

Combating Counterfeit Goods in Vietnam: Perspectives of Customers and Businesses toward Blockchain Technology Applications

Le Nhat Thanh¹, Nguyen Thi Thuy Hanh^{2,*}



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¹University of Economics and Law and Vietnam National University, Ho Chi Minh City, Vietnam No. 669, Do Muoi, Linh Xuan Ward, Ho Chi Minh City, Vietnam.

²University of Economics and Law and Vietnam National University, Ho Chi Minh City, Vietnam No. 669, Do Muoi, Linh Xuan Ward, Ho Chi Minh City, Vietnam.

Correspondence

Nguyen Thi Thuy Hanh, University of Economics and Law and Vietnam National University, Ho Chi Minh City, Vietnam No. 669, Do Muoi, Linh Xuan Ward, Ho Chi Minh City, Vietnam.

Email: hanhntt@uel.edu.vn

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ABSTRACT

Vietnam has emerged as one of the fastest-growing e-commerce markets in recent years, bringing considerable financial benefits while also increasing challenges and concerns, particularly related to counterfeit goods. Counterfeit goods not only cause massive economic losses for both companies and customers, but they also harm the community and our planet. Thus, eliminating counterfeit goods has become a top priority for protecting customers, brand authenticity, and ensuring long-term economic growth. Blockchain technology (BC) can improve product traceability and authentication, thus preventing counterfeit goods. This study examined the current situation of counterfeit goods in Vietnam and the potential of BC as an anti-counterfeiting solution. A qualitative research design was adopted, employing in-depth interviews with both businesses and consumers to explore their experiences, perceptions, and intentions toward BC-based applications. The findings revealed that buyers frequently encounter counterfeit products, particularly when purchasing through online platforms. Conventional anti-counterfeiting technologies, such as QR codes and holographic labels, have been widely employed. However, these methods still suffer from significant shortcomings, including duplication, high cost, and a lack of end-to-end traceability. Most enterprises emphasize the need for advanced, tamper-proof technological options, such as BC-based solutions. BC could strengthen traceability, enhance consumer trust, and protect the brand. Consumers also expressed willingness to pay more for products integrated with BC verification tools. These perspectives imply that BC has strong potential to serve as the next-generation anti-counterfeiting technology in Vietnam. Furthermore, this study proposes practical solutions to promote the adoption of BC, including establishing regulatory frameworks, providing financial and technical support for small and medium-sized enterprises, conducting pilot programs, and increasing public awareness through education and training. These recommendations contribute to developing a trustworthy digital marketplace, preventing counterfeiting, enhancing customer trust, protecting legitimate enterprises, and ensuring the sustainable development of e-commerce in Vietnam.

Key words: Anti-Counterfeiting Solutions, Blockchain technology, Counterfeit goods, E-commerce, Vietnam

INTRODUCTION

Counterfeit goods have become a significant issue in Vietnam, primarily due to the rise of online shopping and technological advancements, posing serious threats to businesses, consumers, and the nation's economic stability. Counterfeit goods cause financial loss and harm human health, particularly in the cases of milk and pharmaceuticals. Since 2021, counterfeiters have made over 200 billion VND (roughly 7.9 million USD) from counterfeit medicines. In 2023, the Ministry of Industry and Trade recorded 5,464 violations related to counterfeit production and sales, a 48% increase from the previous year¹. Recently, Vietnamese police detected 573 brands of fake powdered milk, targeting those most vulnerable, such as those with dia-

betes, babies, and pregnant women². Therefore, combating counterfeit goods has become a top priority for mitigating potential threats.

Multiple anti-counterfeiting measures have been implemented, including Quick Response codes (QR codes), Barcodes, Radio Frequency Identification (RFID), Security Inks, Microtext, and holographic labels³. While these technologies provide varying degrees of protection and serve as essential deterrents across industries, their effectiveness is increasingly challenged by sophisticated counterfeiting operations and inherent technological limitations. Extensive research has revealed their vulnerability to forgery⁴. Thus, according to⁵, Blockchain technology (BC) has emerged as a promising alternative due to its decen-

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tralized, transparent, and immutable characteristics. Several major global corporations have already begun adopting BC in supply chain management to improve product authentication. For example, Everledger Limited created Everledger, which uses BC to track the origin of high-value products⁶. However, the majority of Vietnamese businesses still use conventional anti-counterfeiting techniques. Adoption of BC for anti-counterfeiting reasons in Vietnam remains restricted. Therefore, encouraging the development and implementation of BC-based anti-counterfeiting solutions in Vietnam is crucial for protecting consumers, safeguarding genuine businesses, enhancing customer trust, and increasing the transparency of e-commerce platforms.

This study provides a comprehensive understanding of counterfeiting issues and anti-counterfeiting measures in the Vietnamese marketplaces. This study focuses on enterprises and customers, among the most vulnerable stakeholders. To the author's knowledge, this study will be the first to explore the perspectives of businesses and shoppers toward BC-based anti-counterfeiting measures in Vietnam. This study will propose practical solutions for encouraging the use of BC in anti-counterfeiting efforts in Vietnam.

The remaining study is divided into four sections. Section 2 discusses the relevant literature. Section 3 provides a detailed outline of the method. Section 4 analyzes and discusses the results. Section 5 proposes recommendations.

LITERATURE REVIEW

Counterfeiting and its impact

According to⁷, counterfeit and pirated goods accounted for approximately 3.3% of international trade between 2017 and 2019, with China and Hong Kong being the primary sources. Vietnam ranked among the top 25 counterfeit-producing countries, with major counterfeit categories including cosmetics, fashion, electronics, and pharmaceuticals. Counterfeit goods are intentionally produced to imitate genuine products, deceiving consumers and facilitating fraudulent trade practices⁸. Counterfeit goods are classed into three types under Decree No. 98/2020/ND-CP of Vietnam: (i) counterfeits in terms of quality and functionality, (ii) counterfeits in terms of composition and quantity, and (iii) counterfeits in terms of branding and origin.

The rapid expansion of e-commerce and social media has significantly aggravated the counterfeit problem, making verifying product origin and quality increasingly challenging. Digital platforms from e-

commerce marketplaces like Shopee and Lazada to informal social media marketplaces have become primary channels for counterfeit distribution. Their marketplace models, which allow almost instant seller onboarding with minimal verification, inadvertently enable counterfeiters to operate at scale in Vietnam⁹. Flash sales, time-limited promotions, and algorithmic boosts exacerbate the problem by overwhelming monitoring systems and reducing consumer scrutiny, as highlighted by 2024 inspections that showed spikes in counterfeit sales during major shopping events¹⁰. In addition, counterfeiters exploit deceptive strategies, such as creating websites that mimic official brand stores, leveraging the influence of celebrities, or turning to live commerce, where real-time transactions with large audiences leave little opportunity for verification. For example, Miss Nguyen Thuc Thuy Tien, Quang Linh Vlogs and Hang Du Muc were prosecuted for producing counterfeit products and exaggerating efficacy, generating nearly 18 billion VND in sales, with Thuy Tien earning almost 7 billion VND in commission^{11,12}.

Conventional and modern anti-counterfeiting technologies

Conventional anti-counterfeiting measures have been the frontline defence against counterfeit products for decades, employing physical, electronic, and digital authentication methods. These approaches include Radio Frequency Identification (RFID) tags, Quick Response (QR) codes, holographic labels, security inks, microtext, and serialized barcodes. Operating on three main principles: visual verification (holograms, security inks), electronic identification (RFID/NFC tags), and digital authentication (QR codes, barcodes linked to databases) - these methods have achieved broad adoption but face critical limitations. Their vulnerabilities include clonability, reliance on centralized verification systems, high implementation costs, and limited consumer accessibility^{13,14}. Such weaknesses become increasingly evident in modern counterfeiting operations, where criminals can replicate visual features, clone electronic identifiers, and compromise centralized servers¹⁵. For example, a Holographic Label can be replicated by skilled counterfeiters, offering limited verification and traceability¹³. RFID Tag has a high implementation cost due to secure tags, infrastructure, and specialized reader networks^{13,16}. QR Codes rely on centralized servers, with database compromise and single-point-of-failure risks¹⁷. At the same time, Security Ink limits consumer verification and accessibility¹⁸.

Moreover, modern technologies, such as AI and IoT, face barriers related to data quality, infrastructure costs, and cybersecurity risks¹⁹⁻²¹. The primary constraints of IoT networks are low power, storage, and computing capacity of end devices. Additionally, AI struggles with trust and privacy in collaborative settings, which limits defence efficiency¹⁹. These shortcomings suggest a more resilient, distributed, and tamper-proof technological approach is necessary. BC operates as an immutable, decentralized ledger for tracking product details across the supply chain^{6,19,22-24}. BC emerges as a promising solution for anti-counterfeiting²⁵⁻²⁷. BC could reduce the danger of counterfeiting by enabling producers to secure publicly accessible sales and inventory data.

Blockchain technology (BC)

BC is a distributed ledger technology that maintains data through chains of data block structures^{25,28}. BC refers to a decentralized ledger of data blocks, with each block linked to its previous block through cryptography techniques²⁹. Its blocks require validation and verification by all nodes in the network, ensuring immutability, reliability, security, and trust²². Each node stores BC data. The node will validate and store transactions in a new block²⁶. BC has various distinguishing properties, making it an appealing solution to counterfeiting challenges. These key characteristics include security and privacy, decentralization, immutability, transparency, and flexibility. First, BC allows for data transit without using agents, providing excellent security²⁷. It uses public key encryption to ensure data security²⁶.

Additionally, it protects privacy because nodes' identities are anonymous^{26,30}. Besides, BC is a decentralized ledger²². Thus, it reduces the risks of centralized control. Thirdly, when data is saved in BC, it cannot be changed or manipulated²⁶. As a result, BC contributes to providing reliability and transparency while reducing concerns about counterfeiting. Finally, BC ensures openness and flexibility, as all nodes can access and verify transactions^{26,31}.

Adopting Blockchain technology to combat counterfeit products

Different BC-based anti-counterfeiting systems have been proposed.³² developed MediChain-a, a BC-based medical record platform, to prevent fake drugs. Everledger employs BC-based digital identities to track diamonds, thereby supporting transaction authentication and helping to prevent the circulation of conflict or "blood" diamonds in the jewellery market⁶. Besides,³³ proposed PharmaChain

based on BC to avoid counterfeiting medicine in the pharmaceutical supply chain. Several studies have suggested using anti-counterfeiting systems in food supply chains^{34,35}. However, BC usage for anti-counterfeiting measures is limited. Previous international studies have identified issues limiting BC-based solutions, such as cost²⁶ and transaction delays²⁴. Additionally, several studies have emphasized adoption barriers in developing economies, including limited infrastructure, digital literacy, and financial constraints³⁰.

Moreover, few national researchers have studied BC and its applications in Vietnam.³⁶ investigated the applicability of BC in the Melaleuca oil supply chain in Hue and discovered BC to be a promising technological solution. However, they identified numerous primary obstacles to BC adoption, including readiness, compatibility, cooperability, and the legal environment.³⁷ Applied BC to propose an educational certificate management system. However, previous studies have not focused on the viewpoints of businesses and customers regarding the use of BC to prevent counterfeit items in Vietnam.³⁸ underscored that we live in the counterfeiting era. They explored the reasons for the rise in counterfeiting but did not provide an in-depth analysis of current counterfeiting issues in Vietnam. As a result, this research will fill existing gaps in the use of BC for counterfeiting by looking into obstacles and readiness of Vietnamese firms and customers.

METHODOLOGY

This study employs a qualitative research approach, including in-depth interviews with customers and businesses about counterfeit items and current anti-counterfeiting methods. In addition, the study investigates their perceptions of blockchain-based anti-counterfeiting solutions. The research process involves several key stages: formulating research questions, conducting a comprehensive literature review, performing interviews, analyzing the collected data, and proposing potential solutions. Each stage is discussed in detail in the following sections.

Stage 1. Defining research questions

This study addresses the following questions:

RQ1. What are the experiences and perspectives of customers and businesses about counterfeit items and current anti-counterfeiting measures?

RQ2. What solutions should be implemented to promote the usage of BC solutions?

Stage 2. Reviewing related works

This stage will review relevant works on counterfeiting challenges, emphasising the adoption of BC and its significance in the Vietnamese context.

Stage 3. Perform interviews

To the best of the authors' knowledge, this is the first study to explore the perspectives of businesses and customers regarding BC-based anti-counterfeiting solutions in Vietnam. We reviewed past studies to ensure the questionnaire design was applicable and aligned with academic requirements. The surveys will address the study questions raised in the first stage. The study focuses on firms' experiences with counterfeit goods, current anti-counterfeiting techniques, and perceptions of BC's solutions and expectations. Customers' survey responses cover their experiences purchasing counterfeit items, awareness of anti-counterfeiting technologies, attitudes toward counterfeit consumption, and intention to employ BC-based solutions.

This stage involves in-depth interviews with businesses and buyers. Semi-closed questions will be used to gather opinions from companies and buyers. This study used convenience sampling to select participants who are easily accessible and available, allowing for an open and honest sharing of experiences and viewpoints. Convenience sampling is a non-probability method in which participants are selected based on their accessibility, making it a quick, inexpensive, and straightforward method to implement³⁹. Specific criteria were applied to ensure representativeness when selecting interviewees and survey respondents.

Enterprise representatives were selected through purposive sampling, focusing on industries highly vulnerable to counterfeiting, such as pharmaceuticals, cosmetics, fashion, food, and electronics. Eligible businesses were required to (i) operate in the e-commerce or logistics sector, (ii) be registered in Ho Chi Minh City, and (iii) have experience with counterfeiting issues. Participants could be managers or employees to capture diverse perspectives on anti-counterfeiting practices. Customer respondents were recruited through a mixed approach combining online distribution via social media and e-commerce community groups with offline dissemination in stores and universities in Ho Chi Minh City. The questions in this study were modified after discussion with two management and information systems experts. Following that, we tested a pilot version with five customers and one business to guarantee that it was easy for respondents to comprehend. This survey will be conducted over two months, from January 2025 to March 2025. The survey interviewed respondents from Ho Chi Minh City. The city not only represents Vietnam's most significant e-commerce hub and the top-ranked region in the National E-Business

Index⁴⁰ but also serves as a melting pot of residents from across the country with varied cultural backgrounds and consumption patterns. Hence, while nationwide generalization is limited, the sample still offers a relevant and diverse reflection of perspectives on counterfeiting.

Stage 4. Results analysis

This study collected data from 21 business representatives across various industries, retail, manufacturing, and logistics. Besides, 120 valid customer responses were collected. Descriptive statistics were employed to explore the current situation, levels of awareness, and expectations of customers and businesses.

Stage 5. Propose solutions

This stage will offer practical strategies to encourage the use of BC in anti-counterfeiting initiatives in Vietnam. The potential solutions include legislation, financial assistance, customer and company awareness campaigns, and training programs.

RESULTS AND DISCUSSION

Counterfeiting Issues and Business Perspectives on Blockchain-Based Solutions

This survey included interviews with 21 companies of various sizes. Most respondents come from medium-sized and small firms, which account for more than 70% of all participants. These companies operate in various sectors, including groceries, pharmaceuticals, fashion, and electronics. The respondents are employees and managers with many years of experience in their respective firms. Therefore, they possess a deep understanding of counterfeiting issues and the anti-counterfeiting measures adopted by their organizations.

Most businesses (66.7%) reported encountering noticeable counterfeit merchandise, while the remainder were unaware of the situation. This result indicates that counterfeiting is a significant issue for Vietnamese firms. More than 80% of respondents acknowledged the serious consequences of counterfeiting goods. It substantially impacted their organization, resulting in financial losses, reputational damage, and a loss of consumer trust. Businesses have adopted various solutions to prevent the sale of counterfeit goods, encompassing both technical and non-technical measures. Several technical methods have been implemented, including anti-counterfeit labels, QR/barcodes, holograms (76%), tamper-evident devices (48%), security inks or watermarks (43%), RFID and NFC (14%). The most commonly used technical solutions include QR codes, barcodes, and holograms. However, these technologies remain vulnerable, as they can still be easily duplicated^{4,41}.

Moreover, a few organizations have adopted RFID and NFC, which provide better security. However, they have severe limitations, such as distance concerns for NFC and the ease of data forgery without using cryptography for RFID³. They also require significant financial and technological investment. As a result, it is necessary to implement advanced anti-counterfeiting technologies that overcome the limitations of those existing methods. BC is a revolutionary technology that can prevent counterfeit goods^{24,26}. The results show that while 23.8% of respondents reported high satisfaction and 42.9% were satisfied, nearly one-third remained neutral, and a small minority expressed dissatisfaction. This suggests that conventional tools, such as QR codes and holograms, are generally viewed as functional and affordable, but far from universally effective. Importantly, partial satisfaction does not imply long-term adequacy; respondents acknowledged persistent weaknesses, including vulnerability to duplication, lack of end-to-end traceability, and limited consumer engagement. Thus, while traditional measures appear sufficient in the short run, they remain inadequate to address increasingly sophisticated counterfeit practices. As a result, businesses seek effective and straightforward anti-counterfeiting measures. The most critical factors are efficacy (90%), ease of adoption and affordability (71%), and security (67%).

Interview results indicate that 38.1% of organizations are ready to deploy or pilot BC-based solutions immediately, while 57.1% are considering it. Additionally, businesses seek BC-based solutions that provide a range of functionalities. They frequently seek solutions that offer traceability, seamless integration, cost-effectiveness, real-time data recording, interoperability, and immutability. The top three requirements are traceability, ease of integration, and affordability, with 76.2% citing each. Hence, BC providers should consider those features to satisfy the expectations of their users and encourage adoption.

Counterfeiting Issues and Customer Perspectives on Blockchain-Based Solutions

The consumer interview involved 120 participants. They are primarily composed of young individuals under the age of 27 (93.3%), with a predominance of females (67.5%) and a high rate of university-level education (88.3%). These demographics indicate they are young and tend to adapt quickly to new platforms and technological advancements. However, they are easily subject to purchasing counterfeit goods and counterfeiting risks, particularly through Internet commerce. Additionally, respondents have low to

middle incomes (less than VND 10 million/month). As a result, they suffer enormous losses when they buy counterfeit items.

Counterfeit commodities are widely available in Vietnam. Most respondents (65%) purchased counterfeit goods at one time, while 26% were unsure whether the products they bought were genuine or fake. Additionally, counterfeit items are commonly found in various locations, including online platforms (88%), traditional markets (65%), local retailers (28.3%), and supermarkets (11%). Online shopping is rapidly expanding in Vietnam, offering significant benefits for both businesses and customers by enabling transactions anytime and anywhere, often at competitive prices. Counterfeiters, on the other hand, distribute their counterfeit items through online marketplaces. These counterfeiters develop fake websites that closely mimic genuine brand sites to deceive customers and commit fraud. They provide lower pricing compared to the authentic brand. This issue affects a range of brands, including well-established names in Vietnam. Many customers only discover counterfeit items after they have purchased and consumed them. Counterfeit items are currently found in a wide range of products, posing significant challenges for consumers and businesses. The most vulnerable sectors include cosmetics (77%), fashion (64%), electronics (42%), and food (29%). Cosmetics exhibit the highest rate of counterfeiting. Consuming counterfeit cosmetics can be harmful to purchasers' health, with significant repercussions such as facial injury and disease. Thus, preventing counterfeiting is vital to protecting human well-being. Most respondents (75%) are disappointed in purchasing counterfeit goods. They hope that counterfeiters will face severe penalties and lengthy jail terms.

Besides, buyers know the several anti-counterfeiting techniques currently employed in Vietnam. The respondents revealed that hologram labelling and QR/barcode scanning are the most widely used, accounting for 93.3% and 81.7%, respectively. However, numerous purchasers stated that many products, such as milk, detergent, food, and clothing, were unavailable. Some respondents indicated that they did not inspect the merchandise because they had purchased it from someone they trusted or their neighbors. Furthermore, consumers are generally receptive to BC applications in product verification. Most respondents preferred purchasing items that incorporate BC-based solutions, reflecting increasing awareness of product authenticity and recognition of BC's potential to mitigate counterfeit risks. These findings

underscore a growing demand for BC-enabled solutions, particularly if integrated into user-friendly platforms.

RECOMMENDATIONS

This study will provide several practical solutions to promote using BC-based anti-counterfeiting solutions in Vietnam.

Establishing government regulations for using BC-based solutions

The government plays a significant part in addressing counterfeiting. Firstly, the government should require businesses, particularly those in vulnerable industries such as pharmaceuticals and cosmetics, to provide product verification tools. These might include BC-powered QR codes, RFID tags linked to decentralized ledgers, or smartphone apps that allow customers to verify product authenticity instantaneously. Secondly, authorities should impose more severe punishments on individuals and organizations that engage in counterfeit manufacturing, distribution, and marketing. In Vietnam, numerous celebrities promote products without verifying their authenticity or brand value. Celebrities who advocate fraudulent products on social media or other platforms can dramatically increase the distribution and consumption of counterfeit goods. The government should impose significant financial penalties, and imprisonment, to compel celebrities to verify the claims they make about products carefully. Thirdly, financial incentives, such as grants, tax credits, and low-interest loans, can assist these businesses in transitioning to safer supply chain methods. Additionally, technical support should be provided to help enterprises deploy BC-based systems. The government may collaborate with BC providers to conduct research and pilot trials, demonstrating the effectiveness of BC-based anti-counterfeiting systems. Furthermore, holding workshops and training programs is crucial for increasing BC awareness among businesses and customers, thereby combating counterfeiting. By enacting these regulations, Vietnam may create a more trustworthy market environment where companies and consumers benefit from enhanced transparency and safety.

Developing and piloting BC-based solutions

Applying BC is crucial for preventing counterfeiting. There is a need to research and develop BC-based solutions that are applicable and effective in the Viet-

namese setting. Designing BC-based solutions requires an in-depth understanding of Vietnam's specific business environment, technological infrastructure, and consumer behavior. Besides, BC providers should offer BC-based solutions that are practical, cost-effective, and easily integrated into local supply chains. In addition, they should provide different options that can be effectively applied on web and e-commerce platforms. Moreover, incorporating BC into existing anti-counterfeiting methods is an advantageous option. For example, integrating widely utilized technologies like QR codes, RFID, and NFC enhances accessibility. A smartphone app that instantly reads product tags and verifies authenticity through BC can help detect counterfeit items while improving reliability and user experience. Furthermore, piloting BC-based solutions is crucial for demonstrating their effectiveness and enhancing user confidence. Providers can offer trials or free versions, allowing buyers to quickly verify the validity of products on websites and e-commerce platforms.

Increasing expertise and skills for BC-based anti-counterfeiting solutions

Public awareness campaigns should be launched through television, social media, and public events to educate consumers about the dangers of counterfeit goods and the importance of verifying product authenticity before purchasing. These campaigns should include real-life stories of adverse effects caused by counterfeit cosmetics or medications and discuss how BC technology might assist in defending consumers' rights. Training programs could also be established to teach users how to utilize BC-enabled applications efficiently by providing basic, accessible guidance, such as video lessons or infographics. The government should collaborate with schools, colleges, industry associations, and consumer rights organizations to raise awareness of anti-counterfeiting technologies and foster an authenticating culture from an early age. When consumers actively demand authentic, verifiable products, businesses will be more motivated to implement BC-based solutions, resulting in a mutually beneficial relationship of trust and quality in the marketplace.

CONCLUSIONS

The spread of counterfeit goods in Vietnam continues to erode the credibility of the marketplace, threaten consumer safety, and damage the reputations of genuine enterprises. Despite implementing conventional anti-counterfeiting methods, such as QR

codes, RFID, and hologram labels, these methods remain vulnerable to forgery, underscoring the need for more robust technical solutions. The study provides an in-depth analysis of counterfeiting issues and anti-counterfeiting measures used in the Vietnamese marketplaces. This study interviewed enterprises and customers located in Ho Chi Minh City. Counterfeiting has become a significant issue in Vietnam. Thus, deploying BC-based anti-counterfeiting technology is crucial for addressing this pressing issue. The study provides practical recommendations to encourage the adoption of BC-based anti-counterfeiting solutions, including establishing government legislation, developing and piloting BC-based solutions, and enhancing expertise and capabilities for enterprises and customers.

Although this research provides insights into the importance of BC and perspectives on adopting BC-based anti-counterfeiting solutions, it has several limitations. First, data were collected only in Ho Chi Minh City using convenience sampling, which restricts the generalizability of findings to the national context. Second, reliance on self-reported data may introduce biases. Third, the analysis primarily focuses on descriptive and initial inferential statistics. Thus, the following are some potential avenues for future research.

Future research should focus on developing BC-based anti-counterfeiting applications suitable for the Vietnamese setting. Additionally, pilot implementation projects utilizing BC-based traceability platforms would provide significant evidence of their operational efficiency and cost-effectiveness. Future research can include more diverse samples from various industries, notably those more susceptible to counterfeiting, such as pharmaceuticals, cosmetics, and food, and employ advanced modeling techniques to test adoption determinants. Further research could also examine the factors influencing businesses' and customers' intentions to adopt BC-based solutions. These future directions will help lay the groundwork for encouraging and implementing BC in anti-counterfeiting efforts.

ABBREVIATIONS

1. BC: Blockchain
2. QR: Quick Response
3. RFID: Radio Frequency Identification
4. NFC: Near Field Communication

CONFLICT OF INTEREST STATEMENT

The authors declare that they have no conflicts of interest.

AUTHORS' CONTRIBUTIONS

First author (Le Nhat Thanh): Conducted the literature review and developed the introduction, collected and analyzed the data, and prepared the initial draft of the manuscript.

Corresponding author (Nguyen Thi Thuy Hanh): Conceptualized and supervised the research, designed the research methodology, data analysis, and discussion, and proposed solutions.

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Phòng chống hàng giả tại Việt Nam: Quan điểm của khách hàng và doanh nghiệp về ứng dụng công nghệ Blockchain

Lê Nhật Thanh¹, Nguyễn Thị Thúy Hạnh^{2,*}



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¹Khoa Hệ thống thông tin, Trường Đại học Kinh tế - Luật, Đại học Quốc gia Thành phố Hồ Chí Minh, Việt Nam 669, Đỗ Mười, phường Linh Xuân, thành phố Hồ Chí Minh, Việt Nam.

²Khoa Hệ thống thông tin, Trường Đại học Kinh tế - Luật, Đại học Quốc gia Thành phố Hồ Chí Minh, Việt Nam 669, Đỗ Mười, phường Linh Xuân, thành phố Hồ Chí Minh, Việt Nam.

Liên hệ

Nguyễn Thị Thúy Hạnh, Khoa Hệ thống thông tin, Trường Đại học Kinh tế - Luật, Đại học Quốc gia Thành phố Hồ Chí Minh, Việt Nam 669, Đỗ Mười, phường Linh Xuân, thành phố Hồ Chí Minh, Việt Nam.

Email: hanhntt@uel.edu.vn

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TÓM TẮT

Những năm gần đây, Việt Nam nổi lên như một trong những thị trường thương mại điện tử phát triển nhanh nhất khu vực, mang lại nhiều cơ hội kinh tế song cũng đặt ra không ít thách thức, đặc biệt là vấn nạn hàng giả. Hàng giả không chỉ gây thiệt hại kinh tế nghiêm trọng cho doanh nghiệp và người tiêu dùng mà còn tác động tiêu cực đến môi trường và xã hội. Vì vậy, việc ngăn chặn hàng giả đã trở thành ưu tiên hàng đầu nhằm bảo vệ người tiêu dùng, bảo vệ uy tín thương hiệu và hướng tới tăng trưởng kinh tế bền vững. Công nghệ chuỗi khối (Blockchain – BC) có khả năng truy xuất nguồn gốc minh bạch và xác thực sản phẩm hiệu quả, từ đó ngăn chặn hàng giả. Nghiên cứu này xem xét thực trạng hàng giả tại Việt Nam và đánh giá tiềm năng ứng dụng BC trong công tác phòng chống hàng giả. Phương pháp nghiên cứu định tính được sử dụng, thông qua phỏng vấn sâu với doanh nghiệp và người tiêu dùng để tìm hiểu trải nghiệm, nhận thức và mức độ chấp nhận các giải pháp dựa trên BC. Kết quả cho thấy người tiêu dùng thường xuyên gặp phải hàng giả, đặc biệt trên các nền tảng trực tuyến. Các công nghệ truyền thống như mã QR hay tem nhãn ba chiều đã được áp dụng khá phổ biến, nhưng chúng tồn tại nhiều hạn chế như dễ bị sao chép, chi phí cao và thiếu khả năng truy xuất toàn chuỗi. Các doanh nghiệp nhấn mạnh nhu cầu về các giải pháp công nghệ tiên tiến để chống hàng giả, chẳng hạn như các giải pháp dựa trên BC. BC có thể tăng cường khả năng truy xuất nguồn gốc, nâng cao niềm tin của người tiêu dùng và bảo vệ thương hiệu. Trong khi đó, người tiêu dùng cũng sẵn sàng trả giá cao hơn cho sản phẩm có tích hợp công nghệ xác thực bằng BC. Điều này cho thấy các ứng dụng BC có tiềm năng trở thành giải pháp chống hàng giả thế hệ mới tại Việt Nam. Nghiên cứu đồng thời đề xuất một số giải pháp thúc đẩy ứng dụng BC như xây dựng khung pháp lý, hỗ trợ tài chính, hỗ trợ kỹ thuật cho doanh nghiệp nhỏ và vừa, triển khai các dự án thí điểm và tăng cường truyền thông, và đào tạo nhằm nâng cao nhận thức xã hội. Những khuyến nghị này góp phần hình thành một môi trường thương mại điện tử minh bạch, nâng cao niềm tin khách hàng, bảo vệ doanh nghiệp chính hãng, thúc đẩy sự phát triển bền vững của thương mại điện tử Việt Nam.

Từ khóa: Giải pháp chống hàng giả, công nghệ blockchain, hàng giả, thương mại điện tử, Việt Nam

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