

ENACTMENT OF THE RIGHT TO FREE PUBLIC HEALTH CARE BILL, ACT 2024, WHICH USES BLOCK-CHAIN EXPERTISE AND THE INTERNET OF THINGS TO MANIPULATE HEALTHCARE PROVISION

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Abstract

Achieving this objective can be facilitated by implementing thorough and ongoing health monitoring and surveillance systems that take advantage of recent technological developments. Well-established hypotheses regarding technology use will serve as the foundation for the inquiry. Most people think that BCT technology is a significant breakthrough and a game-changer that is essential in contemporary corporate environments. However, throughout time, its use expanded to several other well-known industries, including government, real estate, agriculture, healthcare, insurance, and supply chain management. This approach seeks to establish safe and unchangeable data sharing throughout the network and safe use of IoT in healthcare. The Digital India program, which was started in 2015, has increased the need for IoT devices in India. By 2023, this project aims to create 100 smart cities, where intelligent IoT devices will revolutionize public services including traffic control and healthcare. These centers of excellence (CoEs) are mostly focused on the automotive industry, manufacturing, healthcare, and agriculture. IoT applications in these domains are currently being intensively investigated by more than 100 companies (Ministry of Electronics and Information Technology, 2020). According to an IDC estimate, the demand for wearable technology in India has grown by 168%, with over 15 million wearable devices including smart watches, medical devices, wristbands, and ear-worn devices shipped in 2019.

Keywords: IoT, BCT, Health care services, Free Public Health Act, Cutting Edge Technologies

1. INTRODUCTION

The current study piece is organized effectively to enable a thorough analysis of the subject. It is organized logically into five chapters, each of which contributes significantly to the overall analysis. The article is organized as follows:

Furthermore, the introduction pointed out a gap in the literature that needs to be filled by more research on the variables influencing IoT and BCT use in relation to well-known theories of technology adoption including TAM, TRI, and TPB. Additionally, it provides a clear overview of the study's goals, research questions, and scope, all of which form the foundation for the research methods and literature review that follow.

Aim1: Examine the factors influencing IoT adoption in healthcare services and the level of users' technological preparedness.

Aim 2: To determine whether the BCT approach could work as a catalyst for the healthcare industry's adoption of IoT by improving the security, integrity, and privacy of vital health data.

Aim 3: To ascertain how the integration of BCT technology and the Internet of Things may alter the perceived performance of healthcare institutions.

As a result, research in cutting-edge technologies like BCT and IoT is anticipated by the Indian market. According to this, the Indian market is ready for an empirical investigation into cutting-edge technologies like BCT and IoT. Meity, NASSCOM, and state governments have created Centers of Excellence (CoE) in order to do this. On IoT in

Gandhi Nagar, Bengaluru, and Gurugram. It's obvious that taking concrete action to ensure that everyone has access to quality healthcare is crucial, which is consistent with the notion that health is vital. But it became evident during the COVID-19 epidemic that global health services were unprepared. The cost of medical care increased significantly over this period. Numerous research were conducted to determine whether healthcare issues were exclusive to certain nations or if they were worldwide, regardless of how wealthy or poor a nation was.. These centers aim to work together with different organizations like businesses, start-ups, government bodies, and educational institutions.

2. LITERATURE REVIEW

There is not much scholarly work that has looked into the factors affecting the full use of IoT and BCT from the end user's point of view, using well-known technology adoption theories. There are only a few studies that have examined the use of IoT and BCT together by applying theories like the Technology-Organization-Environment (TOE) Model. This model looks at how technical, organizational, and environmental factors influence the use of IoT and BCT, and how things like the organization's preparedness, how well the technology fits, and the external environment affect decisions on whether to adopt it (Bhattacharyya et al., 2022). The Diffusion of Innovation Theory (DIT) focuses on how communication, social structures, and perceived benefits of new technologies affect the acceptance of IoT and BCT, and highlights the role of early adopters and opinion leaders in spreading awareness and encouraging adoption (Salah, K & Khan, M.A.2018). However, these studies did not look at factors from the end user's perspective. There were also not many other studies that used technology adoption theories to understand how end users adopt IoT and BCT, such as the Technology Acceptance Model TAM, which looks at whether users find the technology easy to use and whether they believe it is useful (Vetro et al, 2016). The Unified Theory of Acceptance and Use of Technology builds on TAM and includes factors like social influence, helping conditions, and expected performance. The Technology Readiness Index (TRI) is used to measure how ready and willing a person is to use new technologies like IoT or BCT. The Theory of Planned Behavior (TPB) is a psychological model that explains human behavior by looking at attitudes, social norms, and perceived control over actions, and can be used to understand and predict the adoption of BCT technologies (King et al, 2017). However, not much research has been done to understand how a user's skill level with technology affects their willingness to adopt new technologies like IoT and BCT. It is also unclear whether the influence of friends and society plays a role in how users decide to adopt these technologies. The assessment of adoption of IoT and BCT can be done by using three major technology adoption theories: TPB, TRI, and TAM. This study is a new attempt to look at how users accept the combined use of IoT and BCT by using elements from TPB, TRI, and TAM,. As shown in Table 2.1, there are a few studies that have combined TPB, TRI, and TAM,. to understand technology adoption (King et al, 2017), but these have only looked at BCT, and IoT. This shows a gap in the current literature that this thesis tries to fill. This is the first study that investigates the factors affecting the acceptance of the combined use of IoT and BCT in the health sector in an Indian context, by integrating the three theories: TPB, TRI, and TAM.

3. RESEARCH METHODOLOGY

This research methodology must include a research methodology chapter since it serves as the cornerstone that determines the study's design, execution, and analysis. Its importance

stems from helping researchers choose the best methods for gathering and analyzing data, which in turn influences how reliable and accurate the research conclusions are. Understanding the many kinds of research methodologies is crucial since each one provides a distinct perspective and has applications in real-world situations (Paul & Din., 2017).

This chapter discusses a variety of research techniques, outlining their unique characteristics and optimal applications. The researcher has decided to employ an empirical research approach for the study that examines the variables influencing the deployment of IoT and BCT in healthcare services. Observable and quantifiable facts are meticulously gathered during empirical research, which aids in drawing conclusions that are backed up by data. This method provides insights that cannot be gained solely through theoretical or qualitative approaches by allowing for firsthand observation of how actual users behave, what they prefer, and their experiences in the dynamic healthcare environment (Paul & Din., 2017). Additionally, empirical research makes the results more generalizable by assisting in the identification of useful trends that have broader applicability. The empirical approach aids in obtaining a more impartial, trustworthy, and widely applicable understanding of the various elements influencing the adoption of new technologies in the healthcare industry, where efficient and scalable solutions are required. Both qualitative and quantitative analysis methods are part of the empirical methodology used in this study. To take into consideration the many and varied elements that affect the uptake of IoT and BCT in healthcare services, a mixed-method approach is being employed. This choice is supported by the idea that integrating new technologies into healthcare is a complicated process that calls for a more thorough understanding than can be obtained from numerical data alone. . Combining qualitative and quantitative approaches enables a comprehensive study that addresses statistical patterns as well as in-depth observations, viewpoints, and the nuances of the healthcare technology adoption setting. A thorough explanation of the various forms of research and the rationale for choosing empirical research, as described. The mixed-method research methodology is conducted in two stages, and the rationale for employing a mixed-method approach is also covered. The first phase involves a qualitative inquiry in detail, followed by the second phase, which includes quantitative investigation.

4. BLOCK-CHAIN EXPERTISE AND THE INTERNET OF THINGS UNDER THE RIGHT TO FREE PUBLIC HEALTH. CARE BILL, 2024

(a) Any person who resides inside India's boundaries and is an Indian citizen is considered a citizen under the laws in force for this purpose.

(b) The term "appropriate government" applies to the Central Government in all other situations, the Government of a State in the case of a State, and the Government of a Union Territory with its own legislature in the case of a Union Territory;

(c) As part of free public health care, all citizens receive free medical services at hospitals, including consultation, diagnosis, and treatment of any sickness, as well as rehabilitation services;

(d) A hospital is any recognized establishment that offers medical services and facilities, including

(i) A hospital established, run, or owned by the local or applicable government;

(ii) A hospital that falls under a particular category and receives grants or assistance from the local or relevant government to cover all or part of its expenses;

(iv) An unaided hospital that is unable to pay its expenses because it does not get any subsidies or help from the appropriate local government or authority.

Reasoning: For the purposes of this section, "specified category" refers to the collection of hospitals mentioned in the Clinical Establishments (Registration and Regulation) Act,

2010.

(e) Regardless of the name, "local authority" refers to a Municipal Corporation, Municipal Council, Zila Parishad, or Nagar Panchayat, and encompasses any other or body that has administrative control or is empowered by law to function as a local authority in any city, town, or village;

(f) "Prescribed" means as prescribed by rules made under this Act; and "senior citizen" means any citizen who is above the age of 65 years.

5. LIMITATIONS AND FUTURE SCOPE

Some insight into the use of IoT and BCT in India's healthcare sector has been provided by the current study. Considering the unique circumstances and healthcare requirements in different areas or nations, future researchers could examine how cultural disparities and inequities impact the combined use of these technologies. Additionally, those who are more tech-savvy are more likely to embrace new developments than those who are not. It is crucial to remember that IoT devices require a consistent internet connection. These aspects could also be examined in future research. Furthermore, the rapidly evolving nature of the IoT and BCT domains is significant since the data gathered here may soon become obsolete due to continuous improvements in technology and medicine. Future research may employ a long-term study technique to address this. In empirical research, qualitative approaches concentrate on examining subjective traits and encapsulating the complex and profound nature of human experiences, attitudes, and perceptions. Qualitative data is gathered and interpreted using techniques including content analysis, focus groups, and interviews. By providing a more thorough perspective and disclosing subtle insights, qualitative techniques enable researchers to have a contextual understanding of the components involved (Guo,2022). In contrast, quantitative methods in empirical research involve the systematic collection and analysis of numerical data. In quantitative approaches, surveys, experiments, and statistical analyses are frequently used. By identifying patterns, correlations, and statistical significance in the data, these techniques aim to provide a more comprehensive and structured understanding of the study questions. Mixed techniques, which combine qualitative and quantitative approaches, offer a comprehensive and well-rounded approach to empirical research. While quantitative methods guarantee statistical precision and generalization, enabling a broader understanding of patterns and trends, qualitative methods enrich the study by capturing the minute intricacies of human experiences and views. Combining these two methodological philosophies ensures a thorough analysis of the phenomenon under study and improves the correctness and dependability of the research findings. The current empirical investigation uses a mixed-method research technique that started with qualitative analysis and progressed to quantitative analysis in order to uncover the characteristics that govern the acceptance of IoT and BCT. The necessity to obtain a comprehensive and in-depth understanding of the factors influencing the usage of technology in this study is the basis for the adoption of mixed approaches in healthcare services. Since quantitative methods offer statistical analysis and thorough coverage, while qualitative approaches offer contextual and in-depth knowledge, the synergy between the two approaches is essential. Triangulation, made possible by the use of mixed methodologies, enhances the validity and reliability of the study by validating results from both qualitative and quantitative research. A more meaningful interpretation of numerical data is made possible by qualitative insights, which are essential in giving quantitative patterns context and explanation. A more flexible and thorough analysis is made possible by the adaptability of qualitative research, which also makes it possible to

investigate unanticipated factors that can surface during the study. In summary, using multiple techniques increases the overall precision of the study's findings, offering a comprehensive analysis of the complex terrain of technology adoption in the healthcare industry.

6. CONCLUSION

Beyond the boundaries imposed by culture, community, and place of residence, achieving optimal bodily and mental health is a fundamental human objective. Maintaining one's health is not just the duty of the individual but also of society at large. People who are in better health contribute greater vitality and better outcomes to their communities. By providing innovative and creative ways to promote well-being in various facets of life, technology plays a significant role in enhancing health (Kshetri, Can, 2018). A new era where people may actively use digital tools to maintain and enhance their health has begun as a result of the integration of technology into healthcare, daily routines, and strategies for staying healthy. People's ability to take control of their own well-being is greatly aided by technology. It provides improved medical diagnostic tools and customized fitness applications (Ram, et al., 2021). This contributes to the development of a comprehensive strategy that addresses mental and physical health. The relationship between technology and well-being demonstrates both how far we've come and how much more we can do to live a better and healthier existence in this era of significant technological advancement. This link emphasizes how crucial contemporary IT solutions are to transforming healthcare delivery (Ram, et al., 2021). Cutting-edge technologies like BCT technology (BCT) and intelligent data analysis for health issue prediction provide clinicians with crucial information to make precise diagnosis and enhance treatments, Address address health issues as soon as possible. By using these technologies, people and healthcare systems can significantly enhance health outcomes, including early disease detection, individualized treatment regimens, and more patient involvement in their care (Kaur et al., 2021). However, overcoming a number of obstacles, such as issues with disparate systems collaborating, concerns about protecting health data, and unequal access to technology and digital skills, is necessary to make these technologies broadly utilized and accepted. Therefore, in addition to advancing technology, it's critical to work hard to address these issues and foster an innovative and collaborative culture inside the healthcare system. By collaborating, medical professionals, government representatives, and technologists, and patients may establish the ideal setting for the seamless and efficient usage of these new technologies. This will ultimately enable us to maximize their advantages in enhancing health outcomes and elevating everyone's standard of living. In this evolving environment, the current research on the factors influencing the adoption of IoT and BCT in enhancing healthcare services is quite relevant. Understanding the factors influencing the successful deployment of IoT and BCT technologies adds to the body of knowledge as technology plays an increasingly important role in healthcare delivery. These results have ramifications for both scholarly discussions and real-world uses in technological development, healthcare, and policymaking.

6.1 Novelty and Contribution to Existing Literature

To provide a clear, unbiased look at the factors influencing the adoption of these technologies, this section of the study employed rigorous statistical methodologies and data analysis. Numerous valuable insights were discovered by the quantitative analysis, including statistical correlations, patterns, and relationships in the data. This aided in the identification

of trends and significant findings that enhanced our comprehension of the intricate applications of IoT and BCT in healthcare. To fully examine the research questions, the study combined qualitative and quantitative methods. This approach ensured that the findings were comprehensive and supported by statistical evidence. By employing both approaches, the study became more dependable and consistent, providing a comprehensive view of the elements influencing the adoption and application of BCT and IoT in healthcare.

6.2 Future Recommendations

The present study has shed light on how IoT and BCT are being adopted in India's healthcare industry. In order to understand the distinct dynamics and healthcare requirements that exist in various locations or countries, future researchers can investigate the impact of cross-cultural differences and disparities on the integrated adoption of IoT and BCT technologies. It's also critical to emphasize that IoT devices need continuous internet access, and tech-savvy people adopt new technologies differently than less tech-savvy people. These characteristics can also be investigated in future studies. Furthermore, the IoT and BCT domains' quick and dynamic development is an important consideration because it could because the data collected for this study to quickly become outdated due to the continuous improvements in technology and healthcare procedures. To mitigate this constraint, forthcoming investigations may consider employing a longitudinal methodology.

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