aimed at improving the environmental sustainability of the fashion supply chain, and there is a need for more comprehensive and integrated solutions. Consumer demand for sustainability: There is increasing consumer demand for sustainable and environmentally responsible fashion products, and there is a need for the fashion industry to respond to this demand.	from their research can be used to inform future initiatives aimed at improving environmental sustainability in the fashion supply chain and contribute to the development of more sustainable and responsible fashion practices.	suggest analysing single relationships between drivers and practices and underscoring the role played by the companies for a more in-depth analysis.	
18.	Smart Contract Document Authentication for Digital Clothing Design Specification based on Blockchain and QR Code	D Geethanjali, R Priya and R Bhavani	This addresses the problem of document authentication in the clothing industry, specifically in the design specification process. The authors argue that the current manual authentication process is prone to errors, fraud, and manipulation, and that a more secure and efficient solution is needed.	The proposed solution involves the use of smart contracts on a blockchain platform to create a secure and transparent record of digital clothing design specifications. The authors also propose the use of QR codes to provide quick and easy access to the authentication information stored on the blockchain. In conclusion, the authors highlight the need for a secure and efficient solution for document authentication in the clothing industry and propose a blockchain and QR code-based solution to address this problem.	Adoption and implementation: The widespread adoption and implementation of the proposed solution may be hindered by a lack of awareness and understanding of blockchain technology, as well as resistance to change. Interoperability: Ensuring interoperability between different blockchain platforms and QR code scanning devices and different systems and technologies may be a challenge.	Smart contracts via digital signatures are built upon in the future scope of our project, wherein we can turn artwork made by underprivileged children into NFTs to raise funds.
19.	Lelantos: A Blockchain-based Anonymous Physical Delivery System	Riham AlTawy , Muhammad ElSheikh , Amr M. Youssef , and Guang Gong	Online shopping means that there is a lot of data of the user that is being tracked at any one time like credit card info, addresses, etc., and as such we want to find any ways to do this that encourages a bit	This paper discusses a concept called Lelantos, which is as is suggested by the title of the paper, a physical delivery system based on blockchain whose main goal is	A system like this shares similar shortcomings like a traditional blockchain system like security and accountability, where tracking illegal and fraudulent transactions and deliveries becomes	In creating our project using parts of this system, we need to be able to look at more secure measures to ensure that frauds and illegal movements happen less and there is a failsafe in case they do. We also need to find

			more privacy, that is to be able to get things online or avail services without giving away much information.	anonymity. It aims to achieve this with the use of a Delivery Smart Contract to act as the trusted go-between of the parties actually engaging in the transaction(s). It comprises two main components, one on the blockchain (the contract), and the other off the blockchain (the servers and applications) that help in achieving this goal.	even more difficult than usual. There is also an added difficulty of integrating these changes into the current financial framework because of how ingrained they have been for a long time and they are not that flexible anymore to accommodate this level of change immediately.	better ways to scale this technology up to integrate it more efficiently with currently functioning systems.
20.	Blockchain-based Solution for Proof of Delivery of Physical assets	Haya R. Hasan, Khaled Salah	There are a lot of challenges that come up while addressing current delivery systems, specifically proof of delivery. During delivery itself, there are a lot of things that can go wrong like missing, damaged, and stolen items which could in case be very ruining. As such, we want to develop a system to do this effectively, while also ensuring that it is decentralized and private.	This paper proposes that this be done using a system of smart contracts that takes care of Accountability, Punctuality and other related aspects. It also proposes setting up an authority that makes sure that the rules that are set by this system are followed and not abused. A main feature of this system is the introduction of tamper proof logs that ensure some form of security and trackability.	Currently, using this sort of system faces quite a few difficulties, one of the major ones being scalability. This is because the current limitations of blockchain mean that it is very slow when applied to a large enough system which means that we need to limit these transactions. Another major problem is integration, as very few applications allow for proper involvement of blockchain and its related systems to make a unified system. Finally, a lot of these systems do not follow regulatory compliances setup by companies, countries and industries.	To address the problems affecting such a system currently, work needs to be done researching and improving on the aforementioned drawbacks like scalability, and developing newer algorithms and data structures to better the consensus systems. Other than this, we need to develop new protocols that encourage the inclusivity of such systems into current applications and architecture to enhance them.
21.	Blockchain Applications in Supply Chain Transactions	Christian F. Durach ,Till Blesik, Maximilian von During, and Markus Bick	It is observed that a decent fraction of people that use online e-commerce, finance and banking services are not trusted by the customers who normally voice concerns relating to privacy, integrity etc. As such, there seems to be a necessity for a system that can address these needs efficiently and effectively.	This paper seeks to improve on currently proposed Blockchain Adoption Frameworks by extending them from the scope of economic systems to the scope of the entire supply chain as a whole using blockchain to bring about a peer to peer system providing an open database (i.e in essence a worldwide ledger that can be seen by	As is the case in a lot of blockchain applications, integration is a major drawback of such systems which includes the technical complexity, because it is much more resource intensive, and requires a lot more expertise than traditional systems. This also means that it is difficult to make it layman friendly and open to all. Another major problem to address is data privacy where a	As with any new technology, first and foremost to make it successful is to make it easy to adopt by people, and a majority of this has to do with making it more accessible. that is creating more user friendly applications, libraries and frameworks along with training and support. Next, a similar thing must be done to address interoperability to develop protocols and standards that are more compliant to making the integration of these systems and current,

				anyone), and having this transparency that helps people trust in the system more as they can see what goes on , and tell how safe it is with their own eyes.	company/individual who wants their data to be private find it difficult to do so as everything is on the public ledger leading to security concerns.	more traditional ones more seamless.
22.	A Blockchain-Driven Supply Chain Finance Application for the Auto Retail Industry	Jingjing Chen, Tiefeng Cai, Wenxiu He, Lei Chen, Gang Zhao, Weiwen Zou and Lingling Guo	The auto retail industry is one where there is a lot of money and data that flows through, which are large both in quantity and amount. As such, we would desire a solid system that helps in financing such operations that focus on transparency, reliability, security and convenience, which this paper hopes to address.	In this paper, a system known as BCautoSCF is proposed, whose main objective is to set up a solid system for financing the auto retail industry. In such a case, we try to have a highly efficient workflow to reduce errors and increase security, and these are achieved by a type of smart contract to reshape the current system of supply chains in the retail industry.	The main drawback of this system is that it uses a form of smart contracts, and these are very early in their adoption and as such aren't able to be fully utilized, nor do we completely know their scope, their weaknesses and how they can be exploited if any which makes it vulnerable to use in a sensitive use case like this. An also present lack of coordination between multiple third parties could also mean the introduction of possible falsified and forged documents and policies which will mess with the system.	For the first drawback, this is not something that can be sorted overnight and requires intensive research into such blockchain applications and how they can be included in day to day operations without posing a threat and disrupting the flow too much. A better system of introducing asset verifying on the smart contract can also be done to ensure that traditionally competing parties can come to a mutual agreement when it comes to verifying the validity of an asset and the relevant documents and papers which increases efficiency and decreases fraud among untrusted third parties.
23.	Blockchain Technology Adoption in Supply Chain Finance	Arief Rijanto	Supply chain financing is a form of financial transaction where there is the existence of a third party which helps in the exchange by financing the supplier instead of the customer directly, mainly to reduce financing costs and improve on business efficiency. As such, we need a system that ensures this is possible, and with solid transparency, efficiency and security.	Supply Chain Financing can be bettered by the including the usage of blockchain technology within, especially in use cases like improving security and service levels.	Compared to traditional technologies, running applications on blockchain is inherently slower which reduces efficiency. It also integrates badly with other pre existing applications and technologies which makes application of the technology a hassle. It is also more expensive owing to the fact that it is a new technology with differing requirements.	Research into both our project and future research should look into how to improve on the aforementioned defects by making more efficient applications and integrating them better with pre existing applications and technologies to make it better for use in both the general sense to make it easier and cheaper for global access.
24.	Blockchain for good? Digital Ledger technology and Sustainable development goals	Richard Adams, Beth Kewell, and Glenn Charles Parry	Most usages of Blockchain revolve around more popular applications like cryptocurrency and more recently things like NFTs, however the use cases are much more broad than this and can be used for multiple other things to promote the agenda of	The SDGs proposed by the United Nations focused on providing a destination and a rudimentary roadmap for governmental, corporate and civic action to lead to change. The P2P ability of Digital	As we talk about the concept of B4G (Blockchain for Good), it follows that there must be a contradiction and contrary points must exist that come under B4B (Blockchain for Bad), which looks at shortcomings and the pitfalls that might be encountered as we	Our project looks at a small application of blockchain technology in an application for a supply chain system for clothing. Although this does not have a major impact on a topic like the SDGs, we still see that being able to reduce waste, resources and increase efficiency in any process inherently

			Blockchain for Good (B4G).	Ledger transactions removing the need for a third middleman, as well as the increase in transparency of the transactions in question, makes it such that trust obligations are much easier between transacting parties. Supply chains can also be enhanced owing to the fact that assets are registered using unique keys which provides a way to track and register ownership and movement over time.	explore these technologies further, and a few of them are the fact that this privacy also means that the possibility of DLTs being used for nefarious purposes is very high, and these might be used for anything that is even directly opposing the SDGs we want to achieve. Another pitfall is the fact that AI, which is becoming the most widely used technology by far, is emotionless completely unlike humans and is said to make the most rational decisions, which might not be the best ones by human standards.	contributes to development although indirect, but still helping. Other research we need to look at, and hopefully through our project is how we can prevent misuse of this technology either for someone's personal gain or advantage i.e better security measures as well as achieving a balance in these technologies to come up with an effective system for seamless integration with current technologies, and the fact that we need to achieve a true balance between complete decentralization and centralization to ensure that people do get to maintain their privacy that the want, but that there is no direct active threat as a result.
25.	Technology-based strategies for online secondhand platforms promoting sustainable retailing.	Yoonjae Bae, Jungyeon Choi, Munguljin Gantumur and Nayeon Kim	This study suggests potential strategies for online secondhand platforms. To address the problem of fraudulent transactions, secondhand resale platforms can incorporate time-sensitive chats that resemble Instagram's disappearing photo message.	The study explores technological strategies of online secondhand resale platforms and their impact on the industry's growth and transformation. A mixed method of data collection was used to analyze features of resale e-commerce. Results show that features promoting safe transactions, user-friendly design and compatibility influence user's usage while high-tech features had least impact. Findings suggest digitalization and onlineization of the industry will continue with implementation of strategies improving user experience, leading to increased satisfaction and usage of the platforms.	It only focuses on four case studies in the entire domestic and international resale industry, there could be more innovative strategies developed by other businesses and the limited number of participants in the secondhand user survey and the geographic limitations arising from sharing the online survey led to few responses from international users.	It helps us understand that the genz want social platform through which sellers can earn fame and money and buyers can discover unique items in a proper, refined process. Perceived usefullness, perceived ease of use and perceived enjoyment are important factors while building a website.
26.	Buying Clothes from Thrift Stores: An Analysis of Young People Consuming	Sílvia Borges Corrêa1and Veranise Jacubowski Correia	It addresses the issue of the increasing trend of young people buying second-hand clothing from thrift stores and the factors	This article presents research on the consumption of second-hand clothing among	The paper focuses on young people who buy clothes from thrift stores, but it may not fully represent the experiences of other	This paper gives us motivation to to build a platform for buying second hand clothing as people nowadays are shifting to online

	Second-hand Clothing	Dubeux	that influence their decision to do so.	young people, guided by an anthropological perspective. Results were found through participant observation and in-depth interviews and show the relationships and motivations for buying second-hand clothing and accessories.	demographics or regions and The paper primarily relies on self-reported data from a survey, which may not accurately reflect the true motivations and attitudes of the participants.	platforms and their financial capacity plays an important role in making them buy secind hand clothes.
27.	Customer engagement in second-hand fashion marketplaces after the pandemic	Carla Lopez and Farrah Outarra	The paper seeks to understand how the pandemic has affected consumer behavior and attitudes towards second-hand fashion and how it has impacted the growth and sustainability of the second-hand fashion market	Current customers of second-hand clothes are price and uniqueness focused, requiring communication and newsletters to retain loyalty. Consumers never buying second-hand clothes are open to information but face contamination fears, lack of awareness, and trust issues with independent stores. Physical store customers require seeing shop facilities for trust, but are open to shift to online with real-world connections like pop-up stores or interactive deliveries	The sample size used in the paper may not be representative of the entire population of customers who engage with the second-hand fashion marketplace, and this can limit the generalizability of the results.	This paper helps us understand why people would want to buy second hand clothes and if they are willing to buy second hand clothes.
28.	Trust in blockchain‐enabled exchanges: Future directions in blockchain marketing	Teck Ming Tan and Saila Saraniemi	This article serves to address these research gaps by conducting semi-structured interviews with 18 informants who have had at least three years of project experience with blockchain-enabled exchanges.	This research article investigates how blockchain technology enables trust in online exchanges compared to traditional exchanges. Through semi-structured interviews, three unique aspects of blockchain that build trust were identified: trust in exchange actors, trust in exchange actions, and trust in exchange assets. This research is important for understanding the rise of trust-related issues in online advertising and privacy.	The paper primarily focuses on trust in blockchain-enabled exchanges, but does not fully examine the broader impact of blockchain technology on consumer behavior and marketing	This research is vital for us to understand the rise of threats to trust regarding online advertising, customer trust, privacy, and digital rights. It taught us conditions that provide trust in a blockchain-enabled exchange and how and what makes the data in a blockchain tamperproof and immutable

29.	Potential of blockchain technology in supply chain management: a literature review	Amulya Gurtu and Jestin Johny	This paper highlights the imperative role of blockchain technology that has created a discourse in the world of innovation and technology. It will help academics to further the understanding of blockchain technology	This paper reviews the existing literature on blockchain technology and its potential in supply chain management (SCM). It considers the benefits of blockchain, such as protecting data integrity, reducing risk, and increasing visibility and traceability, and how it can be applied to SCM through smart contracts, supply chain finance, and reduced intermediaries. The paper analyzes published articles on blockchain technology to identify its use in various industries. The paper concludes with implications for SCM professionals.	This analysis is limited to 299 papers from the EBSCO database through December 2018.	It helped us realise that blockchain technology is likely to transform the global supply chain platform by eliminating intermediaries/brokers and the process of physical verification of documents.
30.	The power of a blockchain-based supply chain	Rita Azzi, Rima Kilany Chamoun and Maria Sokhnb	This paper describes how the blockchain can be integrated into the supply chain architecture to create a reliable, transparent, authentic and secure system.	The paper discusses integrating blockchain into supply chain management to improve transparency, reliability, authenticity, and security. Benefits and challenges are studied, and real-world and theoretical examples are used to build understanding of requirements for efficient blockchain-based supply chain management.		This paper basically helped us in understanding the technology of blockchain and its implementation.
31.	Fast Fashion And Second Hand Clothes Between Ecological Concerns And Global Business	CUC Sunhilde and Tripa Simona	One of the main problems addressed in the paper is the environmental impact of fast fashion. Another problem addressed in the paper is the negative impact of fast fashion on local communities and workers. The paper also discusses	The paper concludes by calling for a more sustainable and equitable approach to fashion and clothing production and consumption. This includes the need for better regulation of the fast fashion	One of the limitations of the paper is its scope. The paper primarily focuses on the environmental and social impacts of fast fashion and second-hand clothing, but it does not delve deeply into the economic and cultural factors that drive these industries.	During the literature survey, we have addressed one of the gaps by discussing cultural and economic impacts of fast fashion culture in the literature survey.

			the rise of the second-hand clothing market as a response to the problems associated with fast fashion. The second-hand clothing market offers an alternative to fast fashion, providing consumers with a way to reduce waste, support sustainable practices, and promote ethical labor practices	industry and for consumers to adopt more sustainable and ethical practices. The paper argues that a shift towards sustainable and equitable practices in the fashion industry is necessary for the long-term health of the environment and for the well-being of local communities and workers.	The paper also has a limited focus on the role of governments and regulations in addressing the challenges associated with fast fashion and second-hand clothing. The paper does not provide a comprehensive solution to the challenges associated with fast fashion and second-hand clothing.	
32.	Integrating On-chain and Off-chain Governance for Supply Chain Transparency and Integrity	Shoufeng Cao, Thomas Miller, Marcus Foth. Warwick Powell, Xavier Boyen, Charles Turner-Morris	One of the main problems addressed in the paper is the lack of transparency and integrity in traditional supply chain management systems. Another problem addressed in the paper is the difficulty in achieving a balance between centralization and decentralization in supply chain governance.	The paper argues that the integration of on-chain and off-chain governance can provide a solution to these problems. On-chain governance, using blockchain technology, provides a decentralized and transparent system for tracking and verifying information. Off-chain governance, using traditional systems and institutions, provides a centralized and efficient system for managing and coordinating the supply chain.	The paper also has a limited focus on the role of stakeholders in the integration process. Another limitation of the paper is its assumption that on-chain and off-chain governance can be easily integrated. The paper does not address the legal and institutional challenges that may arise in the integration process. The paper does not provide a comprehensive assessment of the risks and trade-offs associated with integrating on-chain and off-chain governance.	Again, the gap is solved by doing a more comprehensive literature survey of trying to be more inclusive of the stakeholders in the problem statement. Furthermore, specific attention will be provided to the integration of the on-chain and off-chain legalities.
33.	Antecedents of Blockchain-Enabled E-commerce Platforms (BEEP) adoption by customers – A study of second-hand small and medium apparel retailers	Geetika Jain, Sachin S.Kamble, Nelson Oly Ndubisi , Archana Shrivastava, Amine Belhadi, Mani Venkatesh	One of the main problems addressed in the paper is the low adoption of BEEPs by customers, despite their potential benefits. The paper contributes to the existing literature by conducting a study of second-hand small and medium apparel retailers to identify the antecedents of BEEP adoption by customers. Another problem addressed in the paper is the need for a better understanding of the factors that influence customer adoption of BEEPs.	In conclusion, the paper addresses the problem of low customer adoption of BEEPs by small and medium apparel retailers, and provides a better understanding of the factors that influence customer adoption of BEEPs. The findings of the study have important implications for BEEP providers and retailers, and provide a foundation for future research in this area.	A weakness of the study is that it does not fully explore the potential benefits and challenges of using BEEPs in practice. The study does not consider other factors that may impact customer adoption of BEEPs, such as the availability of alternatives, competition, and legal and regulatory barriers. Another limitation of the study is that it relies on self-reported data from customers, which may be subject to bias and inaccuracies.	The full scope of alternatives have been analyzed in the literature review part of this paper, and appropriate care for the same has been taken,

34.	Supply Chain Contract Design Under Financial Constraints and Bankruptcy Costs	Kouvelis, P., & Zhao, W.	The specific paper discusses the financial constraints that govern the flow of the trade in industries and between States.	The paper concludes by providing key reasons that govern trade such as relations between nations, supply and demand, and market trends.	Weaknesses include: Biased analysis of International Relations and incorrect assumptions of alternative economic strategies.	The weaknesses have been addressed by a comprehensive analysis of the economic situation of global supply chains and how they work with respect to financial constraints.
35.	Achieving Transparency Through Blockchain: Sustainability Of Fishery Supply Chain Management	Miguel Cordova, Karla Maria Nava-Aguirre	The paper "Achieving Transparency Through Blockchain: Sustainability of Fishery Supply Chain Management" addresses the issues faced by the fishery industry in terms of supply chain management and transparency. The authors argue that the current system of fishery supply chain management is facing numerous challenges such as illegal, unreported, and unregulated (IUU) fishing, mislabeling of seafood products, and a lack of traceability. These challenges undermine the sustainability of the fishery industry and also pose risks to consumer health and the environment.	The paper highlights the importance of adopting blockchain technology to achieve transparency and sustainability in the fishery supply chain. However, the authors also acknowledge the need for further research and collaboration among stakeholders to fully realize the potential of blockchain in the fishery industry.	Technical barriers: The authors highlight the need for standardization and interoperability of blockchain systems across different supply chain actors. Adoption challenges: The authors note that the implementation of blockchain technology in the fishery industry requires buy-in from all actors in the supply chain. Limited impact on IUU fishing: The authors acknowledge that while blockchain technology can enhance traceability in the supply chain, it may have limited impact on reducing illegal, unreported, and unregulated (IUU) fishing. IUU fishing remains a complex issue that requires a multi-faceted approach.	Adoption challenge is the key gap filled by this paper, comparatively and is driven by addressing socio economic problems at their roots, such as poverty and the stigma of being scammed by middle-men.
36.	The Supply Chain Has No Clothes: Technology Adoption of Blockchain for Supply Chain Transparency	Kristoffer Francisco and David Swanson	The paper "The Supply Chain Has No Clothes: Technology Adoption of Blockchain for Supply Chain Transparency" addresses several challenges and problems in the implementation of blockchain technology for supply chain transparency. Some of the issues addressed in the paper are: Technical Challenges, Implementability, and limited impact on supply chain sustainability.	In conclusion, the authors of the paper recognize that while blockchain technology holds great promise for improving transparency in a supply chain context, there are also significant technical, adoption, and privacy-related challenges that must be addressed in order to fully realize the potential of this technology.	Some of these limitations and weaknesses include: High costs, Complexity of integration, Data accuracy, and Potential for cyber attacks.	Given that blockchain works on key consensus mechanisms, an open ledger that can be accessible by all involved parties, thereby addressing the problem of Data accuracy.

1.3 METHODOLOGY

To explore the possibilities of WeCover as a platform for clothing donations and purchases in a small town with a population of around 650,000 people, the following methodology should be employed:

- Identifying local partners: To launch WeCover in a small town, it is important to identify and collaborate with local partners. This includes local businesses, schools, community centers, and religious organizations. These partners can help promote the platform, build trust with potential donors, and reach a wider audience.
- Conducting market research: Market research will be conducted to identify the target audience for the platform, including people who want to donate clothes and people who want to buy affordable clothes. This will help to tailor the marketing campaign and the platform to the needs of the community.
- Launching a marketing campaign: A marketing campaign will be launched to build awareness of WeCover in the community. This campaign will include online ads, social media posts, and flyers posted in public places. The marketing campaign will emphasize the benefits of donating clothes and the credits system, as well as the involvement of local businesses.
- Setting up donation centers: WeCover will set up donation centers in convenient locations throughout the town, such as shopping centers, schools, and community centers. These donation centers will be staffed by volunteers who can help donors with the donation process and answer any questions they may have.
- Incorporating blockchain technology: Blockchain technology will be integrated to ensure transparency and accountability in the donation process. This will help to verify the delivery of clothes to the needy.
- Implementing blockchain verification: To ensure the transparency and accountability of the donation process, WeCover will implement blockchain verification for all donations. This will help to build trust with donors and recipients alike.
- Developing a rewards system: A rewards system will be created where donors can earn points for each successful donation. These points can be redeemed as coupons for shopping at local businesses. This will help to incentivize people to donate and support local businesses.
- Developing a user-friendly platform: A user-friendly platform will be created that allows people to easily donate clothes, specify their size and type, and earn credits alongside fulfilling criteria mentioned above. Also, a section will be created for availers to browse available clothes and make purchases.
- Distributing donated clothes: Once donations are received and verified, WeCover will work with local partners to distribute the clothes to those in need. This could include working with local shelters, schools, and community centers to identify those who could benefit from the donated clothes.
- Monitoring and evaluating the platform: The platform will be regularly monitored and evaluated to ensure it is meeting its goals and objectives. Feedback from users will be collected and used to improve the platform.

1.4 Implementation

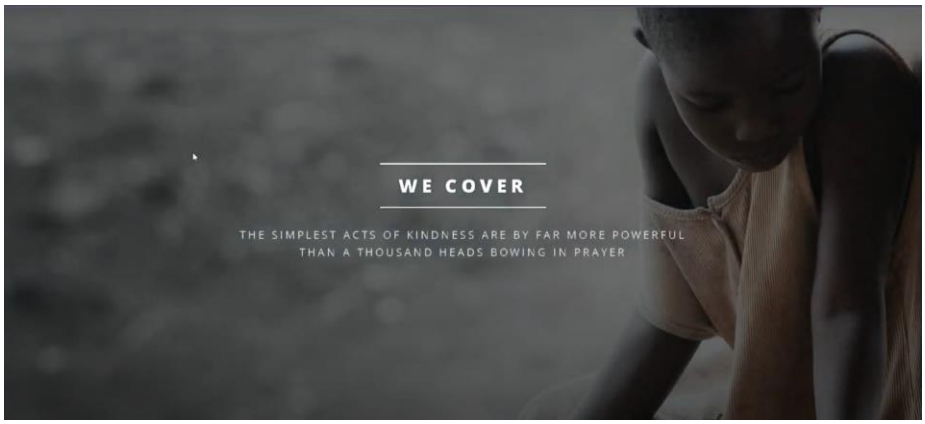

Figure1.1 Landing page of the WeCover Website

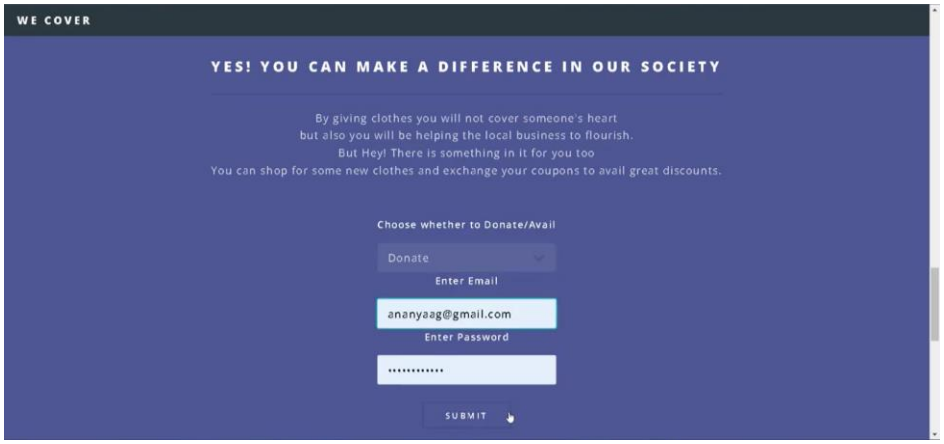

Figure1.2 Donor and Availer Login

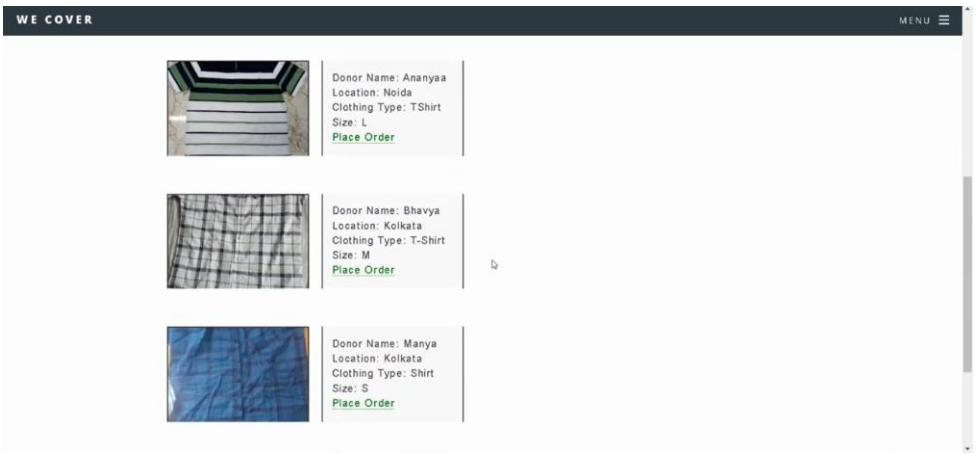

Figure1.3 Available donations page

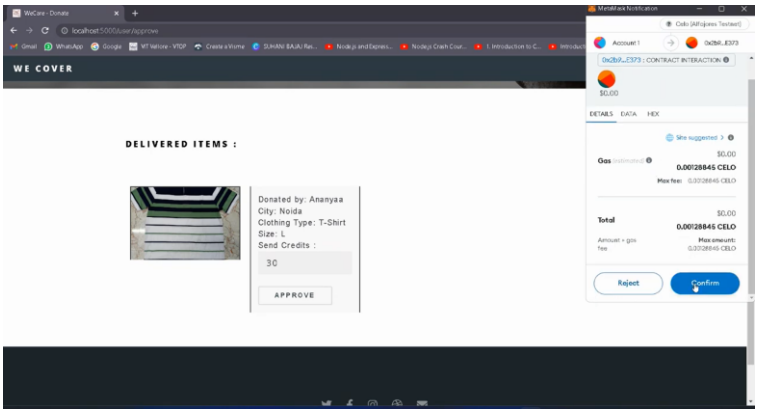

Figure1.4 MetaMask wallet

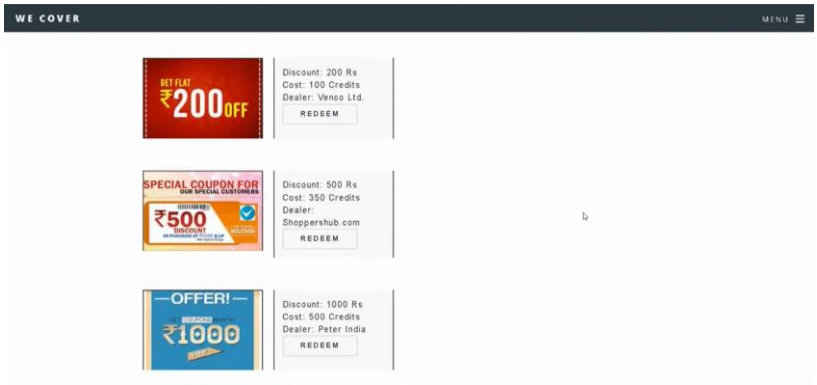

Figure 1.5 Redeeming credits for coupons

II. RESULT AND DISCUSSION

The implementation of WeCover aims to provide a novel and effective solution to help those in need while fostering community engagement. The results and discussion section will focus on the impacts of this project, its uniqueness compared to other similar services, the anticipated short- and long-term outcomes, and potential future improvements.The results obtained are discussed below

2.1 Impacts

The integration of blockchain technology into the logistics of a donation operation has the potential to revolutionise the way charitable contributions are managed. By offering increased security, transparency, and efficiency, this project is poised to significantly enhance trust in the donation process, both for donors and recipients. Additionally, the innovative use of incentives for donating, such as redeemable rewards and tokens, is expected to foster a sense of community involvement and commitment to the cause.

2.2 Uniqueness

Unlike traditional donation services, WeCover combines the benefits of decentralized ledger technology with a user-friendly website and strategic partnerships with local businesses. The combination of these features enables our project to stand out from other similar services, offering a more reliable, transparent, and rewarding experience for all parties involved.

2.3 Short term outcomes

In the short term, we anticipate an increase in the volume of donations due to the enticing incentives and heightened trust in the donation process. This will lead to a more significant positive impact on the lives of those in need, as they will have better access to clothing resources. The efficient and transparent management of the supply chain will also help reduce potential fraud and theft within the system.

4.4 Long term outcomes

In the long term, we expect the project to continue growing, with more businesses joining the network and increasing the number of donation points and transportation options. This will further enhance the reach and effectiveness of the project, creating a sustainable and scalable model for charitable donations.

2.5 Future improvements

As the project evolves, there are several areas for potential improvement and expansion. These include the integration of additional types of donations (e.g., food, toys, or household items), the development of mobile applications to complement the website, and the implementation of advanced blockchain features like smart contracts to automate and optimize the supply chain process.

In conclusion, WeCover presents a unique and innovative approach to charitable giving. The anticipated impacts and outcomes highlight the potential for significant positive change, both for donors and recipients. With continued development and improvements, this project has the potential to become a model for how blockchain technology can be harnessed for social good.

III. CONCLUSION

Bringing about a conclusion to our project, WeCover presents an innovative approach to addressing the needs of underprivileged communities while promoting a secure, transparent, and rewarding donation process. By leveraging the advantages of decentralized ledger technology, strategic partnerships with local businesses, and

user-friendly digital platforms, our project stands out from traditional donation services and is poised to make a significant impact on the lives of those in need. As we continue to refine and expand the project, we anticipate further growth and enhanced effectiveness, ultimately establishing this initiative as a pioneering model for utilizing blockchain technology in the realm of charitable giving and social good.

REFERENCES

[1]. Adams, R., Kewell, B., & Parry, G. (2018). Blockchain for good? Digital ledger technology and sustainable development goals. Handbook of sustainability and social science research, 127-140.

[2]. AlTawy, R., ElSheikh, M., Youssef, A. M., & Gong, G. (2017, August). Lelantos: A blockchain-based anonymous physical delivery system. In 2017 15th Annual Conference on Privacy, Security and Trust (PST) (pp. 15-1509). IEEE.

[3]. Brandín, R., & Abrishami, S. (2021). Information traceability platforms for asset data lifecycle: Blockchain-based technologies. Smart and Sustainable Built Environment, 10(3), 364-386. doi:10.1108/sasbe-03-2021-0042

[4]. Bullón Pérez, J. J., Queiruga-Dios, A., Gayoso Martínez, V., & Martín del Rey, Á. (2020). Traceability of ready-to-wear clothing through blockchain technology. Sustainability, 12(18), 7491.

[5]. Geethanjali, D., Priya, R., & Bhavani, R. (2022, July). Smart Contract Document Authentication for Digital Clothing Design Specification based on Blockchain and QR Code. In 2022 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES) (pp. 1-9). IEEE.

[6]. Agrawal, T. K., Koehl, L., & Campagne, C. (2018). A secured tag for implementation of traceability in textile and clothing supply chain. The International Journal of Advanced Manufacturing Technology, 99, 2563-2577.

[7]. Wang, Y., Han, J. H., & Beynon-Davies, P. (2019). Understanding blockchain technology for future supply chains: a systematic literature review and research agenda. Supply Chain Management: An International Journal, 24(1), 62-84.

[8]. Agrawal, T. K., Sharma, A., & Kumar, V. (2018). Blockchain-based secured traceability system for textile and clothing supply chain. Artificial intelligence for fashion industry in the big data era, 197-208.

[9]. Caniato, F., Caridi, M., Crippa, L., & Moretto, A. (2012). Environmental sustainability in fashion supply chains: An exploratory case based research. International journal of production economics, 135(2), 659-670.

[10]. Corrêa, S. B., & Dubeux, V. J. C. (2015). Buying clothes from thrift stores: An analysis of young people consuming second- hand clothing in Rio de J

[11]. Bae, Y., Choi, J., Gantumur, M., & Kim, N. (2022). Technology-based strategies for online secondhand platforms promoting sustainable retailing. Sustainability, 14(6), 3259.

[12]. Lopez, C., & Ouattara, F. (2021). Customer engagement in second-hand fashion marketplaces after the pandemic.

[13]. Tan, T. M., & Saraniemi, S. (2022). Trust in blockchain-enabled exchanges: Future directions in blockchain marketing. Journal of the Academy of Marketing Science, 1-26

[14]. Gurtu, A., & Johny, J. (2019). Potential of blockchain technology in supply chain management: a literature review. International Journal of Physical Distribution & Logistics Management.

[15]. Kilany, R., & Azzi, R. (2019). The power of a blockchain-based supply chain.

[16]. Cao, S., Miller, T., Foth, M., Powell, W., Boyen, X., & Turner-Morris, C. (2021). Integrating on-chain and off-chain governance for supply chain transparency and integrity. arXiv preprint arXiv:2111.08455.

[17]. Chen, J., Cai, T., He, W., Chen, L., Zhao, G., Zou, W., & Guo, L. (2020). A blockchain-driven supply chain finance application for auto retail industry. Entropy, 22(1), 95.

[18]. Cordova, M., & Aguirre, K. M. N. (2022). Achieving transparency through blockchain: sustainability of fishery supply chain management. Revista Eletrônica de Negócios Internacionais: Internext, 17(3), 398-412.

[19]. Durach, C. F., Blesik, T., von Düring, M., & Bick, M. (2021). Blockchain applications in supply chain transactions. Journal of Business Logistics, 42(1), 7-24.

[20]. Francisco, K., & Swanson, D. (2018). The supply chain has no clothes: Technology adoption of blockchain for supply chain transparency. Logistics, 2(1), 2.

[21]. Hasan, H. R., & Salah, K. (2018). Blockchain-based solution for proof of delivery of physical assets. In Blockchain–ICBC 2018: First International Conference, Held as Part of the Services Conference Federation, SCF 2018, Seattle, WA, USA, June 25-30, 2018, Proceedings 1 (pp. 139-152). Springer International Publishing.

[22]. J. Kim, K. Park, and L.Lee (2019, January). The Role of Smart Contracts in Blockchain-Enabled Supply Chain Management. In 2019 9th International Conference on Cloud Computing, Data Science & Engineering (Confluence) (pp. 538-544). IEEE.

[23]. Jain, G., Kamble, S. S., Ndubisi, N. O., Shrivastava, A., Belhadi, A., & Venkatesh, M. (2022). Antecedents of Blockchain-Enabled E-commerce Platforms (BEEP) adoption by customers–A study of second-hand small and medium apparel retailers. Journal of Business Research, 149, 576-588.

[24]. Khan, S. A., Mubarik, M. S., Kusi- Sarpong, S., Gupta, H., Zaman, S. I., & Mubarik, M. (2022). Blockchain technologies as enablers of supply chain mapping for Sustainable Supply Chains. Business Strategy and the Environment, 31(8), 3742-3756. doi:10.1002/bse.3029

[25]. Kouvelis, P., & Zhao, W. (2016). Supply chain contract design under financial constraints and bankruptcy costs. Management Science, 62(8), 2341-2357.

[26]. Kramer, M. P., Bitsch, L., & Hanf, J. (2021). Blockchain and its impacts on Agri-Food Supply Chain Network Management. Sustainability, 13(4), 2168. doi:10.3390/su13042168

[27]. Longo, F., Nicoletti, L., Padovano, A., d'Atri, G., & Forte, M. (2019). Blockchain-enabled supply chain: An experimental study. Computers & Industrial Engineering, 136, 57-69.

[28]. M. Johnson, N. Patel, and O. Davis (2022). Using Blockchain technology for Improving Supply Chain transparency and traceability . Information & Management, 59(7), 103508.

[29]. Nirantar, K., Karmakar, R., Hiremath, P., & Chaudhari, D. (2022). Blockchain based supply chain management. 2022 3rd International Conference for Emerging Technology (INCET). doi:10.1109/incet54531.2022.9824449

[30]. Queiroz, M. M., Telles, R., & Bonilla, S. H. (2020). Blockchain and supply chain management integration: a systematic review of the literature. Supply chain management: An international journal, 25(2), 241-254.

[31]. Rehman, E., Khan, M. A., Soomro, T. R., Taleb, N., Afifi, M. A., & Ghazal, T. M. (2021). Using blockchain to ensure trust between donor agencies and ngos in under-developed countries. Computers, 10(8), 98.

[32]. Rijanto, A. (2021). Blockchain technology adoption in supply chain finance. Journal of Theoretical and Applied Electronic Commerce Research, 16(7), 3078-3098.

[33]. Sheng, S. W., & Wicha, S. (2021). The proposed of a smart traceability system for teak supply chain based on blockchain technology. 2021 Joint International Conference on Digital Arts, Media and Technology with ECTI Northern Section Conference on Electrical, Electronics, Computer and Telecommunication Engineering. doi:10.1109/ectidamtncon51128.2021.9425780
[34]. Wang, Y., Zghari-Sales, A., & Chen, C. H. (2019). Designing a blockchain enabled supply chain. IFAC-PapersOnLine, 52(13), 6-11. doi:10.1016/j.ifacol.2019.11.082
[35]. Y.K. Chen, J.L. Lin and Y.T. Liu (2019). The Promise of Blockchain for Supply Chain Traceability: An Empirical Study. International Journal of Information Management, 46, 70-82.