Blockchain Technology Adoption for Agriculture, Manufacturing, Services, Knowledge, Culture, and Research: A Systematic Literature Review

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Abstract: - Since FinTech had the most potential in business, economics, and knowledge disciplines, the study's major goal was to address the contributions of Blockchain technology adoption (BCT/BCA) to six business, knowledge, culture, and research areas. To ensure that most research on the subject was accessed and that pertinent publications were found, vetted, and examined, the PRISMA technique -a model for systematic literature reviews (SLRs)- was employed in this investigation. The results show that BCA improves organizational procedures, performance, fidelity, integrity, and trust for businesses, cultures, and research projects with a disrupting financial technology (FinTech) mindset. It also enhances corporate transaction transparency and scalability, improves big data, knowledge, same-data, and information sharing, and prevents fraud with fraudulence suspension and cyber-hacking protection. Additionally, the implementation of smart contracts offers ESG and sustainability benefits. This research employed hybrid methodology, blending together qualitative analysis with SLR. All 789 of the publications that were chosen in the initial step underwent quantitative analysis, and the eight most cited papers that passed the PRISMA screening process underwent qualitative examination. The study sequence is composed of three layers: (i) financial factors that function as BCA functionality, (ii) possibilities and problems related to the financial variables, and (iii) contributions, consequences, and outlook of the issues- is defined in this paper and projected to six business, knowledge, culture, and research areas. Furthermore, a significant contribution is thought to be the managers' ability to consult the suggested sequence for insightful information, economic difficulties, and BCA potential estimation. Scholars, researchers, managers, and practitioners will all benefit from the study.

Key-Words: - FinTech, blockchain technology adoption, agriculture, manufacturing, services, knowledge, culture, research, systematic literature review, PRISMA.

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1 Introduction

The growing usage of digital technology and the application of fraud analysis and verification (authentication) based on risk are likely to propel the global market for fraud detection and prevention in Industry 4.0.

There is a significant concern with a r esearch gap since no thorough study examines how blockchain technology adoption (BCA) affects crucial business functionalities that are thought of as financial variables (such as integrity, transparency, and privacy) for manufacturing, services, research, knowledge, culture, and agriculture, [1], [2], [3]. For managers and corporations interested in disrupting FinTech functions, it is crucial to address the impact of BCA on these financial variables, [4], [5], [6], [7].

With exponential expansion, BCA projects are being employed more and more in manufacturing, services, research, culture, agriculture, and the knowledge sector, [8], [9], [10], [11]. These programs, however, are vulnerable to fraud, security threats, performance constraints, and integration-related problems, which can breed mistrust and deter user investment. The challenges, issues, dangers, restrictions, and possibilities related to financial variables must be integrated with BCA functionalities to address these causes, [1], [8], [9].

To improve the early detection of security and transparency issues, fraud, cyber-hacking, and

abnormal behavior in digital transformation initiatives, it is also crucial to correlate the contributions of BCA to corporate management, DEI and ESG functionalities, integration questions on BCA potentiality, BCA outlook, and implementation with the BCA/FinTech issues, [12], [13], [14], [15], [16].

The literature on the practical application and impact of BCA on a griculture [17], [18], [19], manufacturing [20], [21], services [22], [23], knowledge [24], [25], culture [26], [27], [28], and research [29], [30] is noticeably lacking, despite the growing interest in the topic. A large number of recent research concentrate on theoretical frameworks or specific case studies, but not all of them thoroughly examine BCA practices, challenges, and potential solutions in varied situations.

The goal of this article is to bridge this knowledge gap by doi ng a thorough literature review and providing a comprehensive grasp of how BCA is implemented in six key business application areas: manufacturing, services, research, knowledge, culture, and agriculture.

Considering the increase in BCA applications due to the COVID-19 epidemic [31], [32], [33], [34], this study assessed works published between 2013 and 2022 with the goal of gathering and analyzing primary research on the topic. To determine the financial factors, problems, and contributions associated with BCA, this study conducted a thorough and methodical examination.

This statistically based analysis finds the most significant associations using bibliometric criteria such as total citations and the year of publication. The PRISMA method was used to carry out this systematic review, [35] with the goal of identifying research gaps, consolidating existing knowledge in the BCA/FinTech domain, and offering insightful information for future research paths, [36], [37], [38].

Thus, this study's main goal was to bridge this theoretical gap and ascertain how BCA has impacted the six major business sectors -stock markets, supply chains, corporate management, and the banking industry- that were chosen because FinTech showed the most promise in these areas, [17], [30].

The purpose of this research was to ascertain how the implementation of blockchain technology in sectors with substantial FinTech potential is affecting a number of business functionalities that are predicted to be financial variables or BCA functionalities, including anonymity, loyalty, commitment, faithfulness, trust, traceability, accountability, security, fidelity, transparency, corporate performance, privacy, and cryptography, [39], [40], [41], [42], [43], [44].

This study's objectives were to uncover, record, and evaluate the main conclusions (such as information, methods, advantages, expenses, problems, issues, possibilities, and challenges) on the possible adoption of blockchain technology to disrupt FinTech functions. Additionally, the study aimed to investigate the possible future outcomes and applicability of blockchain technology in a number of important business operations, [17], [30].

Content analysis categorization and systematic literature review (SLR) are the methods used in this work to examine the literature. These methods can add to the body of knowledge in a number of ways, such as i ndependent, stand-alone investigations, [35].

According to [45], [46], [47], [48], [49], [50], [51], [52] when done separately, SLR and content analysis usually contribute in three main ways: (i) giving a summary of the current state of knowledge and its implications in theory, methods, or application areas; (ii) evaluating the opportunities, problems, and challenges involved; and (iii) suggesting future paths for knowledge advancement in the application domain, methodology, and research. Additionally, according to [53], [54], [55], [56], [57], [58], [59], [60], [61], [62] meta-analysis aids in the integration of knowledge gathered for logical arguments and strong pieces of evidence (academic reasoning).

The study will help create a thorough BCA/FinTech framework that will show how blockchain adoption is now progressing in terms of important business operations, implementation challenges, security concerns, and management matters.

As far as we are aware, this is the first paper that uses a cl assification of SLR and content analysis to discuss how specific key findings on BCA manage and influence important business, financial, and commercial functions as well as tasks for manufacturing, services, research, knowledge, culture, and agriculture.

To "*determine, assess, and record for future reference when management, who are willing and ambitious, chooses to move forward with the implementation of blockchain technology, which is upending FinTech functions in agriculture, manufacturing, services, knowledge, culture, and research,*" the study question, eligibility (clear inclusion and exclusion) criteria, and search terms all outline the intended SLR.

Based on the review's scope, seven search terms were used: knowledge, culture, research, manufacturing, services, agriculture, blockchain technology adoption, and services. To understand the present applications of blockchain in these six FinTech industries, the following three review research questions have also been developed.

RQ1. *Describe the financial factors (variables, BCA functionalities) of current FinTech/BCA apps and their consequences for a certain application domain.*

Innovation and technological advancement come with costs and benefits, yet opposition to change never goes away. Understanding the challenges of implementing blockchain technology is essential to facilitate further research. Consequently, the following research question is developed.

RQ2. *In particular application areas, what are the problems, dangers, constraints, and possibilities related to financial variables used as BCA functionalities?*

Other research topics include its use in business operations, propositions, hypotheses, potentialities, and challenges, as well as what the researchers and companies face in the future. Consequently, the following research question is created.

RQ3. *What are the theoretical contributions (propositions, hypotheses, etc.), consequences, queries, possibilities, and prognosis of BCA/FinTech issues, risks, restrictions, and outlook in a particular application area?*

This paper used a thorough SLR of peer-reviewed publications on the BCA/FinTech field to address these three research questions. Lastly, studies (academic papers about BCT procedures in these six application domain areas) were included and excluded using research questions and specific inclusion and exclusion criteria depending on the review's focus. Therefore, an article could not meet any exclusion criteria and had to meet all inclusion criteria for eligibility to be considered for the review.

A seven-step SLR was employed as an independent scholar approach to draw conclusions about the review research questions under consideration. This included framing the research questions, identifying pertinent publications, assessing the study's quality, compiling the supporting data, interpreting the results, deriving quantitative assessment, considering the impact of BCA on important financial variables that are thought of as BCA functionalities, and providing data and content classification on the study's spatial-temporal evolution.

Its goals were to discover, analyze, evaluate, and research all relevant BCA/FinTech literature so that corporate management could use the findings to explore the potential for using BCT in corporate operations.

The document type was selected as "Proceeding publication or Article paper," and the two most important keywords in this paper were "BCA" and "commercial sectors." After that, 124 papers were PRISMA evaluated in Clarivate Analytics/Web of Science (WoS) and Elsevier/Scopus, two abstracting/indexing databases. As part of a hybrid research approach, this study integrated qualitative analysis with a systematic literature review (SLR).

Quantitative analysis was the initial step of all 789 selected publications, and for the second step, a qualitative investigation was required of the highly cited papers that were screened (five papers in each application domain area). Based on the previously mentioned study, this paper proposes a systematic research framework.

The contributions to this work are as follows. First, the proposed architecture naturally combines blockchain technology, business application situations, and BCA concerns. This framework can be used by business experts to reconsider their financial problems and investigate how blockchain technology could be able to help. Second, this study makes some recommendations for further investigation. We believe that by implementing these suggestions, corporate managers, blockchain experts, and business professionals could work together and have a big influence on the business sector.

The remainder of the document is organized as follows: The literature background for the implementation of blockchain technology in six application domains with significant FinTech potential is provided in Section 2 (Research Background). The approach and steps for the BCA/FinTech SLR analysis using a specially tailored SLR technique are presented in Section 3 (Methodology) to direct the curation, screening, and analysis of academic content data.

Section 4 (Research Strategy for Literature Exhausting) lists the five literature research techniques used for the proposed SLR. The SLR is used in Section 5 (Results) for the selection, screening, extraction, and analysis of academic content using a modified PRISMA technique. After a discussion in Section 6, the conclusions are organized in Section 7 according to contributions,

discoveries, real-world applications, consequences, future directions, and limitations.

2 Research Background

2.1 Literature Review

Blockchain technology (BC) is one of Industry 4.0's most exciting and important technologies. It is believed to have the capacity to fundamentally alter how the corporate sector and economy operate; it offers a range of chances for existing businesses to grow and for new businesses to be founded, as well as serious obstacles for those that already exist.

According to [4], [5], and [14] BCT is a ground-breaking distributed ledger system that reduces fraud and cyberattacks, encourages stakeholders to share information and data, implements smart contracts, and eliminates agents, brokers, and intermediaries, offers this evidence.

BCT promotes transparent administration and trust by making it more difficult for dishonest players to counterfeit fraudulent transactions or (digital) assets by utilizing cutting-edge encryption to deliver secure digital signatures and timestamping. Participants in the metaverse ecosystem consequently feel more confident, trusting, and faithful. As a result, corporate blockchain transformation creates a n ew challenge for entrepreneurship management, [40], [41].

FinTech, or financial technology, is the use of cutting-edge technologies for financial services. FinTech currently makes use of several technologies, such as artificial intelligence, cloud computing, and blockchain, [8], [9]. Through the provision of digital financial services to individuals across the globe, FinTech has proven its true potential in traditional financial offerings. This study looked at how blockchain adoption (BCA) can disrupt the FinTech industry, [10].

According to [16] and [48] because consensus-based verification eventually boosts trust and lessens the need for third-party verification, BCT is crucial to the financial sectors. Agriculture [17], 18], [19], Manufacturing [20], [21], Services [22], [23], Knowledge [24], [25], Culture [26], [27], [28], and Research [29], [30] are just a few of the commercial and financial processes that are impacted by BCA in the FinTech space. The advantages, limitations, effectiveness, and challenges of applying BCT to various business, management, and financial processes have been clarified by earlier studies, [56].

However, considering how quickly BCT and the global business environment are developing, it is essential to have a thorough awareness of the developments and applications of BCT in the management arena. Additionally, it is critical to acknowledge and highlight the ways in which corporate organizations can employ BCT to generate value, [9], [16], [56].

According to [1], [11], and [30] the possibility of cyberattacks and financial fraud will be decreased by "blockchain adoption for FinTech" (BCA/FinTech), which involves integrating BCT into financial systems and processes. BCT provides superior protection and defense against financial theft and cyberattacks due to its tamper-proof nature, [63], [64], [65], [66], [67].

Furthermore, BCT offers a strong foundation for intelligent contracts, which could greatly improve financial efficiency. In addition to automating transactions, smart contracts offer the ability to automate contract implementation and enforcement, which could significantly reduce transaction costs.

A seven-step systematic literature review (SLR, [35]) is an objective academic procedure that consists of (i) formulating the review question, (ii) locating pertinent studies, (iii) assessing the quality of the study, (iv) highlighting the evidence, and (v) analyzing the findings. Assessing all pertinent literature on the subject is the goal of this approach, which also provides functionalities, information, data, and outlook for content analysis categorization and meta-analysis techniques, [31], [36], [37], [45].

2.2 BCA/FinTech Application Domain Areas

In [18], [20], [22], [24], [26] and [29], six business sectors -including BCA/FinTech disciplines, applications, and functions with significant FinTech potential- are discussed and summed up as follows:

Agriculture (AC) and BCA/FinTech: The use of blockchain technology in many agricultural applications is growing in popularity. These applications could meet a variety of demands in the agricultural product ecosystem, such as improving provenance traceability, contract exchange efficiency, IoT-based food quality control, and transparency in food safety.

Because the complex farm-to-fork pipeline involves many untrusted parties, including small-scale farmers, food processors, logistics companies, distributors, and retailers, it can be critical in some circumstances to strike the right balance between the integrity and efficiency of agricultural management systems.

BCT technologies have several uses in the agriculture industry, [68], [69], [70], [71], [72], [73] and have important ramifications, [74], [75], [76], [77], [78], [79], [80], [81], [82], [83]. Blockchain

technology offers operations managers numerous advantages for their daily work, such as quicker reaction times, secure and safe data, accurate node visibility, and transparent transactions, [84], [85], [86], [87].

BCA/FinTech and Manufacturing (MF): Recent years have seen many studies on cloud manufacturing in relation to cloud computing and Industry 4.0. However, the industry is less confident about implementing cloud manufacturing because of problems that still exist in this emerging field, such as trust, anonymity, commitment, safety, and payment. Blockchain technology, which has recently gained popularity and has distinct benefits in terms of security and decentralization, offers a potentially workable answer in this field.

BCT technologies have numerous uses in the industrial industry, [88], [89], [90], [91], [92], [93], [94] and significant ramifications, [95], [96], [97], [98], [99], [100], [101], [102], [103], [104], [105], [106]. Manufacturing managers can gain the trust of supply chain and manufacturing players, fidelity, quicker response times, privacy, data security, and transparent transactions by i mplementing blockchain technology [107], [108], [109], [110], [111].

BCA/FinTech and the Services Industry (SE): Blockchain can boost the amount of safe financial transactions, decrease bank costs, speed up payments, and enhance performance in the service sector, [22], [112], [113], [114], [115]. Notwithstanding its many advantages, BCT faces numerous challenges and barriers when applied in the banking and finance industry, [23], [116], [117], [118], [119], [120].

The circular economy is growing in importance both locally and globally. As evidenced by the unprecedented COVID-19 crisis, which brought to light the constraints and vulnerability of supply chains and services, circular economy strategies could offer a solution both during and after the pandemic, [121], [122], [123], [124].

The services sector is a cr ucial part of the circular economy, which makes it possible to manage social, environmental, and financial concerns. Although DLT frameworks, like Blockchain, are necessary for the services industry to operate effectively, the subject has not received much attention. By enhancing the services sector, BCA could further reinforce the circular economy, [125], [126], [127].

BCA/FinTech and Knowledge (KN): BCT technologies have significant uses in the knowledge sector, [24], [128], [129], [130], [131], [132], [133], [134], [135], [136], and have remarkable ramifications, [25], [137], [138], [139] [140], [141].

Unfortunately, according to [142], [143], [144], and [145], as businesses grow larger and more complex, inefficiencies inevitably occur, BCA and collective intelligence techniques can be used to access the expertise and experiences of sizable and varied populations. Likewise, design thinking methodologies are associated with the idea of gathering information from a wide range of people in order to quickly detect and address inefficiencies, [146], [147], [148], [149], [150].

There are a few nuances to consider when employing a BCA solution for something as subjective and context-dependent as finding and correcting organizational inefficiencies, despite the fact that these techniques have proven to be scalable, flexible, and successful in a v ariety of applications [151], [152], [153], [154], [155].

BCA/FinTech and the Culture (CU): BCT technologies have significant uses in the cultural sector, [26], [156], [157], [158], [159], [160], [161], [162], [163], [164], and have remarkable ramifications, [28], [165], [166], [167], [168], [169], [170], [171], [172], [173], [174], [175]. The promotion of local cultural wealth and economic development is greatly aided by artistic and innovative items. The cultural sector now positions itself as a p otential application area for the creation of new technical investments. Recent growth plans that are backed nationally to digitize the sector by combining technology with artistic and cultural heritage have made these expenditures possible, [156].

This study provides a summary of the ways in which blockchain technology is impacting this industry. This investigation led to the discovery of three uses for blockchain technology: tokenization and fractional equity, provenance and reliability, and rights management and digital protection. According to [156] new research questions are also put forth within three study areas that are taken into consideration: (i) expanding the field of empirical research, (ii) establishing guidelines for cultural personnel, and (iii) looking at the consumer's point of view. Lastly, a research plan is also established.

BCA/FinTech and Research (RE): BCT technologies have significant uses in the research sector, [29], [176], [177], [178], [179], [180], and have remarkable ramifications, [30], [181], [182], [183], [184], [185], [186], [187], [188], [189], [190], [191].

Technology-focused scholars have shown a great deal of interest in the blockchain, stressing its perceived effect and disruptive potential, but ICT

literature has been reluctant to catch on. This study takes an ICT-focused approach to the topic by developing the main themes from blockchain-based research through a thorough examination.

Although there are not many commercial-grade blockchain applications now, this literature study shows that technology has a lot of potential to support several use cases that cut across the whole sector.

This study elaborates on t his point by articulating through each of the major themes and addressing the many adoption hurdles to produce a comprehensive narrative on t he various potential blockchain applications and the future path of technology. According to the report, blockchain technology has the potential to significantly alter a number of well-established sectors and procedures while also advancing the UN Sustainable Development Goals.

Thus, exposure to agriculture, manufacturing, service, knowledge, culture, and research industry, constitutes a significant research topic in the field of BCA/FinTech. To assist managers, practitioners, and scholars when they choose to move forward with BCA in agriculture, manufacturing, services, knowledge, culture, and research, it is necessary to locate and document relative key findings (such as procedures, functions, data, benefits, problems, issues, opportunities, costs, and challenges), even if they are self-judging assumptions.

3 Methodology

A thorough literature review and qualitative analysis were used in this study's hybrid research approach. Prior to undergoing qualitative analysis, the most cited papers that made it through the screening procedure had to first undergo quantitative analysis.

The flowchart of the proposed methodology is as follows:

Box 1

SLR (top eight referenced publications by sector) → Text analysis of the top eight cited papers → Key -findings → Financial variables functioned as Blockchain features (RQ1) → Risks, issues, opportunities, and Limitations (RQ2) → Theoretical contributions, implications, potentiality, questions, and outlook (RQ3) → Quantitative analysis → Qualitative analysis → Statistics.

This study's hybrid research methodology combined a co mprehensive literature review with qualitative analysis. Seven papers per application domain area (business sector) were chosen for qualitative analysis after a quantitative review of the first 789 chosen articles.

Considering the previously described findings, this study recommends a systematic research methodology. According to [35], [36], [37] and [38] four elements were devised as methodology criteria to guarantee that the highest number of publications on BCA models applied in many business sectors would be found.

Methodology Selection (first methodology criterion). The first need is to collect final articles using the PRISMA SLR technique ("Preferred Reporting Items for Systematic Reviews and Meta-Analyses"). The four steps of PRISMA, an evidence-based systematic literature review procedure, are (i) identification, (ii) screening, (iii) eligibility, and (iv) inclusion, [35]. Its objective is to systematically improve the chances of finding the most pertinent articles, [45], [46], [47], [48], [49], [50], [51], [52], [53], [54].

Database selection is the second methodology criterion. The databases that were utilized for the search are the subject of the second criterion. For this, two databases were used: Clarivate Analytics/WoS and Elsevier/Scopus. The over-lap percentage of articles between WoS and Scopus is 99.11%. Nevertheless, WoS according to [55] has 22,100 journals, books, and conference proceedings, while Scopus has 42,420 journals, book series, and conference proceedings.

The third technique criterion is keyword selection. The third prerequisite to examining as many related articles as possible is to use the appropriate keywords. The following list of query terms summarizes the literature search strategy employed in this investigation. According to [31] and [54], the terms "abstract," "keywords," and "article title" were used in a search.

Box 2

Query terms:
"Agriculture" OR "Manufacturing" OR "Service" OR "Knowledge" OR "Culture" OR "Research"
AND
"Blockchain Technology Adoption"

The choice of majors is the fourth methodological requirement. Using a multidisciplinary approach to search for publications was the fourth criterion this study utilized to assess the route to obtain papers suitable for review. This method enables one to do a keyword search across all journals across a w ide

range of topics without being limited to a specific journal or journal category.

The list below illustrates the variety of studies that the SLR has covered. To ensure the reliability of the database and the results, keywords were utilized to establish the inclusion and exclusion criteria for article selection.

To cover the most recent information on the use of BCT and the four business sectors, a systematic search technique was conducted between 2013 and 2023. The databases used to find the most pertinent kinds of English-language papers published in scholarly journals were Web of Science and Scopus, [31], [54], [58], [60], [61].

The following are the time period, databases, search phrases, and data sources utilized in the suggested SLR:

Box 3

- Time period: 2013–2022;
- Data source: Journal articles and conference papers published in English;
- Search keywords and terms: ("agriculture" OR "manufacturing" OR "service" OR "knowledge" OR "culture" OR "research") AND ("Blockchain technology adoption");
- Searched databases: Clarivate Analytics/WoS and Elsevier/Scopus.

Title, abstract, keywords, and content were scanned (Figure 1) in accordance with the PRISMA 2020 guidelines, [35] to ascertain whether an article satisfied the inclusion criteria. Excluded were the papers that had nothing to do with the four questions that framed the proposed SLR. The seven most cited articles were obtained by filtering out many papers.

Over the past decade, improvements in systematic review methodology and terminology have necessitated an update to the guidelines in bibliometrics, content analysis, and meta-analysis, [31], [35], [36], [37], [38], [48]. Updated reporting guidelines that take into consideration improvements in locating, selecting, assessing, and evaluating (identification and synthesis) of literature reviews, bibliographic studies, and meta-analyses are included in the PRISMA 2020 statement, which replaces the 2009 version, [45], [46], [47], [48], [49], [50], [51], [52], [53], [54].

Increasing the transparency of systematic reviews is the goal of the 27-item PRISMA checklist. They include every aspect of the publication including the title, abstract, introduction, methods, results, discussion, and financing, [35], [36], [53]. This article conforms with PRISMA guidelines and checklists since this is the recognized format for reporting systemic reviews.

According to [31], [51], [58], [60] and [61], a tailored PRISMA-adapted methodology is presented for the proposed SLR's academic content categorization to direct the curation, screening, and analysis of academic content data. It was created with the intention of promoting transparency in systematic reviews. It discusses the following subjects: the inclusion and exclusion criteria, the formalization of the research questions, the definition of the search databases consulted, and the clarification of the search words employed in line with the research questions adhered to [47], [50], and [54].

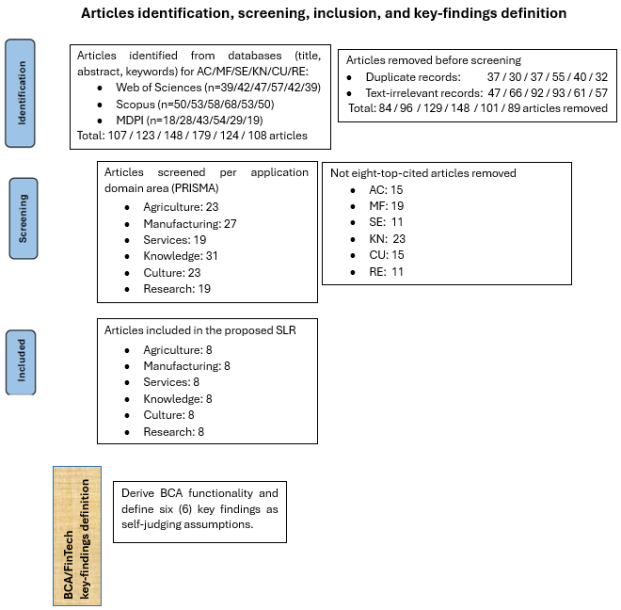

Fig. 1: The PRISMA 2020 f low diagram for the proposed systematic review

The suggested SLR structure for six separate SLR investigations that correspond to the six application domain regions is shown in Figure 2. Agriculture, Manufacturing, Services, Knowledge, Culture, and Research are the four business and financial functions that are described as BCA/FinTech disciplines under examination in Step 1 as BCA/FinTech application domain discipline domains.

SLR Subject area: According to [20], [21], [22], [23], [24], [25], [26], [27], [28], [29] and [30] this literature analysis focuses on the BCA's role in disrupting the FinTech field, which is anticipated to have significant FinTech potential in the generally acknowledged BCA/FinTech application fields.

The scholar databases and open access archives WoS and Scopus are utilized to extract and choose peer-reviewed papers on the BCA/FinTech

disciplines to answer the three research questions in Step 2 (2nd methodological criterion).

According to [1], [36], [37] and [38], the main scientific databases of academic articles that offer on-demand bibliographic information or records are these two search databases. The following seven search terms were employed in Step 3 (the third methodological criterion) in accordance with the application domain areas and the SLR scope that were established in Step 1: ("agriculture," "manufacturing," "services," "knowledge," "culture," or "research") AND "adoption of blockchain."

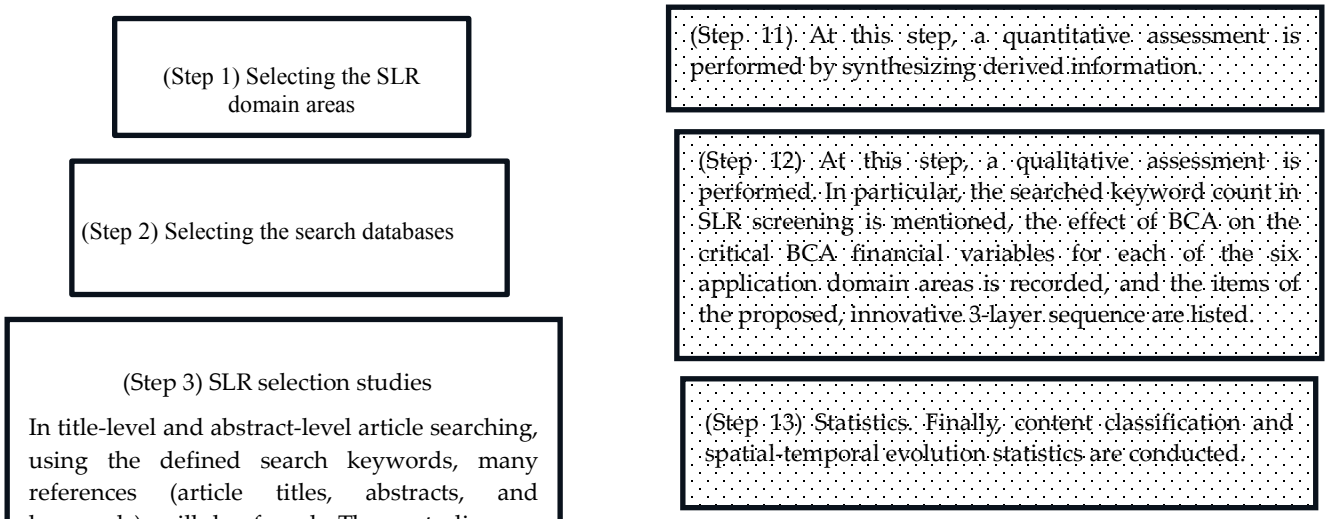

Fig. 2: The framework of the proposed SLR

Reading academic papers and then brainstorming with specialists can help you come up with search terms. With the increasing number of periodicals, databases, journals, automated techniques, and semi-automated processes that use machine learning and text mining, researchers can anticipate the citations of significant studies and discover new and relevant research. They can find more pertinent items as a result.

Search period: The search period is set as November 2023-September 2024.

The search in "publication title, abstract, and keywords" is predicated on hypotheses backed up by literature and by the author itself (for example, it is expected that relevant documents' main points will be discussed in the publication's abstract, title, and key-words as stated in [31], [36], [37], [38] and [54]).

Language: English. Justifiable self-arguing constraints are the basis of the English language selection. There are currently few reasons to use a language other than English as t he de facto

academic lingua franca.

In Step 4, t he SLR research questions are determined. The scope, search terms, and research questions are used to establish the SLR inclusion/exclusion searching criteria in Step 5.

Studies (academic papers about BCT practices) are included and excluded using the specific inclusion and exclusion criteria, which are based on the scope of the review, search keywords, and research objectives. As a result, an item must satisfy all eligibility requirements for inclusion in the review and may not satisfy any excluding requirements.

For the article characteristics, the following eligibility (inclusion) criteria were applied:
• Best BCA practices have been identified (Expectations);
• English (Languages);
• 2013–2022 ((SLR time scope);
• DOI (identity);
• Disrupting and radical FinTech functionalities (Outcomes).

Accordingly, the following criteria for exclusion were applied:
• Theoretical rather than practical publications (articles, papers, reports);
• Non-English publications;
• All papers published any time before January 1st, 2013;
• All non-peer-reviewed publications.

Following, Step 6 presents the top eight most referenced articles (according to SLR projection and the content filtering using the above inclusion and exclusion criteria).

Using documented experiences and best practices in Step 7, which derives BCA functionality, six significant results are defined as self-assessed presumptions (i.e., evidence-based reasoning that is accepted as t rue without any scientific proof or documentation), [1], [47], [48], [49], [50], [53].

Step 8 then projects or cross-references the major findings (which are considered self-judging assumptions) to financial variables considered as BCA functions according to [1], [31], [53] and [54].

Step 9 wraps up by outlining the possible issues, dangers, problems, constraints, and outlook to help BCA managers who are considering blockchain technology decide whether to implement it.

Finally, Step 10 concludes by stating that managers interested in BCA/FinTech should consider the potential issues, questions, consequences, problems, theoretical implications and contributions, potentiality, and BCA outlook.

The report does a thorough literature assessment to identify the top five cited publications in each of the six business areas (application domain). These articles discuss the applications, implications, challenges, opportunities, and potential of BCA for FinTech.

The six assumptions listed below have been identified as "key findings" in the proposed SLR:
• The use of smart contracts promotes faithfulness, commitment, and loyalty in BCA/FinTech.
• challenges with credit corruption in BCA/FinTech are regarded as trust challenges in digital transactions (supply chain, manufacturing, food sector, agriculture, etc.).
• In the fields of agriculture, manufacturing, services, knowledge, culture, and research, information-sharing difficulties are regarded as fidelity issues in BCA/FinTech.
• BCA integrity is facilitated by corporate ESG initiatives.
• BCA traceability is improved by corporate DEI activities.
• Adoption of cryptocurrencies offers security, privacy, transparency, and anonymity while also increasing the scalability, durability, and efficiency of BCA/FinTech.

The following are the structural elements of the customized PRISMA protocol utilized in systematic bibliographic research and review:

Box 4

BCA/FinTech application domain: Four BCA/FinTech application domain sectors are categorized. Search databases consulted (2nd methodology criterion): Web of Science and Scopus. Search keywords (3rd methodology criterion): (“Agriculture” OR “Manufacturing” OR “Services” OR “Knowledge” OR “Culture” OR “Research”) AND “BCA”. Research questions formulation: RQ1 (BCA applications), RQ2 (BCA problems, opportunities, and challenges), and RQ3 (BCA outlook and potentiality). SLR eligibility criteria: The four (4) exclusion and the five (5) inclusion criteria. Results: The six (6) key findings.

The value generation, applications, and digital documentation of BCA/FinTech in managing the six BCA/FinTech application domain areas will be the

main emphasis of this article, as shown in following Figure 3.

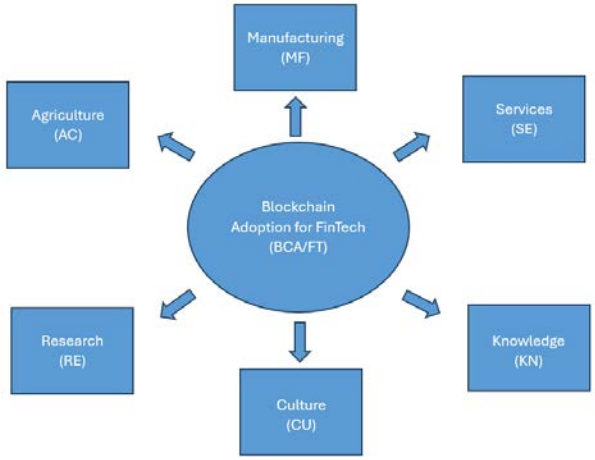

Fig. 3: Framework for adopting blockchain for the six FinTech application domain areas

4 Exhausting Literature (4th Methodology Criterion)

The SLR researchers are aware of all significant discoveries and current advancements in the discipline after thoroughly searching the literature.

Regretfully, it is impossible to cover every piece of publication related to the six specified business areas. Hence, it is crucial to make sure that every effort has been made to thoroughly research the subject at hand. Even when the search criteria and methodologies are changed, the same books and articles still show up in a basic LSM (linear search methodology).

The literature-exhausting multidisciplinary approach employed in this study as the fourth criterion seeks to (a) decide what crucial steps need to be taken before the topic's research is discontinued, (b) do an in-depth study on the topic using resources and search engines, and (c) get help with your research by contacting the library's support services.

As a r esult, the following five library search strategies are used in the suggested multidisciplinary approach.

- Locating the eight top-referenced publications in Library Databases
- Define an academic publication (paper, article, case study) as a prototype and find any related publications
- Use Clarivate's Web of Knowledge / Elsevier's Scopus indexing databases
- Use of SAGE Navigator
- Seek any available librarian support for research consultancy.

5 Results and Analysis

Blockchain applications and their consequences in six major FinTech application domain areas were examined, evaluated, and documented for a systematic bibliographic and literature evaluation using a sp ecially designed PRISMA-adapted methodology.

The following features of the SLR were used in this work for the selection, screening, extraction, and analysis of academic material (using the adapted PRISMA protocol as the criterion for technique selection):

Search databases (the second technique criterion): The open-access archives from Clarivate Analytics/WoS and Elsevier/Scopus were chosen on the basis of well-supported information.

BCA's disruption of the FinTech discipline, as defined by the application fields of agriculture, manufacturing, services, knowledge, culture, and research, is the subject of this content analysis classification and literature study.

Keywords: ("agriculture" OR "manufacturing" OR "services" OR "knowledge" OR "culture" OR "research") AND "Block-chain technology adoption".

Search period: Time period from November 2023 to September 2024.

Field (search): The text string "article-title–abstract–keywords".

The three research questions (RQ1, RQ2, and RQ3) that were introduced in Section 1 and covered in Section 3 a re then projected onto Figure 3's six FinTech application domain areas.

RQ1	What are the current FinTech/BCA apps' financial variables (BCA features) and what does this mean for a specific application area?
RQ2	How might financial variables function as BCA functionalities present opportunities and problems in a particular application area?
RQ3	What are the ramifications, propositions, inquiries, outlook, and potentiality of Blockchain adoption in a certain application field?

SLR eligibility criteria:

Inclusion criteria

- Best BCA practices have been identified (as expected)
- English (as the publication's language)
- 2013-2022 (as the SLR time domain)
- DOI (as the publication identity)
- Disrupting and radical FinTech functionalities (as the outcomes and results).

Exclusion criteria
- Published research papers about theory rather than practice
- All articles written in any language rather than English
- research papers with a publication date before January 1st, 2013
- All non-peer-reviewed publications.

5.1 Agriculture

Bibliometric evaluation of the content found in scholar and citation index databases (Clarivate analytics/WoS and Elsevier/Scopus) is conducted to identify the functions correlated to publications' impact.

Initially, from November 2023 to September 2024, 107 publications were considered (time scope 2013-2022; see customized PRISMA protocol). From these 107 publications, 23 were screened, and the top eight most-referenced publications were picked (Figure 1) and displayed in Appendix in Table 1, [78], [79], [80], [81], [82], [88], [89], [90].

The examination of the spatial-temporal evolution revealed a decreasing linear temporal evolution citing from 2020 to 2022 that concentrated geographically in the USA (12.5%), China (25%), Asia/Africa (25%), Europe (25%), and Pacific (12.5%) (Table 1, Appendix).

The list of compatible major conclusions, as key findings, from the text analysis of the eight most cited papers on BCA/FinTech and agriculture [78], [79], [80], [81], [82], [88], [89], and [90], is as follows:
- Smart contract utilization advances BCA/FinTech loyalty, commitment, faithfulness, and knowledge sharing [Key finding #1].
- Corporate ESG activities facilitate BCA integrity [Key finding #2].
- Credit corruption problems in BCA/FinTech are considered trust issues in digital transactions (agriculture) [Key finding #3].
- Corporate DEI initiatives enhance BCA traceability and accountability [Key finding #4] .
- By adopting cryptocurrencies, the BCA/FinTech becomes more efficient, scalable, and durable with loyalty, commitment, and cryptography functionalities [Key finding #5].

From these five key findings, the following eight (8) financial variables (RQ1), operated as B CA functionalities for the agriculture and food industry, are produced according to the literature, [17], [18], [19]: loyalty (findings #1 and #5), commitment (findings #1 a nd #5), faithfulness (finding #1), knowledge sharing (finding #1), integrity (from key finding #2), trust (finding #3), traceability-accountability (finding #4), and cryptography (finding #5).

Additionally, from these eight (8) financial variables, the following four (4) RQ2 issues are produced according to the literature: security risks (from loyalty, commitment, faithfulness, and trust), skill gaps (from integrity, and traceability-accountability), integration-related issues with other company's units (from integrity, cryptography, and knowledge sharing), and performance-related limitations (from integrity and traceability-accountability).

Finally, from the above four (4) issues, risks, limitations, and opportunities, the following five (5) RQ3 implications are produced according to the literature, [68], [69], [70], [71], [72], [73], [74], [75], [76], [77], [78], [79], [80], [81], [82], [83], [84], [85], [86], [87], [88], [89], [90]: how to protect data subjects against data harm (from security risks and skill gaps), governance and internal control (from security risks and integration-related issues with another company's units), audibility (from skill gaps), direct peer-to-peer transactions via cryptocurrencies eliminating middlemen and reducing transaction time (from skill gaps, performance-related limitations), and scalability (from performance-related limitations).

Comments: As part of the evolving e-agriculture system, blockchain technology is revolutionizing the entire sector to meet the 21st-century food issue. From the farm to the people, it plays crucial roles in a variety of ways: it increases the efficiency of the food supply chain by fostering trust amongst stakeholders and simplifying processes; it safeguards the privacy and integrity of data by combining precision agriculture and smart farming methods to boost farm productivity; and, finally, it gives farmers the opportunity to maximize their profits through a dependable platform. Overall, it has a significant positive impact on all stakeholders in the agriculture sector.

5.2 Manufacturing

Bibliometric evaluation of the content found in scholar and citation index databases (Clarivate analytics/WoS and Elsevier/Scopus) is conducted to identify the functions correlated to publications' impact.

Initially, from November 2023 till September 2024, 123 publications were considered (time scope 2013-2022; see customized PRISMA protocol). From these 123 publications, 27 were screened, and

the top eight most-referenced publications were picked (Figure 1) and displayed in Appendix in Table 2, [88], [89], [90], [91], [92], [112], [113], [114].

The examination of the spatial-temporal evolution showed a stable temporal evolution citing from 2018 to 2022, peaking in 2020 and concentrated geographically in the USA (12.5%), China (12.5%), Asia (25%), Europe (37.5%), and Pacific (12.5%) (Table 2, Appendix).

The list of compatible major conclusions, as key findings, from the text analysis of the eight most cited papers on BCA/FinTech and manufacturing ([88], [89], [90], [91], [92], [112], [113], and [114]), is as follows:

- Smart contract utilization advances BCA/FinTech loyalty, commitment, faithfulness, and same-data sharing [Key finding #1].
- Corporate ESG activities facilitate BCA integrity [Key finding #2].
- Credit corruption problems in BCA/FinTech are considered trust issues in digital transactions (manufacturing) [Key finding #3].
- Corporate DEI initiatives enhance BCA traceability and accountability [Key finding #4].
- Information-sharing problems in BCA/FinTech are considered fidelity issues in markets, investments, and financial services [Key finding #6].

From these five key findings, the following eight (8) financial variables (RQ1), operated as BCA functionalities for manufacturing, are produced according to the literature, [20], [21]: loyalty (finding #1), commitment (finding #1), faithfulness (finding #1), same-data sharing (finding #1), integrity (finding #2), trust (finding #3), traceability-accountability (finding #4), and fidelity (finding #6).

Additionally, from these eight (8) financial variables, the following four (4) RQ2 issues are produced according to the literature: security risks (from same-data sharing, integrity, loyalty, commitment, faithfulness, and fidelity), the transfer and storage of highly sensitive data (from fidelity, and integrity), high cost of implementation (from traceability-accountability, and faithfulness), and enhanced sustainability efforts by improving tracking and verifying emissions (from traceability-accountability, and trust).

Finally, from the above four (4) issues, risks, limitations, and opportunities, the following four (4) RQ3 implications are produced according to the literature: data privacy (from security risks and the transfer and storage of highly sensitive data), harmonizing the innovation BCT spirit with pragmatic needs of financial governance (from high implementation cost), trust among users (from the transfer and storage of highly sensitive data and security risks), and decentralization (from high implementation costs and enhanced sustainability efforts by improving tracking and verifying emissions).

Comments: Blockchain technology and cloud manufacturing are combined in the BCA and manufacturing ideas. The idea gets around the drawbacks of the current traditional cloud manufacturing platforms. Key components of the suggested idea, such as c onsensus-oriented, worldwide payment, and creditable distributed processes, are derived from blockchain technology. Furthermore, we ought to be able to read and write transactions and data on the blockchain thanks to the smart contract capabilities.

While most of the problems with conventional cloud manufacturing designs are resolved by integrating blockchain technology into cloud manufacturing, further in-depth research must be done in the future. The mechanism for appointing the first blockchain owners, the creation of a special cryptocurrency system for the suggested system, the integration of distributed and grid computing methods, the application of cybersecurity measures, the enhanced cost structure of computing a manufacturing solution, the cost distribution between manufacturers and end users, and other topics are among the research extensions.

5.3 Services

Bibliometric evaluation of the content found in scholar and citation index databases (Clarivate analytics/WoS and Elsevier/Scopus) is conducted to identify the functions correlated to publications' impact.

Initially, from November 2023 to September 2024, 148 publications were considered (time scope 2013-2022; see customized PRISMA protocol). From these 148 publications, 19 were screened, and the top eight most-referenced publications were picked (Figure 1) and displayed in Appendix in Table 3 [112], [113], [114], [115], [116], [128], [129], [130].

The examination of the spatial-temporal evolution revealed an incremental non-linear temporal evolution of increasing citations from 2017 to 2022 that concentrated geographically in Asia (25%), Europe (62.5%), and the Pacific (12.5%) (Table 3, Appendix).

The list of compatible major conclusions, as key findings, from the text analysis of the eight most cited papers on B CA/FinTech and the service industry [112], [113], [114], [115], [116], [128], [129], and [130], is as follows:

- Smart contract utilization advances BCA/FinTech transparency, anonymity, and knowledge sharing [Key finding #1].
- [Credit corruption problems in BCA/FinTech are considered trust issues in digital transactions (services, government, etc.) Key finding #3].
- By adopting cryptocurrencies the BCA/FinTech becomes more efficient, scalable, and durable with anonymity, security, privacy, and transparency functionalities [Key finding #5].
- Information sharing problems in BCA/FinTech are considered performance issues in supply chains, markets, investments, banking, and financial services [Key finding #6].

From these four key findings, the following seven (7) financial variables (RQ1), operated as BCA functionalities for the service industry, are produced according to the literature, [22], [23]: transparency (findings #1 and #5), anonymity (findings #1 and #5), knowledge sharing (finding #1), trust (finding #3), security (finding #5), privacy (finding #5), and (efficient, scalable, and durable) performance (finding #6).

Additionally, from these seven (7) financial variables, the following five (5) RQ2 issues are produced according to the literature: performance-related limitations (from performance and knowledge sharing), skill gaps (from privacy and anonymity), security risks (from transparency, trust, and privacy), enhanced sustainability efforts by improving tracking and verifying emissions (from performance, transparency, and security), and the transfer and storage of highly sensitive data (from anonymity, security, and transparency).

Finally, from the above five (5) issues, risks, limitations, and opportunities, the following three (3) RQ3 theoretical contributions are produced according to the literature: capital-intensive investments deter most companies from adopting BCT (from performance-related limitations and skill gaps), holding companies accountable for their sustainability claims (from the transfer and storage of highly sensitive data and security risks), and track carbon balances and other environmental metrics (from enhanced sustainability efforts by improving tracking and verifying emissions).

Comments: Although most of the chosen literature is focused on b anking and financial services, blockchain-based traceability implementations seem to be quite common in a range of service business categories. Many of the selected works of literature fail to identify the social, environmental, or economic objectives that the proposed blockchain-based traceability solutions accomplish from a sustainability perspective.

According to our analysis, numerous publications provide test-level implementations using relevant test suites, mostly the Ethereum blockchain. The performance metrics of the literature that was retrieved are also dispersed, which is an interesting discovery.

The range of available technical solutions and the underlying technical features of these solutions seem to make direct comparisons difficult, especially in the lack of defined benchmarks.

Even though it is considered a first-line traceability technology, there are still several organizational, technological, and legal problems that need to be fixed. Throughput, scalability, interoperability, interface with old ERP systems, and blockchain-related legal challenges are some of these.

According to our data, most research efforts have focused on unstructured experimentation with traceability solutions related to blockchain for the services industry. Finally, because they can provide value while taking cost-related aspects and ESG/DEI objectives into account, real-world traceability solutions must be designed and validated.

5.4 Knowledge

Bibliometric evaluation of the content found in scholar and citation index databases (Clarivate analytics/WoS and Elsevier/Scopus) is conducted to identify the functions correlated to publications' impact.

Initially, from November 2023 to September 2024, 179 publications were considered (time scope 2013-2022; see customized PRISMA protocol). From these 179 publications, 31 were screened, and the top eight most-referenced publications were picked (Figure 1) and displayed in Appendix in Table 4 [128], [129], [130], [131], [132], [156], [157], [158].

The examination of spatial-temporal evolution showed an incremental linear temporal evolution from 2013 to 2022 that concentrated geographically in the USA (12.5%), Asia (19%), Europe (62.5%), and the Pacific (6%) (Table 4, Appendix).

The list of compatible major conclusions, as key findings, from the text analysis of the eight most cited papers on B CA/FinTech and the knowledge

industry ([128], [129], [130], [131], [132], [156], [157], and [158]), is as follows:

- Smart contract utilization advances BCA/FinTech commitment, faithfulness, and same-data sharing [Key finding #1].
- Credit corruption problems in BCA/FinTech are considered trust issues in digital transactions (knowledge) [Key finding #3].
- By adopting cryptocurrencies, the BCA/FinTech becomes more efficient, scalable, and durable with trust, commitment, and cryptography functionalities [Key finding #5].
- Information sharing problems in BCA/FinTech are considered fidelity issues in supply chains, markets, investments, and financial services [Key finding #6].

From these four key findings, the following six (6) financial variables (RQ1), operated as BCA functionalities for the knowledge industry, are produced according to the literature, [24], [25]: commitment (findings #1 and #5), faithfulness (finding #1), same-data sharing (finding #1), trust (findings #3 and #5), cryptography (finding #5), and fidelity (finding #6).

Additionally, from these six (6) financial variables, the following four (4) RQ2 issues are produced according to the literature: security risks (from same-data sharing, commitment, faithfulness, trust, and fidelity), the transfer and storage of highly sensitive data (from trust, same-data sharing, cryptography, and fidelity), integration-related issues with another company's units (from commitment, same-data sharing, and trust), and performance-related limitations (from commitment, cryptography, and trust).

Finally, from the above four (4) issues, risks, limitations, and opportunities, the following three (3) RQ3 theoretical contributions are produced according to the literature: how to protect data subjects against data harm (from integration-related issues with another company's units), data privacy (from security risks, and the transfer and storage of highly sensitive data), and direct peer-to-peer transactions via cryptocurrencies eliminating middlemen and reducing transaction time (from performance-related limitations).

Comments: Blockchains are complex data structures that contain substantial uncontrollability and arbitrariness information, algorithmic and regulatory restrictions, and components of both public and private systems. The BCA/knowledge method offers a useful framework for conducting empirical research on blockchains that is mainly concerned with the social issues surrounding knowledge resources.

Longer duration by conceptualizing blockchain networks as knowledge commons, one can theoretically contribute a substantial amount of case-based research to the developing field of knowledge commons governance (knowledge common refers to information, data, and content that is collectively owned and managed by a community of users, particularly over the Internet).

In addition to being a rich area for independent study, blockchain networks are also a useful tool for contrasting them with other thoroughly studied information commons scenarios, such as digital governance.

The time is right to start empirical research initiatives based on knowledge commons principles because of the wide range of blockchain variations and historical experiences with both successful and unsuccessful governance.

5.5 Culture

Bibliometric evaluation of the content found in scholar and citation index databases (Clarivate analytics/WoS and Elsevier/Scopus) is conducted to identify the functions correlated to publications' impact.

Initially, from November 2023 to September 2024, 124 publications were considered (time scope 2013-2022; see customized PRISMA protocol). From these 124 publications, 23 were screened, and the top eight most-referenced publications were picked (Figure 1) and displayed in Appendix in Table 5, [156], [157], [158], [159], [160], [176], [177], [178].

The examination of the spatial-temporal evolution revealed a stable temporal evolution citing from 2017 to 2022, peaking in 2019 and concentrated geographically in the USA (12.5%), China (12.5%), Asia (12.5%), and Europe (62.5%) (Table 5, Appendix).

The list of compatible major conclusions, as key findings, from the text analysis of the eight most cited papers on BCA/FinTech and culture ([156], [157], [158], [159], [160], [176], [177], and [178]), is as follows:

- Smart contract utilization advances BCA/FinTech loyalty, commitment, faithfulness, transparency, and information sharing [Key finding #1].
- Corporate ESG activities facilitate BCA integrity [Key finding #2].

• Credit corruption problems in BCA/FinTech are considered trust issues in digital transactions (culture) [Key finding #3].
• Corporate DEI initiatives enhance BCA traceability and accountability [Key finding #4].
• By adopting cryptocurrencies, the BCA/FinTech becomes more efficient, scalable, and durable with privacy, anonymity, security, loyalty, and commitment functionalities [Key finding #5].

From these five key findings, the following eleven (11) financial variables (RQ1), operated as BCA functionalities for the culture industry, are produced according to the literature, [26], [27], [28], [156]: loyalty (findings #1 and #5), commitment (findings #1 and #5), faithfulness (finding #1), transparency (finding #1), information sharing (finding #1), integrity (finding #2), trust (finding #3), traceability-accountability (finding #4), privacy (finding #5), anonymity (finding #5), and security (finding #5).

Additionally, from these eleven (11) financial variables, the following four (4) RQ2 issues are produced according to the literature: security risks (from transparency, information sharing, loyalty, commitment, faithfulness, security, and trust), skill gaps (from integrity, anonymity, privacy, and traceability-accountability), integration-related issues with other company's units (from information sharing, privacy, integrity, and trust), and performance-related limitations (from integrity, information sharing, trust, commitment, and traceability-accountability).

Finally, from the above four (4) issues, risks, limitations, and opportunities, the following five (5) RQ3 implications are produced according to the literature, [156], [157], [158, [159], [160], [162], [163], [164], [170], [171], [172], [173], [174], [175], [176], [177], [178]: how to protect data subjects against data harm (from security risks and skill gaps), governance and internal control (from security risks and integration-related issues with another company's units), auditability (from skill gaps), direct peer-to-peer transactions via cryptocurrencies eliminating middlemen and reducing transaction time (from skill gaps and performance-related limitations), and scalability (from performance-related limitations).

Comments: Most of the papers have focused on developing a blockchain solution or doing a conceptual analysis of this problem rather than considering the viewpoint of the consumer. Few studies have looked at how BCA impacts culture managers and their work because it is fundamentally a commercial technology, and even fewer have looked at how these changes impact end users' viewpoints. Additionally, according to [156], when creating a cultural offer that will satisfy the client, the needs of the consumer must be considered.

Future research, in our opinion, should examine how end users perceive the services offered by cultural enterprises and whether they recognize the significance of this technology. Our SLR approach demonstrates that the NFT and "CryptoArt" phenomena have emerged recently. These phenomena have also made it possible for non-habitual artists to sell their works in the form of digital tokens, turning the exchange and sale of works into an event that borders on being a game. According to [156] we propose a thorough examination of this occurrence and how consumers understand this new genre of art.

The following are the research questions we propose for the future: (i) What impressions do customers have of a blockchain-based service, and how? (ii) Is there a correlation between consumer loyalty and the application of blockchain in cultural heritage? (iii) Have customers placed higher importance on authenticity and safety? If yes, have these characteristics served as motivators for loyalty?

5.6 Research

Bibliometric evaluation of the content found in scholar and citation index databases (Clarivate analytics/WoS and Elsevier/Scopus) is conducted to identify the functions correlated to publications' impact. Initially, from November 2023 to September 2024, 108 publications were considered (time scope 2013-2022; see customized PRISMA protocol). From these 108 publications, 19 were screened, [131], [132], [159], [176], [177], [178], [179], [180], [181], [182], [183], [184], [185], [186], [187], [188], [189], [190], [191], and the top eight most-referenced publications were picked (Figure 1) and displayed in Appendix in Table 6, [131], [132], [159], [176], [177], [178], [179], [180].

The examination of the spatial-temporal evolution showed a non-linear incremental temporal evolution citation from 2013 to 2022 that concentrated geographically in Asia (50%) and Europe (50%) (Table 6, Appendix).

The list of compatible major conclusions, as key findings, from the text analysis of the eight most cited papers on BCA/FinTech and the research industry [131], [132], [159], [176], [177], [178], [179] and [180], is as follows:
• Smart contract utilization advances BCA/FinTech commitment, transparency,

knowledge sharing, same-data sharing, loyalty, and faithfulness [Key finding #1].

- Credit corruption problems in BCA/FinTech are considered trust issues in digital transactions (research) [Key finding #3].
- By adopting cryptocurrencies, the BCA/FinTech becomes more efficient, scalable, and durable with trust, privacy, anonymity, and commitment functionalities [Key finding #5].
- [Information sharing problems in BCA/FinTech are considered fidelity and security issues in markets, investments, banking, and financial services Key finding #6].

From these four key findings, the following eleven (11) financial variables (RQ1), operated as BCA functionalities for the research industry, are produced according to the literature, [29], [30]: commitment (findings #1 and #5), transparency (finding #1), knowledge sharing (finding #1), same-data sharing (finding #1), faithfulness (finding #1), loyalty (finding #1), trust (findings #3 and #5), privacy (finding #5), anonymity (finding #5), security (finding #6), and fidelity (finding #6).

Additionally, from these eleven (11) financial variables, the following four (4) RQ2 issues are produced according to the literature, [131], [132], [159], [176], [191]: security risks (from transparency, same-data sharing, anonymity, security, commitment, faithfulness, trust, privacy, and fidelity), the transfer and storage of highly sensitive data (from anonymity, privacy, knowledge sharing, trust, loyalty, and fidelity), integration-related issues with another company's units (from same-data sharing, commitment, and trust), and performance-related limitations (from knowledge sharing, same-data sharing, commitment, and trust).

Finally, from the above four (4) issues, risks, limitations, and opportunities, the following three (3) RQ3 theoretical contributions are produced according to the literature, [131], [132], [159], [176], [191]: how to protect data subjects against data harm (from integration-related issues with another company's units), data privacy (from security risks, and the transfer and storage of highly sensitive data), and direct peer-to-peer transactions via cryptocurrencies eliminating middlemen and reducing transaction time (from performance-related limitations).

Comments: New information security procedures and standards that are developed and adopted will have a f avorable impact on public trust in blockchain technology. According to [131], [176], [177], [178], [179], and [180], transparency of transactions, where each is uploaded to every node in the network, ensures the overall integrity of the blockchain, is one of the claimed benefits of blockchain in its current version.

This feature may also be a drawback because it is possible that it will not comply with GDPR and existing information security regulations. According to [159], [187], [188], [189], [190] and [191] these problems have been brought up in the literature that is currently available, suggesting that to comply with GDPR and related laws, governance and information security policies need to be revised. The formalization of these procedures and blockchain-specific standards will enhance public confidence in blockchain applications.

Since blockchain technology is still in its infancy and there are not many practical uses for it yet, organizations examining the technology to see how it can affect their current procedures face challenges. According to [176] and [177] the present study bolsters certain tenets of previous research, including the promotion of a pragmatic and optimistic viewpoint on blockchain technology.

5.7 Derived Quantitative Assessment

The objectives (purposes) of the quantitative assessment and analysis were (i) to quantify the SLR data and generalize results (findings) from the 8 most-cited papers to the population (e.g., corporate managers assigned BCA initiatives) of interest, and (ii) to be followed by qualitative research (see next subsection 5.8) to explore the findings further.

Quantitative assessment is characterized by several limitations: usually oversimplify complex phenomena (in our case the "BCA functionalities") reducing them to simple numerical data; may not fully capture the article's context and subjective BCA reasoning of paper's author(s) as individuals; and may not allow for the exploration of new BCA ideas or expected side-effects on findings.

According to [36], [37], and [54], quantitative content analysis classification is made possible by the construction of a quantitative estimate of correlations that are commonly studied in the literature. Systematic literature evaluations that seek to reconcile a variety of associations typically employ this type of study, [31], [45], [47]. The established correlations are often based on conflicting evidence (e.g., a positive or substantial effect on one study but a negative or inconsequential effect on another study).

Furthermore, according to [38], researchers can utilize meta-analysis to identify likely sources of conflict (such as settings or sociodemographic

information). Researchers can objectively create an assessment by using meta-analysis.

The derivative quantitative data is shown in tabular form in Table 7 (Appendix), which integrates the knowledge that has been gathered in Table 1, Table 2, Table 3, Table 4, Table 5 and Table 6 in Appendix.

An SLR approach should offer strong pieces of evidence for logical arguments, even though the data in Table 1, Table 2, Table 3, Table 4, Table 5, Table 6 and Table 7, in Appendix, were generated using the self-arguing six assumptions (important findings) and self-judging inclusion and exclusion criteria.

5.8 Qualitative Assessment - BCA Effect on Critical Financial Variables

The objectives (purposes) of the qualitative assessment and analysis were (i) to gain an understating of the underlying FinTech reasons and BCA motivations, and (ii) to uncover prevalent trends in BCA initiatives.

Qualitative assessment is characterized by several limitations: Usually, a great number of cases representing the population of interest (i.e., most cited articles) is needed; It's very difficult to deal with causality; It's a time-consuming method and labor-intensive procedure; The results can't be verified (not statistically representative); and usually the findings are conclusive and descriptive in nature.

When examining the SLR derivative data in Table 1, Table 2, Table 3, Table 4, Table 5, Table 6 and Table 7, in Appendix, the proposed sequence "BCA functionalities → Issues, risks, limitations, and opportunities → Implications, theoretical contributions, questions, potentiality, and outlook" is documented as integrated accumulated knowledge in tabular format (Table 8, Table 9 and Table 10 in Appendix).

Comments: In agriculture, BCA has a significant positive effect on 8 out of the 16 BCA functionalities.

In the manufacturing sector, BCA significantly affects 8 out of the 16 BCA functionalities.

In the services industry, BCA has a significant positive effect on 7 out of the 16 BCA functionalities.

In the knowledge application domain area, BCA has a significant positive effect on 6 out of the 16 BCA functionalities.

In culture, BCA has a significant positive effect on 11 out of the 16 BCA functionalities.

Finally, in the research domain area, BCA has a significant positive impact on 11 out of the 16 BCA functionalities.

The financial variable trust appears to be supported in all application domain areas, while the financial variables faithfulness and commitment appear to be supported by BCA, as BCA functionalities, in six key FinTech application domain areas (agriculture, manufacturing, service, knowledge, culture, and research).

5.8.1 First Layer of the Proposed SLR Research Sequence (RQ1

In analyzing the SLR derivative information from Table 1, Table 2, Table 3, Table 4, Table 5, Table 6 and Table 9, in Appendix, the first part of the proposed sequence "Blockchain functionalities → Risks, issues, opportunities, and Limitations → Implications, questions, etc." is characterized as integrated accumulated knowledge in a graphical form (Figure 4, Appendix).

AC: Eight (8) financial variables, integrating blockchain adoption functions for agriculture, are produced: faithfulness, integrity, trust, traceability-accountability, commitment, knowledge sharing, loyalty, and cryptography (Figure 4: top left in Appendix).

MF: Six (8) financial variables, integrating blockchain adoption functions for manufacturing, are produced: faithfulness, loyalty, fidelity, trust, integrity, traceability-accountability, commitment, and same-data sharing (Figure 4: top right in Appendix).

SE: Six (7) financial variables, integrating blockchain adoption functions for the service sector, are produced: security, trust, performance, privacy, anonymity, transparency, and knowledge sharing (Figure 4: middle left in Appendix).

KN: Six (6) financial variables, integrating blockchain adoption functions for the knowledge BCA/FinTech application domain area, are produced: faithfulness, trust, commitment, same-data sharing, fidelity, and cryptography (Figure 4: middle right in Appendix).

CU: Eleven (11) financial variables, integrating blockchain adoption functions for culture, are produced: privacy, faithfulness, security, transparency, trust, integrity, traceability-accountability, loyalty, commitment, anonymity, and information sharing (Figure 4: bottom left in Appendix).

RE: Eleven (11) financial variables, integrating blockchain adoption functions for research, are produced: faithfulness, fidelity, transparency, trust, loyalty, commitment, privacy, security, knowledge sharing, anonymity, and same-data sharing (Figure 4: bottom right in Appendix).

5.8.2 Second Layer of the Proposed SLR Research Sequence (RQ2)

In analyzing the SLR derivative information from Table 1, Table 2, Table 3, Table 4, Table 5, Table 6 and Table 10, in Appendix, the second part of the proposed sequence "Blockchain functionalities → Risks, issues, opportunities, and Limitations → Theoretical contributions, implications, potentiality, questions, and outlook" is characterized as integrated accumulated knowledge in a graphical form (Figure 5 in Appendix).

AC: Four (4) issues, risks, limitations, and opportunities for agriculture, are produced: integrated-related issues, skill gaps, security risks, and performance-related limitations (Figure 5: top left in Appendix).

MF: Four (4) issues, risks, limitations, and opportunities for manufacturing, are produced: security risks, transfer and storage of highly sensitive data, high cost of implementation, and enhanced sustainability efforts (Figure 5: top right in Appendix).

SE: Five (5) issues, limitations, risks, and opportunities for the servicing industry, are generated: security risks, skill gaps, performance-related limitations, enhanced sustainability efforts, and the transfer and storage of highly sensitive data (Figure 5: middle left in Appendix).

KN: Four (4) issues, risks, limitations, and opportunities for the stock markets are generated: security risks, performance-related limitations, and the transfer and storage of highly sensitive data, integration-related issues (Figure 5: middle right in Appendix).

CU: Four (4) issues, risks, limitations, and opportunities for the stock markets are generated: integration-related issues, security risks, skill gaps, and performance-related limitations (Figure 5: bottom left in Appendix).

RE: Four (4) risks, limitations, issues, and opportunities for the stock markets are generated: security risks, the transfer and storage of highly sensitive data, integration-related issues, and performance-related limitations (Figure 5: bottom right in Appendix).

5.8.3 Third Layer of the Proposed SLR Research Sequence (RQ3)

In analyzing the SLR derivative information from Table 1, Table 2, Table 3, Table 4, Table 5, Table 6 and Table 10, in Appendix, the third part of the proposed sequence "Blockchain functionalities → Risks, issues, opportunities, and Limitations → Theoretical implications, questions, etc." is characterized as integrated accumulated knowledge in a graphical form (Figure 6, Appendix).

AC: Five (5) theoretical implications are generated (RQ3): governance and internal control, audibility, how to protect data subjects against data harm, direct peer-to-peer transactions via cryptocurrencies eliminating middlemen and reducing transaction time, and scalability (Figure 6: top left in Appendix).

MF: Four (4) theoretical implications are generated (RQ3): harmonizing innovation BCT spirit, trust among users, data privacy, and decentralization (Figure 6: top right in Appendix).

SE: Three (3) theoretical implications are generated (RQ3): holding companies accountable for their sustainability claims, and capital-intensive investments, and tracking carbon balances and other environmental metrics (Figure 6: middle left in Appendix).

KN: Three (3) theoretical implications are generated (RQ3): direct peer-to-peer transactions via cryptocurrencies eliminating middlemen and reducing transaction time, how to protect data subjects against data harm, and data privacy (Figure 6: middle right in Appendix).

CU: Five (5) implications, theoretical implications are generated (RQ3): governance and internal control, how to protect data subjects against data harm, direct peer-to-peer transactions via cryptocurrencies eliminating middlemen and reducing transaction time, auditability, and scalability (Figure 6: bottom left in Appendix).

RE: Three (3) theoretical implications are generated (RQ3): direct peer-to-peer transactions via cryptocurrencies eliminating middlemen and reducing transaction time, how to protect data subjects against data harm, and data privacy (Figure 6: bottom right in Appendix).

5.9 Statistics

Content categorization information and spatial-temporal evolution information are generated as integrated accumulated knowledge through the analysis of the SLR derivative information from Table 1, Table 2, Table 3, Table 4, Table 5, Table 6 and Table 7, in Appendix.

5.9.1 Content Classification Statistics

To quantify content with the inclusion and exclusion criteria, an academic content classification analysis was carried out based on the customized PRISMA-adapted protocol as an organizing framework.

Table 11 (Appendix) and Figure 7 display the findings of this content classification research.

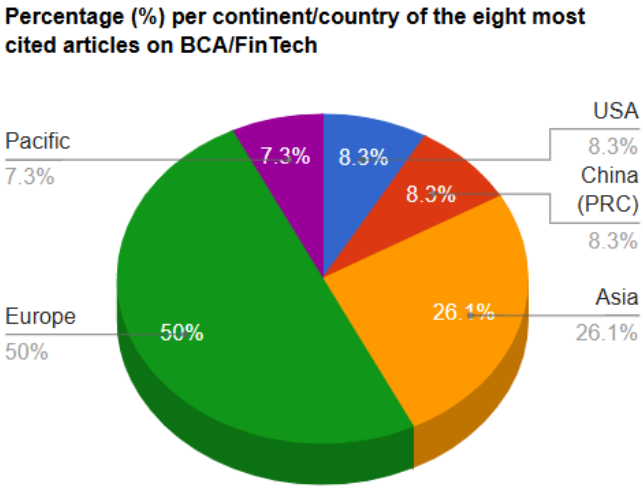

Fig. 7: The eight most cited articles - Percentage (%) per continent/country

Comments: As Table 11 (Appendix) and Figure 7 demonstrate European researchers wrote the top-cited papers (50%). Additionally, Asia and China together account 35% of the contribution (i.e., more than one out of three publications that have the biggest BCA influence originates from Asia-China).

5.9.2 Spatial-Temporal Evolution Statistics

Following the completion of a spatial-temporal evolution study of the data shown in Appendix in Table 1, Table 2, Table 3, Table 4, Table 5 and Table 6 (i.e., the 48 most cited publications), the temporal evolution of increased citations from 2013 to 2022 for the eight most referenced publications, is displayed in Appendix in Table 12, and highlighted with a bar graph in Figure 8 (Appendix).

Comments: The observed incremental citation growth for the years 2017–2022 indicates the recent recognition of the importance of the BCA/FinTech research. Furthermore, no pa pers were published between 2014 and 2016, most likely because of the economic crisis that affected the research and academic communities.

6 Discussion

Scholars with a concentration on technology have paid close attention to blockchain, highlighting its perceived importance and novel disruptive potential. In the domains of research literature, manufacturing, services, knowledge, culture, and agriculture, however, it has taken some time to produce significant momentum. This study adopts a PRISMA approach to the subject, developing the key topics from BC-based research through a comprehensive SLR review. Despite the paucity of commercial-grade blockchain applications now, our literature assessment indicates that BCT holds great potential to support a number of use cases across BCA efforts.

This study expands on this point by articulating through each of the primary topics to present a comprehensive narrative on t he countless conceivable blockchain applications and the technology's future direction, in addition to examining the different barriers to BC adoption. The paper claims that BCT can assist the 17 UN SDG/Sustainability Development Goals (https://sdgs.un.org/goals) and encourage widespread change across a wide range of application domain areas (industries and behaviors). Additionally, this article used a hybrid research approach, combining qualitative analysis with an SLR. In the first step, all 789 selected publications underwent quantitative analysis, and the 48 m ost cited research from the 142 P RISMA-screened articles underwent qualitative analysis. The current study examines the prospects for blockchain technology adoption and identifies the main obstacles and possibilities in existing blockchain implementations.

To record current applications, as w ell as their implications, problems, and prospects for disrupting FinTech capabilities, the article suggests an SLR according to [31], [36], [37], [38], and [54]. Additionally, as a "three research questions SLR discussion" pertaining to six application categories (agricultural, manufacturing, services, knowledge, culture, and research), it draws attention to the opportunities and difficulties related to the BCA in many business and finance domains.

Furthermore, with five of the six major findings, or an assumption acceptance rate of 83%, "Agriculture," "Manufacturing," and "Culture" seem to have the highest assumption acceptance rate among the six BCA/FinTech application domain areas. Based on the six main conclusions, 16 financial variables that functioned as B CA functionalities were created (Table 9, Appendix). BCA significantly improves eight of the sixteen financial factors in agriculture. BCA significantly improves eight of the sixteen financial factors in manufacturing. Seven of the sixteen financial variables in the services sector are significantly improved by BCA.

Six of the sixteen financial variables in the knowledge sector are significantly improved by BCA. Lastly, BCA significantly improves 11 of the 16 financial factors in the domains of culture and research application (Table 9, Appendix). In each of the six major application domain areas, BCA seems

to support the financial variable trust. However, in five out of the six application areas, BCA seems to support the variables faithfulness and commitment (Table 9 and Figure 4 in Appendix).

Although the data of Table 1, Table 2, Table 3, Table 4, Table 5 and Table 6 in Appendix are produced by the six self-arguing assumptions and self-judging inclusion and exclusion criteria, the proposed SLR technique provides compelling evidence for logical reasoning. Therefore, as Table 11 (Appendix) and Figure 7 show, academics from European universities and research institutions wrote half of the most referenced papers. Additionally, the combined contribution from Asia and the P.R. of China is close to 35%; that is, over one in three of the papers that have the greatest impact on the BCA/FinTech industry come from Asia-China.

Furthermore, as Table 12 and Figure 8 in Appendix show, the observed incremental citing growth for the years 2017–2022 indicates the current acknowledgment of the importance of the study on BCA/FinTech. Furthermore, no papers were published between 2014 and 2016, most likely because of the economic crisis that affected the research and academic communities. When the benefits of BCA are unclear, it might be difficult to match an organization's BCA strategy with recognized issues in faithfulness, integration, performance, trust, and traceability-accountability.

Finally, the RQ3 commentary has addressed the following practical implications: scalability (from performance-related limitations), auditability (from skill gaps), governance and internal control (from security risks and integration-related issues with another company's units), and direct peer-to-peer transactions via cryptocurrencies, which cut out middlemen and shorten transaction times (from skill gaps). Even though BCA is being used increasingly often to solve financial and business problems, more research is still needed because this field is still in its infancy. In addition to researchers and scholars, managers and practitioners will find this study useful. Based on the previously mentioned conclusions, it also proposes a systematic study framework.

7 Conclusions

According to [192], [193], [194], [195], [196], [197], [198], [199], [200], [201], [202], [203], [204], [205], [206], [207] and [208] studies have often tended to focus on the technical and performance aspects of blockchain, with particular attention to issues like anonymity, security, trust, performance, and loyalty, in the context of cryptocurrencies and their potential to upend traditional procedures.

Certain sections of the literature have recognized the dearth of a broader discussion on this subject, revealing that more than 85% of studies have concentrated on the technological aspects of blockchain, with less than 15% addressing blockchain applications and business challenges, [209], [210], [211], [212].

The literature has included review studies that concentrate on blockchain technology and its use. Numerous use cases in business-to-government, business-to-business, and business-to-consumer contexts were examined in the review conducted by [206], which demonstrated the broad potential of technology and its utilization. The paper [207] examines blockchain technology and its salient features, with a primary focus on the crucial element of trust in the sharing economy. Many of the main components of these earlier review studies are expanded upon in this study, which provides a broader analysis and narrative in which we identify several important themes as important discoveries pertaining to BCA/FinTech.

The study examines the advantages and disadvantages, highlights significant instances in which blockchain technology can be used to solve practical issues, evaluates BCA considering the UN/SDG (Sustainable Development Goals), and formulates several ideas in line with a recently proposed framework to direct further study on this crucial subject. In this study, we have examined and discussed the positive change and influence that BCA could facilitate for disrupting FinTech functionalities in the context of six application domain areas (agriculture, manufacturing, services, knowledge, culture, and research) through qualitative review of applications, implications, challenges, opportunities, and outlook potentiality, as well as bibliographic quality research.

Providing a comprehensive and cutting-edge scientific understanding of the connection between BCA and the six FinTech application domain areas was the aim of this study. To achieve this, a hybrid research strategy that combined SLR, quantitative, and qualitative analysis was used, along with a systematic research framework. 142 of the 789 publications that passed the PRISMA screening were analyzed qualitatively (the top eight cited papers for each application area). These papers were initially chosen from Clarivate Analytics/WoS and Elsevier/Scopus indexing databases.

Business professionals can use the methodology that has been taught to reassess their financial difficulties and investigate how blockchain

technology might be able to help. This paper also identifies several research topics. We believe that by implementing these suggestions, corporate managers, blockchain technology experts, and business professionals could work together and have a big influence on the business sector.

7.1 Results and Accomplishments

Blockchain technology's application of smart contracts offers sustainability and ESG benefits. In the end, BCA will save expenses in all business processes within a F inTech ecosystem while also enhancing security, visibility, and transparency.

The primary achievements in the literature currently in the publication are also (i) the documentation of BCA/FinTech corporate data (as crude first-level raw data) arranged according to BCA assumptions since it is anticipated that BCA will disrupt the FinTech corporate environment for the six business areas; (ii) the explanation of the six certain-to-occur major conclusions (assumptions) given in the tabular form (Table 7, Appendix) based on derived quality information from this basic data; (iii) the 16 financial variables that functioned as BCA/FinTech functionalities for the six application domain areas were annotated based on these six important findings (Table 9, Appendix); (iv) the definition of the risks, limitations, issues, and opportunities be rooted in these 16 financial variables (Table 10, Appendix); and (v) the formalization of the questions, potentiality, viewpoint, theoretical contributions, and consequences derived from the identified issues and possibilities (Table 10, Appendix).

7.2 Findings and Practical Applications

The results of this investigation are as follows: the sixteen financial variables that functioned as Blockchain functions and were derived from the six key findings (RQ1); the seven risks, problems, constraints, and opportunities, related to the BCA functionalities (RQ2); and the twelve theoretical and practical contributions that were connected to the identified opportunities, concerns, and risks (RQ3).

The suggested approach can help business managers understand and deconstruct literature reviews as isolated, standalone studies on topics that are significant to their organization. For instance, practitioners find it simpler to comprehend recent advancements in their field and to match business operations with these patterns.

The study will also benefit the knowledge/ and research society (transparency, application of smart contracts, credit corruption, cyber-hacking protection, and information sharing), the agriculture and manufacturing industries (visibility for credit corruption and information sharing, smart contracts, effective supply chain tracking, cost reduction/wealth maximization, and security enhancement), and practitioners (ESG activities, DEI initiatives, and knowledge sharing).

Additionally, the study will specifically assist academics and researchers in conducting FinTech multidisciplinary research based on a disruptive cost vs. benefit analysis for a company management BCA/FinTech policy.

7.3 Theoretical and Practical Implications

It is crucial for literature since the entire framework used in the sample publications is a component of the cutting-edge framework this study presents. Consequently, it provides the scholarly community with comprehensive and comprehensible guidance on how the literature explored the relationship between the six business sectors and the use of blockchain technology, [213], [214], [215], [216], [217], [218], [219], [220], [221], [222].

This demonstrates the integration of management, ESG, DEI, and business ethics, which results in a more thorough comprehension of corporate behavior. The findings of this study support well-established theories that relate corporate success to business ethics and obligations, suggesting that aggressive FinTech tactics could jeopardize CSR programs.

Businesses can learn a lot about BCA and CSR from this essay. To give their plan credibility, bolster their CSR position, and cultivate good relationships with all their stakeholders, businesses should reveal their financial results.

Finally, this essay helps policymakers by revealing the strategies that companies employ for BCA while also demonstrating their social responsibility. Future producers will benefit from the lessons this study teaches about the different fundamental elements and methodological nuances of literature reviews.

The ramifications pertain to the benefits of cheaper, error-free, and quicker transactions. It would also be helpful to have procedural expertise, such as how to use control points to help make decisions during the manuscript development process. The declarative and procedural skills that are demonstrated in control points will also be helpful to evaluators.

7.4 Theoretical Contributions

Most of the existing literature review on blockchain technology focuses on technology itself, paying little attention to its experimental applications across

different industries or how it might boost an organization's business value. Furthermore, the current review literature lacks quantitative research on the ways in which blockchain technology improves business strategies, business processes, and business models from a variety of subject perspectives.

Using a three-tiered research framework, this study highlights BCA applications in manufacturing, services, agriculture, knowledge, culture, and research that generate value and knowledge: "Economic and business variables operated as blockchain adoption functions" → "risks, limitations, issues, and opportunities" related to the BCA functions → "questions, theoretical implications, contributions, outlook, and potentiality" of BCA/FinTech functions.

Our knowledge of how blockchain technology affects business sectors, services, knowledge, culture, research, and people is expanded by this study. It benefits the business community as well.

7.5 Practical Contributions

The SLR approach used in this study can encourage managers to develop new business models, give practitioners and scientists the ability to find business model innovation opportunities and assist researchers in business model innovation regarding blockchain technology.

By connecting technology and applications to economic issues, we give practitioners a road map to help them reevaluate the issues they face, identify the categories of economic issues they fall under, and determine whether blockchain technology can be used to address them. We also offer research paths and issues for the future that we think will be useful to practitioners and researchers alike.

7.6 Limitations and Recommendations

In subsection 5.7 the findings were based on a quantitative assessment characterized by several limitations: the “BCA functionalities” are complex phenomena but they were oversimplified and reduced to simple numerical data which may not fully capture the article’s context; they are sensitive to subjective BCA reasoning of paper’s author(s); and not support recommendations for new BCA ideas or cover any unexpected side-effect (e.g., economic, environmental, DEI) in corporate BCA initiatives.

In subsection 5.8 the presented results were based on a qualitative assessment analysis. Nevertheless, qualitative assessment is characterized by several limitations: It’s a time-consuming method and labor-intensive procedure; a great number of cases (i.e., a number>8 for the most-cited studies is needed) representing the population of interest (i.e., the BCA functionalities and good practices) is needed; the results can’t be verified (not statistically representative); and usually it’s difficult to investigate any possible causality and the results (findings) tend to be conclusive and descriptive in nature.

Please take note that search phrases were used to limit this study. The analysis might benefit from being expanded to include articles from journals that are listed in other worldwide databases, such as ProQuest, Ulrich's, EconLit, Cabells Journalytics, Index Copernicus, etc.

The study is qualitative, self-judging (inclusion/exclusion criteria), and self-arguing (assumption-based key results), according to a scan of BCT/Fintech literature. It is hence susceptible to bias in self-arguing, statistics, publication, and sample selection. Furthermore, the selected academic content only mentions a tiny number of cited papers—the eight most cited.

Neither a disruptive FinTech model nor a comprehensive corporate blockchain adoption framework are integrated and presented by us. A future path is to balance the creative energy of BCT with the current "real" requirements of financial governance, based on the results and limitations that are covered in RQ3's comments. Increased rules, however, may stifle creativity and result in less dynamic BCA (BCA functions).

More research on sustainability, ESG and DEI issues, monetary measures of security concerns, information sharing, same-data, transparency, cost/benefits, revenue, profit, and investment pertaining to various blockchain and business domains could be undertaken by academics and researchers.

It would be beneficial to investigate the connections between the six application domain areas (described as separate SLR projects) to promote greater clarity regarding BCA functionalities for these areas.

Lastly, future research may be utilized as data-gathering tactics because consistency/sustainability reports and economic/financial statements are not commonly used for these types of SLR investigations.

7.7 Estimating Blockchain’s Long-Term Financial Impact using the Time-Series Forecasting Model ARIMA

A set of "observations" (or, in our SLR study, "citations") that are tracked over time is called a time series. The degree of correlation between the

SLR citations (observations) at different points in the series varies. Future values can be predicted based on past observations since the values of subsequent observations are interconnected.

To try to predict the long-term financial impact of blockchain adoption corporate initiatives, an SLR study would use the linear forecasting model ARIMA, which implies time-series forecasting, [223], [224].

According to [223] and [224] an AR, an MA, and an integrated component that separates the time series and turns it into a stationary series are all included in the Autoregressive Integrated Moving Average (ARIMA), a linear model.

In addition to their success in predicting short-term value or long-term trends for the financial impact of blockchain adoption in non-linear processes, linear models, such as the ARIMA, are widely recognized for their accuracy, flexibility, and adaptability in predicting linear long-term time series.

7.8 Clustering to Identify Patterns in BCA

A statistical technique for finding business model patterns and determining archetypes is cluster analysis. Future research would create a multidimensional taxonomy and identify multiple blockchain-based company archetypes to give a summary of current BC-based models in the context of business networks, [225].

According to [226] and [227] data from numerous blockchain start-ups would be used as the foundation for empirical validation in the taxonomy creation process. Numerous archetypes that improve knowledge of how BCA solutions impact business models in enterprise networks and make it possible to generate new business models have been identified via the use of hierarchical clustering and the k-means approach, [225], [226], [227].

To categorize and evaluate the incorporation of BCA solutions into current economic models and to facilitate the creation of new ones that take advantage of cutting-edge technological capabilities, the results of the proposed study are therefore meant to be used in future research and practice.

As a result, we propose the following research questions for future research:

(RQ1) *In corporate networks, what are the features of BCA models?*

(RQ2) *In business networks, what are the typical patterns of BCA models?*

Empirical data would be gathered, and a thorough literature evaluation would be carried out to address these research topics. Next, using empirical data and scholarly research, a taxonomy of blockchain-based business models in enterprise networks should be created.

7.9 Future Research Directions

The following two subjects can be investigated further: (i) How can blockchain adoption be evaluated? (ii) What are the costs, advantages, and challenges of implementing blockchain? BCA can also be a useful governance tool to reduce fraud and distortion and increase transparency.

Every economy has governance problems; therefore, scholars can look more closely at the various application scenarios. Therefore, the following three subjects can be the subject of more research: (i) What barriers need to be removed to apply blockchain technology to enhance different levels of governance? (ii) Is blockchain an effective tool for enhancing public scrutiny of the government and/or public officials? (iii) How does BCA enhance intra-organization governance?

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APPENDIX

Table 1. The eight most cited articles on BCA/FinTech and agriculture

Study ref., Country	Article Title	Journal, Year (Citation)	Key Findings
[78], Asia/Africa	"Agricultural Grid Connected Photovoltaic System Design and Simulation in Egypt by Using PVSYST Software."	WSEAS/Transactions on Circuits and Systems, 2022 (122) *	Smart contract utilization advances BCA/FinTech loyalty, commitment, and faithfulness.
[79], Europe/Italy	"Innovative Biotic Symbiosis for Plastic Biodegradation to Solve their End-of-Life Challenges in the Agriculture and Food Industries."	WSEAS/Transactions on Environment and Development, 2022 (69) *	Corporate ESG activities facilitate BCA integrity.
[80], China	"Multi-Chain Collaboration-Based Information Management and Control for the Rice Supply Chain."	MDPI/Agriculture, 2022 (43) *	Credit corruption problems in BCA/FinTech are considered trust issues in digital transactions (agriculture).
[81], Asia/Singapore	"Blockchain Technology for Agriculture: Applications and Rationale."	Frontiers/Frontiers in Blockchain, 2020 (322) *	Smart contract utilization advances BCA/FinTech loyalty, commitment, knowledge sharing, and faithfulness.
[82], China	"Blockchain Technology in Current Agricultural Systems: From Techniques to Applications."	IEEE/Access, 2020 (243) *	Corporate DEI initiatives enhance BCA traceability and accountability. By adopting cryptocurrencies, the BCA/FinTech becomes more efficient, scalable, and durable with anonymity, security, privacy, transparency, and cryptocurrency functionality.
[88], USA	"Consensus-oriented cloud manufacturing based on blockchain technology: An exploratory study."	Elsevier/ Pervasive and Mobile Computing, 2020 (79) *	Corporate ESG activities facilitate BCA integrity. Smart contract utilization advances BCA/FinTech loyalty, commitment, and faithfulness.
[89], Pacific/Australia	"Applications of Blockchain Technology in Sustainable Manufacturing and Supply Chain Management: A Systematic Review."	MDPI/Sustainability, 2021 (228) *	Smart contract utilization advances BCA/FinTech loyalty, commitment, faithfulness, and same-data sharing.
[90], Europe/Germany	"Blockchain in operations management and manufacturing: Potential and barriers."	Elsevier/Computer & Industrial Engineering, 2020 (235) *	Corporate ESG activities facilitate BCA integrity. Corporate DEI initiatives enhance BCA traceability.

Table 2. The eight most cited articles on BCA/FinTech and manufacturing

Study ref., Country	Article's Title	Journal, Year	Key Findings
[88], USA	"Consensus-oriented cloud manufacturing based on blockchain technology: An exploratory study."	Elsevier/ Pervasive and Mobile Computing, 2020 (79) *	Corporate ESG activities facilitate BCA integrity. Smart contract utilization advances BCA/FinTech loyalty, commitment, and faithfulness.
[89], Pacific/Australia	"Applications of Blockchain Technology in Sustainable Manufacturing and Supply Chain Management: A Systematic Review."	MDPI/Sustainability, 2021 (228) *	Smart contract utilization advances BCA/FinTech loyalty, commitment, faithfulness, and same-data sharing.
[90], Europe/Germany	"Blockchain in operations management and manufacturing: Potential and barriers."	Elsevier/Computer & Industrial Engineering, 2020 (235) *	Corporate ESG activities facilitate BCA integrity. Corporate DEI initiatives enhance BCA traceability.
[91], China	"Toward a blockchain cloud manufacturing system as a peer-to-peer distributed network platform."	Elsevier/Robotics and Computer-Integrated Manufacturing, 2018 (407) *	Credit corruption problems in BCA/FinTech are considered trust issues in digital transactions (manufacturing).
[92], Europe/Latvia	"Mitigation of Shift Rotation Effects on Workers' Health and Sleep Quality in Manufacturing Companies in Latvia."	WSEAS/Transactions on Systems and Control, 2021 (129) *	Corporate DEI initiatives enhance BCA traceability and accountability. Information sharing problems in BCA/FinTech are considered fidelity issues in markets, investments, and financial services.
[112], Asia/India	"A review of Blockchain Technology applications for financial services."	Elsevier/ BenchCouncil Transactions on Benchmarks, Standards and Evaluations, 2022 (257) *	Smart contract utilization advances BCA/FinTech loyalty, commitment, faithfulness, and same-data sharing.
[113], Europe/Netherlands	"Blockchain for digital government: An assessment of pioneering implementations in public services."	EU/European Commission, 2019 (179) *	Information-sharing problems in BCA/FinTech are considered fidelity issues in markets, investments, and financial services.
[114], Asia/Kuwait	"The state of play of blockchain technology in the financial services sector: A systematic literature review."	Elsevier/International Journal of Information Management, 2020 (597) *	Credit corruption problems in BCA/FinTech are considered trust issues in digital transactions (manufacturing).

Table 3. The eight most cited articles on BCA/FinTech and the services industry

Study ref., Country	Article's Title	Journal, Year	Key Findings
[112], Asia/India	"A review of Blockchain Technology applications for financial services."	Elsevier/ BenchCouncil Transactions on Benchmarks, Standards and Evaluations, 2022 (257) *	By adopting cryptocurrencies, the BCA/FinTech becomes more efficient, scalable, and durable with anonymity, security, privacy, and transparency functionalities.
[113], Europe/Netherlands	"Blockchain for digital government: An assessment of pioneering implementations in public services."	EU/European Commission, 2019 (179) *	By adopting cryptocurrencies, the BCA/FinTech becomes more efficient, scalable, and durable with anonymity, security, privacy, and transparency functionalities.
[114], Asia/Kuwait	"The state of play of blockchain technology in the financial services sector: A systematic literature review."	Elsevier/International Journal of Information Management, 2020 (597) *	Credit corruption problems in BCA/FinTech are considered trust issues in digital transactions (services, government).
[115], Europe/Romania	"The Analysis of Freight Forwarding Services Using the Business Process Modelling Tools. Study Case in Constanta Port."	WSEAS/Design, Construction, Maintenance, 2022 (119) *	Smart contract utilization advances BCA/FinTech transparency, anonymity, and knowledge sharing. Information sharing problems in BCA/FinTech are considered fidelity issues in supply chains, markets, and financial services.
[116], Europe/Serbia	"Management of Telecommunication Operator Services in Serbia – Case Study Eastern Serbia."	WSEAS/Transactions on Business and Economics, 2021 (135) *	Information sharing problems in BCA/FinTech are considered fidelity issues in supply chains, markets, investments, banking, and financial services. Smart contract utilization advances BCA/FinTech transparency.
[128], Asia/Iran and Pacific/Australia	"The mediating role of blockchain technology in improvement of knowledge sharing for supply chain management."	Emerald/Management Decision, 2022 (104) *	Smart contract utilization advances BCA/FinTech transparency, anonymity, and knowledge sharing. Information sharing problems in BCA/FinTech are considered fidelity issues in financial services.
[129], Europe/Spain	"Blockchain in Education."	EU/European Commission, 2017 (677) *	Smart contract utilization advances BCA/FinTech transparency, anonymity, and knowledge sharing.
[130], Europe/Greece	"On the Robust Multiple Objective Control with Simultaneous Pole Placement in LMI Regions."	WSEAS/Transactions on Systems, 2021 (122) *	Credit corruption problems in BCA/FinTech are considered trust issues in digital transactions (services).

Table 4. The eight most cited articles on BCA/FinTech and the knowledge industry

Study ref., Country	Article's Title	Journal, Year	Key Findings
[128], Asia/Iran and Pacific/Australia	"The mediating role of blockchain technology in improvement of knowledge sharing for supply chain management."	Emerald/Management Decision, 2022 (104) *	Smart contract utilization advances BCA/FinTech and same-data sharing. Information sharing problems in BCA/FinTech are considered fidelity issues in supply chains, markets, investments, and financial services.
[129], Europe/Spain	"Blockchain in Education."	EU/European Commission, 2017 (677) *	Smart contract utilization advances BCA/FinTech commitment, faithfulness, and same-data sharing.
[130], Europe/Greece	"On the Robust Multiple Objective Control with Simultaneous Pole Placement in LMI Regions."	WSEAS/Transactions on Systems, 2021 (122) *	Credit corruption problems in BCA/FinTech are considered trust issues in digital transactions (knowledge).
[131], Asia/Saudi Arabia	"Complete Results on Control and Filtering of Discrete Systems with Time Scales."	WSEAS/Transactions on Systems, 2019 (273) *	By adopting cryptocurrencies, the BCA/FinTech becomes more efficient and durable with trust, commitment, and cryptography functionalities. Smart contract utilization advances BCA/FinTech.
[132], Europe/Denmark	"Citation analysis: A social and dynamic approach to knowledge organization."	Elsevier/Information Processing & Management, 2013 (307) *	Credit corruption problems in BCA/FinTech are considered trust issues in digital transactions (banking industry, etc.).
[156], Europe/Greece	"Advances in Survivability-supported Framework for Traffic Engineering in Multi-service Backbone Networks."	WSEAS/Transactions on Systems, 2022 (102) *	Smart contract utilization advances BCA/FinTech commitment, faithfulness, and same-data sharing.
[157], USA	"A Primer, History, and Taxonomy of Blockchain Use Cases in the Arts."	Artivate A Journal of Entrepreneurship in the Arts, 2019 (231) *	By adopting cryptocurrencies, the BCA/FinTech becomes more efficient, scalable, and durable with trust, commitment, and cryptography functionalities.
[158], Europe/Greece	"Towards a Blockchain Architecture for Cultural Heritage Tokens."	Communications in Computer and Information Science, 2019 (71) *	Credit corruption problems in BCA/FinTech are considered trust issues in digital transactions (knowledge).

Table 5. The eight most cited articles on BCA/FinTech and culture

Study ref., Country	Article Title	Journal, Year (Citation)	Key Findings
[156], Europe/Greece	"Advances in Survivability-supported Framework for Traffic Engineering in Multi-service Backbone Networks."	WSEAS/Transactions on Systems, 2022 (102) *	Smart contract utilization advances BCA/FinTech loyalty, commitment, and faithfulness.
[157], USA	"A Primer, History, and Taxonomy of Blockchain Use-Cases in the Arts."	Artivate A Journal of Entrepreneurship in the Arts, 2019 (231) *	Corporate ESG activities facilitate BCA integrity.
[158], Europe/Greece	"Towards a Blockchain Architecture for Cultural Heritage Tokens."	Communications in Computer and Information Science, 2019 (71) *	Credit corruption problems in BCA/FinTech are considered trust issues in digital transactions (cultural heritage artifacts).
[159], Asia/Taiwan	"Authorization Mechanism Based on Blockchain Technology for Protecting Museum-Digital Property Rights."	MDPI/Applied Sciences, 2021 (63) *	Smart contract utilization advances BCA/FinTech loyalty and faithfulness. Corporate ESG activities facilitate BCA integrity.
[160], China	"How does culture influence innovation? A systematic literature review."	Emerald/Management Decision, 2018 (549) *	Corporate DEI initiatives enhance BCA traceability. By adopting cryptocurrencies, the BCA/FinTech becomes more efficient, scalable, and durable with anonymity, security, privacy, and transparency functionalities. Smart contract utilization advances BCA/FinTech and faithfulness.
[176], Europe/UK	"Blockchain research, practice, and policy: Applications, benefits, limitations, emerging research themes, and research agenda."	Elsevier/International Journal of Information Management, 2019 (1054) *	Smart contract utilization advances BCA/FinTech loyalty, commitment, and faithfulness. Information sharing problems in BCA/FinTech are considered fidelity issues in financial services.
[177], Europe/Denmark	"Blockchain Technology in Business and Information Systems Research."	Springer/Business & Information Systems Engineering, 2017 (387) *	Smart contract utilization advances BCA/FinTech loyalty, commitment, and faithfulness.
[178], Europe/Ireland	"Research - A blockchain of knowledge?"	Elsevier/Blockchain: Research and Applications, 2020 (87) *	Credit corruption problems in BCA/FinTech are considered trust issues in digital transactions (research).

Table 6. The eight most cited articles on BCA/FinTech and the research industry

Study ref., Country	Article's Title	Journal, Year	Key Findings
[131], Asia/Saudi Arabia	"Complete Results on Control and Filtering of Discrete Systems with Time Scales."	WSEAS/Transactions on Systems, 2019 (273) *	By adopting cryptocurrencies, the BCA/FinTech becomes more efficient, scalable, and durable with trust, privacy, anonymity, and commitment functionalities. Smart contract utilization advances BCA/FinTech commitment, transparency, knowledge sharing, same-data sharing, loyalty, and faithfulness.
[132], Europe/Denmark	"Citation analysis: A social and dynamic approach to knowledge organization."	Elsevier/Information Processing & Management, 2013 (307) *	Credit corruption problems in BCA/FinTech are considered trust issues in digital transactions (research).
[159], Asia/Turkey	"Vision-Based Approaches of the Small Satellites Relative Navigation."	WSEAS/Transactions on Computer Research, 2021 (63) *	Smart contract utilization advances BCA/FinTech loyalty, commitment, and faithfulness. Information sharing problems in BCA/FinTech are considered fidelity issues in banking, and financial services.
[176], Europe/UK	"Blockchain research, practice, and policy: Applications, benefits, limitations, emerging research themes, and research agenda."	Elsevier/International Journal of Information Management, 2019 (1054) *	Smart contract utilization advances BCA/FinTech commitment, and faithfulness. Information sharing problems in BCA/FinTech are considered fidelity issues in markets, and investments.
[177], Europe/Denmark	"Blockchain Technology in Business and Information Systems Research."	Springer/Business & Information Systems Engineering, 2017 (387) *	Smart contract utilization advances BCA/FinTech transparency, knowledge sharing, commitment, and faithfulness.
[178], Europe/Ireland	"Research - A blockchain of knowledge?"	Elsevier/Blockchain: Research and Applications, 2020 (87) *	Credit corruption problems in BCA/FinTech are considered trust issues in digital transactions (research).
[179], Asia/India	"Blockchain Technology: Benefits, Challenges, Applications, and Integration of Blockchain Technology with Cloud Computing."	MDPI/Future Internet, 2022 (236) *	By adopting cryptocurrencies, the BCA/FinTech becomes more efficient, scalable, and durable with anonymity, security, privacy, and transparency functionalities. Smart contract utilization advances BCA/FinTech loyalty, same-data sharing, and faithfulness.
[180], Asia/Pakistan	"Research and Applied Perspective to Blockchain Technology: A Comprehensive Survey."	MDPI/Applied Sciences, 2021 (107) *	Credit corruption problems in BCA/FinTech are considered trust issues in digital transactions (research). Smart contract utilization advances BCA/FinTech loyalty, commitment, and faithfulness.

Table 7. The BCA/FinTech six key findings (assumptions) and the six selected application domain areas: derivative information for quantitative assessment

Bibliographic Research for Disrupting FinTech Functionalities (BCA/FinTech Assumptions)		**FinTech Application Areas**					
Key Findings	**Key Findings (Assumptions)**	**AC**	**MF**	**SE**	**KN**	**CU**	**RE**
#1	Smart contract utilization advances BCA/FinTech loyalty, commitment, faithfulness, knowledge sharing, transparency, anonymity, information sharing, and same-data sharing.	√	√	√	√	√	√
#2	Corporate ESG activities facilitate BCA integrity.	√	√			√	
#3	Credit corruption problems in BCA/FinTech are considered trust issues in digital transactions (agriculture, manufacturing, services, knowledge, culture, and research).	√	√	√	√	√	√
#4	Corporate DEI initiatives enhance BCA traceability and accountability.	√	√			√	
#5	By adopting cryptocurrencies, the BCA/FinTech becomes more efficient, scalable, and durable with anonymity, security, privacy, trust, commitment, loyalty, transparency, and cryptography functionalities.	√		√	√	√	√
#6	Information sharing problems in BCA/FinTech are considered security, fidelity, and performance issues in supply chains, markets, investments, banking, and financial services (agriculture, manufacturing, services, knowledge, culture, and research).		√	√	√		√

Table 8. SLR PRISMA screening: Search keywords mentioned

SLR Search Keyword (Screening Phase)	**Count**
Agriculture (AC)	23
Manufacturing (MF)	27
Services (SE)	19
Knowledge (KN)	31
Culture (CU)	23
Research (RE)	19
Blockchain Technology Adoption (BCA)	142

Table 9. The effect of BCA on 16 critical financial variables for the six FinTech application domain areas

BCA Functionalities (Financial Variables)	**FinTech Application Areas**					
	AC	**MF**	**SE**	**KN**	**CU**	**RE**
Faithfulness	√	√		√	√	√
Fidelity		√		√		√
Transparency			√		√	√
Trust	√	√	√	√	√	√
(Efficient, scalable, and durable) Performance			√			
Integrity	√	√			√	
Traceability-Accountability	√	√			√	
Loyalty	√	√			√	√
Commitment	√	√		√	√	√
Privacy			√		√	√
Anonymity			√		√	√
Security			√		√	√
Knowledge sharing	√		√			√
Information Sharing					√	
Same-data sharing		√		√		√
Cryptography	√			√		

Table 10. The elements of the proposed three-level sequence

Implications, Theoretical Contributions, Questions, Potentiality, and Outlook	**Issues, Risks, Limitations, and Opportunities**	**Financial Variables Operated as BCA Functionalities**
Capital-intensive investment deters most companies from adopting BCT	High implementation cost (e.g., memory cost)	Traceability-Accountability, Faithfulness
Decentralization	Transfer and storage of highly sensitive data	Trust, Loyalty, Privacy, Integrity, Fidelity, Knowledge sharing, Same-data sharing, Cryptography, Anonymity
Scalability	Enhance sustainability efforts by improving tracking and verifying emissions.	Transparency, Information sharing, Trust, Security, Performance, Traceability-Accountability
Track carbon balances and other environmental metrics	Skill gaps	Integrity, Anonymity, Privacy, Traceability-Accountability
Auditability	Security risks	Same-data sharing, Information sharing, Anonymity, Transparency, Security, Trust, Commitment, Loyalty, Faithfulness, Integrity, Fidelity, Privacy
Holding companies accountable for their sustainability claims	Performance-related limitations	Same-data sharing, Knowledge sharing, Information sharing, Trust, Cryptography, Performance, Integrity, Commitment
How to protect data subjects against data harm (privacy breach, exploitation, disempowerment)	Integration-related issues with another company's units	Knowledge sharing, Cryptography
Data privacy		Privacy
Trust among users		Trust, Commitment
Governance and internal control		Integrity
Direct peer-to-peer transactions via cryptocurrencies eliminate middlemen and reduce transaction time.		Same-data sharing
Harmonizing the innovative BCT spirit with the pragmatic needs of financial governance. Nevertheless, increased regulations could suppress innovation, leading to less dynamic BCA.		Information Sharing

Table 11. The eight most cited articles - Percentage (%) per continent/country

Continent / Country	BCA/FinTech Sectors (Business Areas)						
	AC	MF	SE KN		CU	RE	Mean
USA	12.5%	12.50%	0%	12.50%	12.50%	0%	8.33%
China (PRC)	25%	12.50%	0%	0%	12.50%	0%	8.33%
Asia	25%	25%	25%	19%	12.50%	50%	26.08%
Europe	25%	37.50%	62.50%	62.50%	62.50%	50%	50%
Pacific	12.5%	12.50%	12.50%	6%	0%	0%	7.26%
	100%	100%	100%	100%	100%	100%	100%

Table 12. The eight most cited articles - Temporal evolution of increasing citations

BCA FinTech Areas	Comments	No. of Papers from the Eight Most Cited Articles on BCA/FinTech								
Agriculture	Decreasing linear citing growth	0	0	0	0	0	0	4	1	3
Manufacturing	Stable citing growth	0	0	0	0	1	1	3	2	1
Services	Incremental non-linear citing growth	0	0	0	1	0	1	1	2	3
Knowledge	Incremental linear citing growth	1	0	0	1	0	3	0	1	2
Culture	Stable citing growth	0	0	0	1	1	3	1	1	1
Research	Incremental non-linear citing growth	1	0	0	1	0	2	1	2	1
	Total	2	0	0	4	2	10	10	9	11
		2013	2015	2016	2017	2018	2019	2020	2021	2022

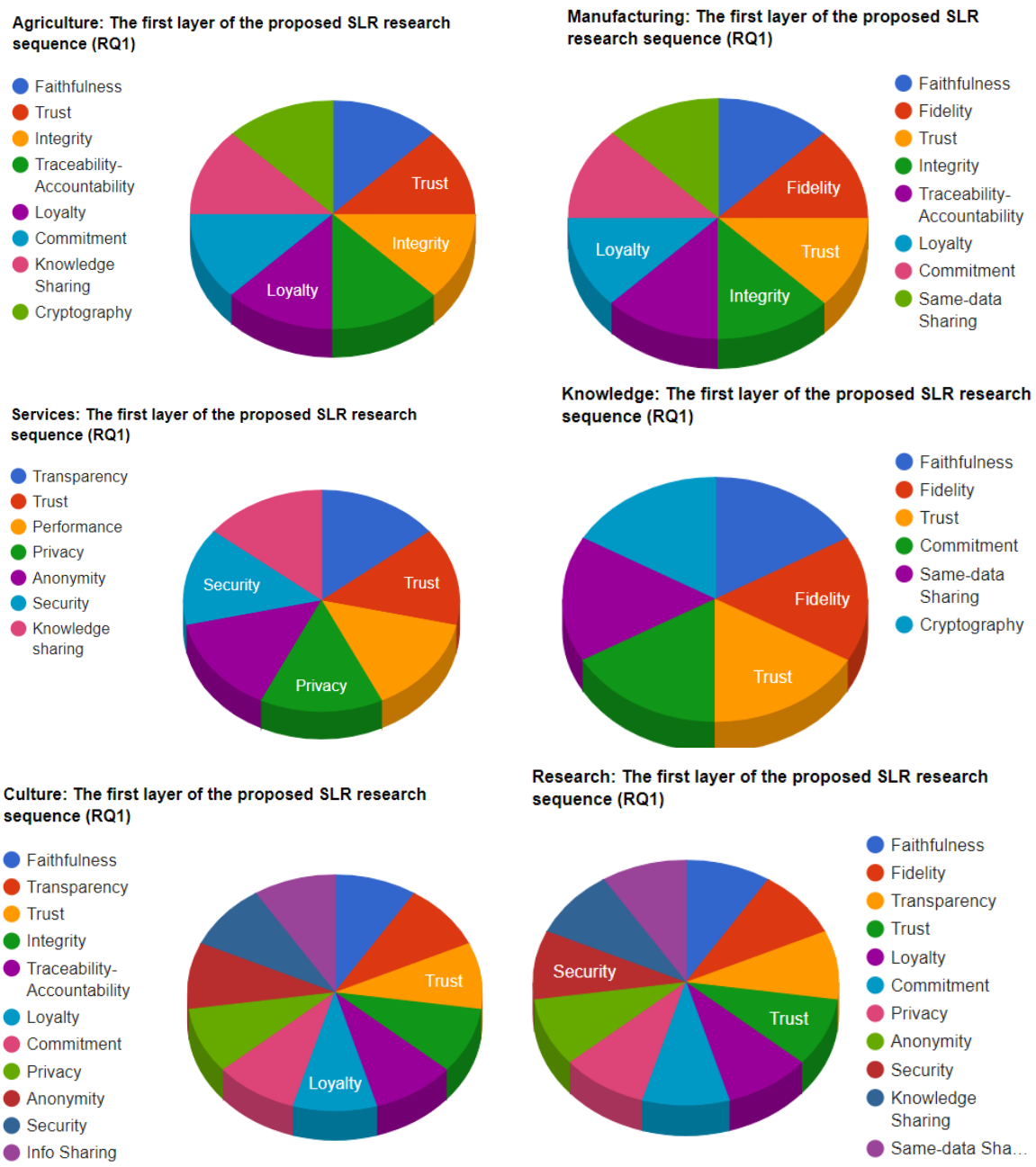

Fig. 4: The first layer of the proposed SLR research sequence (RQ1) - pie chart graphical format

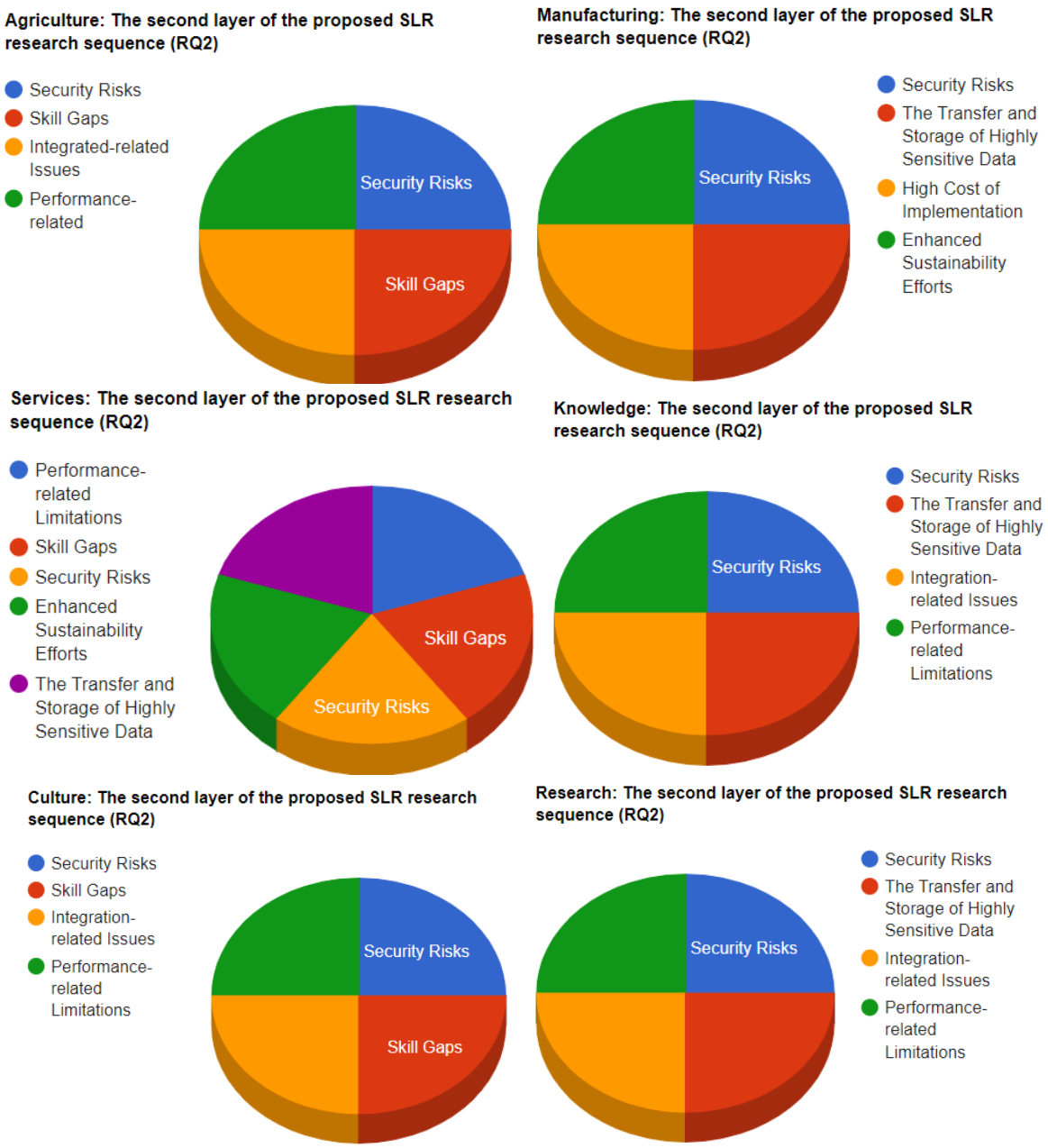

Fig. 5: The second layer of the proposed SLR research sequence (RQ2) - pie chart graphical format

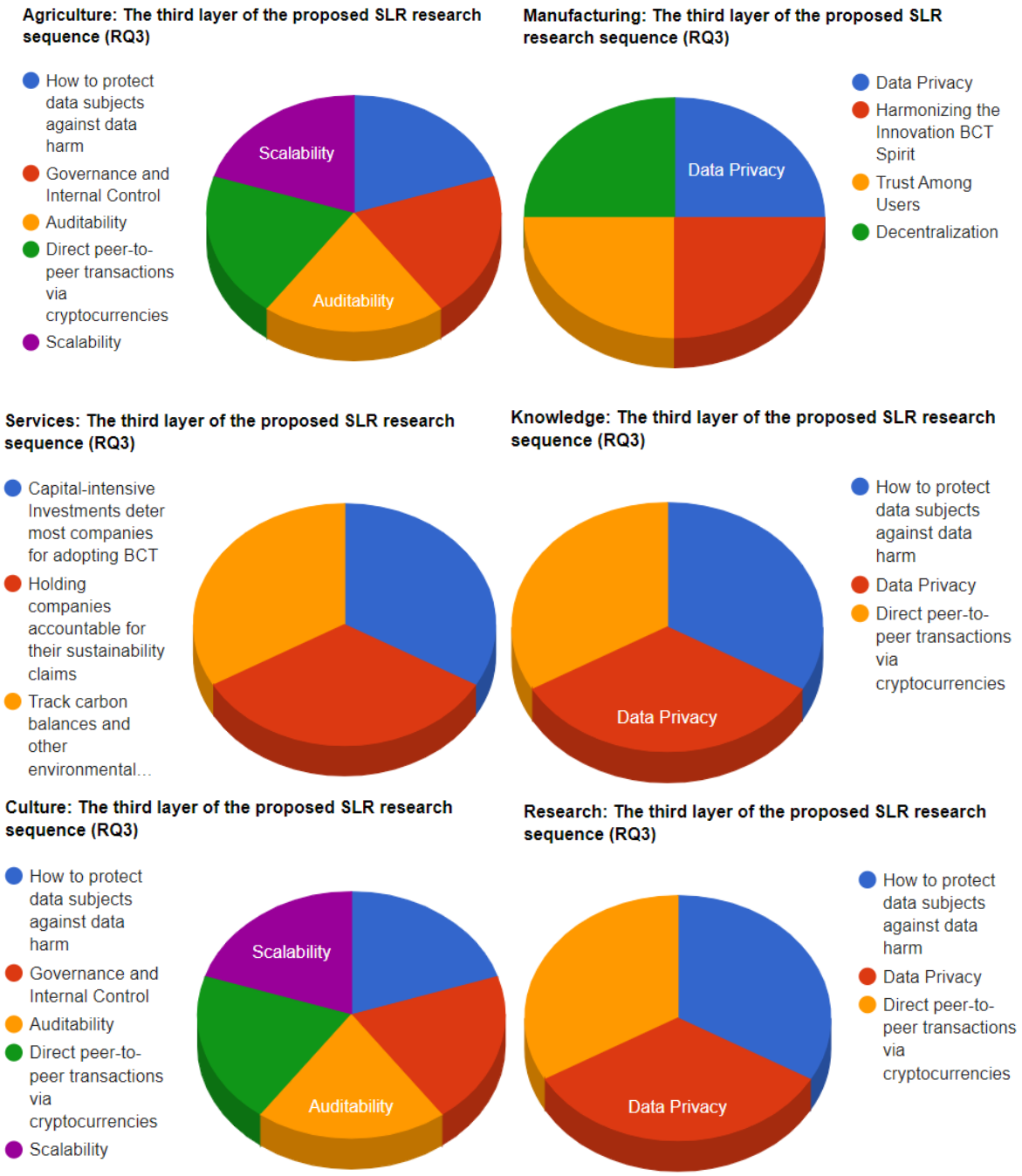

Fig. 6: The third layer of the proposed SLR research sequence (RQ3) - pie chart graphical format

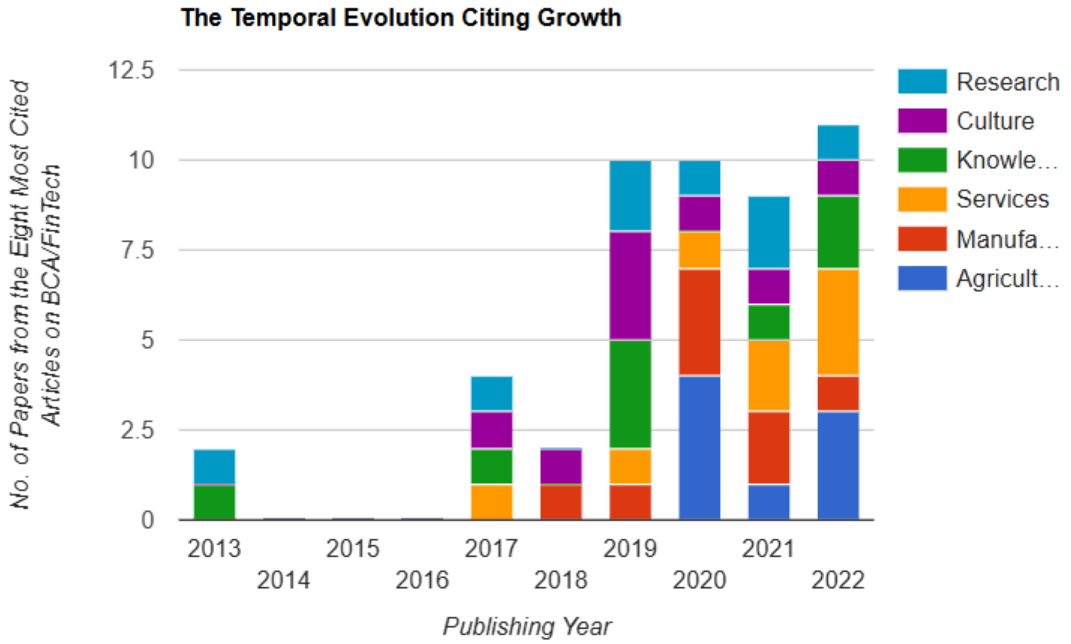

Fig. 8: The eight most cited articles - Temporal evolution of increasing citations