



(RESEARCH ARTICLE)



# Integration of IOT in strategic management: A review of current trends, future possibilities, and challenges

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## Abstract

With IoT being one of the buzzwords of today's modern landscape, this systematic review explores the adoption of Internet of Things (IoT) technologies within organizations. The study is focused on the strategic implications of IoT. By gathering findings from various research studies conducted previously, the review points out the benefits, challenges, critical factors, and taxonomies associated with IoT adoption. The findings reveal that IoT adoption enhances operational efficiency, quality, and innovation. But it also poses challenges related to technological, organizational, environmental, and human factors. Taxonomy of IoT adoption in organizations is proposed, showing industry sectors, application domains, technology types, and adoption levels. Additionally, four critical factors influencing IoT adoption are identified: technological, organizational, environmental, and human factors. The review reveals the need for empirical, comparative, longitudinal, and interdisciplinary studies to deepen understanding and inform practice regarding this matter. Overall, the study provides valuable insights for both theory and practice as it offers a theoretical foundation and practical recommendations for organizations and policymakers for successful IoT adoption in strategic management contexts.

**Keywords:** Internet of Things (IoT); Strategic management; Organizational adoption; Technological innovation

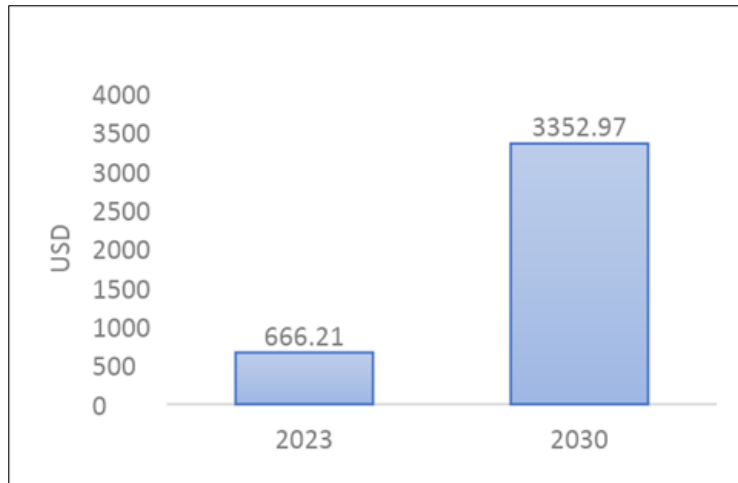
## 1. Introduction

The Internet of Things (IoT) is a modernized technology that establishes a network of connected devices to communicate with each other and cloud. The technology enables the integration of the Internet with everyday things that people use in their homes and offices. Devices that people use daily, including light switches, cars, televisions, fridges, vacuums, washing machines, microwaves, and other stuff, are connected to the internet to be used remotely without direct touch or intervention [9, 5]. The IoT allows users to operate a device from far away with access to control it through the internet. This technology has flourished due to the invention of cheap and smaller computer chips and high-speed internet communication systems. Devices integrated with IoT technology have sensors and processors which are smaller in size and have incredible speed. Interestingly, the use of IoT saves energy with lower maintenance costs [9, 3]. IoT has become a pioneer of sustainable development for human progression and technological advancement.

IoT market has been expanding at a rapid rate from 666.21 billion USD in 2023 to 3,352.97 billion USD by 2030 [2]. IoT has entered almost every industry, such as manufacturing, healthcare, retail, education, agriculture, transportation, and pharmaceuticals, to facilitate productivity. IoT has given the world a new era to build smart homes, smart offices and

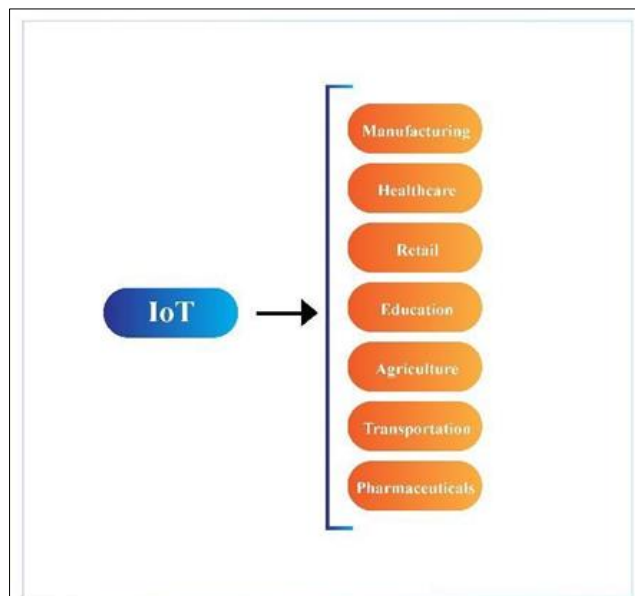
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smart factories, hence a smart civilization. It is the driving force of smart cities to create a community with the blessing of technology in every part of life. The emergence of IoT is beneficial as the cost of utilizing offerings of IoT-based technologies has been decreasing. The growing innovation and usage of artificial intelligence with the assistance of IoT is transforming the world toward a more evolutionary world [2].



**Figure 1** IoT market from 2023 to 2030

Business leaders can seek assistance from IoT in business management while making critical decisions to achieve their organizational goals. IoT provides real-time data, which can be a useful resource for managers to make efficient decisions for their organization [6]. IoT-driven business operations reduce time and effort, making managers proactive in obtaining precise organizational decisions [8]. Businesses can construct their short-term and long-term goals and plan more competently through the data and processes derived from IoT. Managers can get a clear view of their organizational strategies to foster growth with the acceleration in business functionality due to the advantages of using IoT. Businesses can enjoy competitive advantages in the market as a more efficient business entity with the help of IoT [7, 8]. The lead IoT delivers to businesses through time reduction, waste management, labor cost reduction, and efficiency enhancement, which can help managers shape their decisions and resources more proficiently to set their visions [1].



**Figure 2** IoT in different industries

Organizations deal with enormous challenges in developing their goals and the pathways to achieve them in this complicated modern situation of market and customer preferences. Sustaining and obtaining growth require evolutionary ideas and practices for businesses. Managing resources is incredibly critical for managers to utilize them to their fullest and generate maximum outcomes. Technology has always advocated industries as a core partner to accomplish organizational goals with its innovation and revolution [4]. Hence, IoT has given managers opportunities to utilize resources most efficiently to produce maximum outcomes with its advantageous nature. To some extent, IoT enables businesses to embrace advancement sustainably while making the lowest impact on the environment, making strategic management more fruitful for all parties of society.

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## **2. Literature Review**

### **2.1. Applications, approaches, and challenges within the Internet of Things (IoT)**

Sharma et al. (2019) offers a comprehensive review focusing on the applications, approaches, and challenges within the Internet of Things (IoT) landscape. The paper delves into the wide array of sectors benefiting from IoT integration, including healthcare, transportation, smart cities, and agriculture. It likely examines how IoT implementations revolutionize processes and decision-making across these industries, highlighting specific use cases and success stories to illustrate the transformative potential of IoT technologies in various domains. Additionally, the paper may discuss emerging trends and novel applications of IoT, providing insights into the evolving landscape of IoT-enabled solutions.

### **2.2. Industrial Internet of Things**

Maximilian et al. (2018) explore the realm of cybersecurity management specifically tailored for Industrial Internet of Things (IIoT) applications. By highlighting the challenges and opportunities, the paper emphasizes the critical need for robust security measures to safeguard sensitive data and critical infrastructure. It likely underscores the importance of tailored cybersecurity strategies to mitigate risks effectively, considering the unique characteristics and requirements of IIoT environments. The paper may also discuss cutting-edge technologies and approaches for enhancing cybersecurity in IIoT systems, such as anomaly detection, encryption, and secure communication protocols.

### **2.3. Integration of Cloud Computing with IoT**

Atlam et al. (2017) shed light on the integration of Cloud Computing with IoT, pinpointing the challenges and open issues associated with this convergence. The paper likely discusses the potential benefits of leveraging Cloud resources for IoT applications while addressing concerns such as data privacy, interoperability, and scalability. It may propose strategies to overcome integration hurdles for seamless collaboration between Cloud and IoT platforms, considering factors such as data management, latency, and resource provisioning. Additionally, the paper may explore emerging trends and innovative solutions in Cloud-based IoT architectures, such as edge computing and fog computing.

### **2.4. Possibilities and challenges arising of application and integration of IoT in future marketing practices**

Klopper (2016) examines the possibilities and challenges arising from the application and integration of IoT in future marketing practices. Through a critical literature review, the paper likely identifies opportunities for personalized marketing campaigns, accurate customer segmentation, and innovative pricing models enabled by IoT-generated data. It also addresses challenges such as privacy concerns and the need for enhanced skills to navigate the complexities of IoT integration. Additionally, the paper may discuss real-world case studies and practical examples of IoT-driven marketing initiatives, providing insights into successful strategies and potential pitfalls to avoid.

### **2.5. Link between IoT and Cloud Computing**

Cavalcante et al. (2016) conduct a systematic mapping study to explore the interplay between IoT and Cloud Computing. The paper likely provides a comprehensive overview of existing research, trends, and emerging paradigms at the intersection of these two technologies. It may highlight key findings, research gaps, and future directions for advancing the integration of IoT and Cloud Computing, considering factors such as data management, resource allocation, and security. Additionally, the paper may discuss the implications of IoT-Cloud convergence on various industries and application domains, providing insights into potential benefits and challenges.

### **2.6. Management of IoT operating systems**

Bin Zikria et al. (2019) delve into the management of IoT operating systems, elucidating opportunities, challenges, and potential solutions. By examining various IoT operating systems and hardware, the paper likely outlines strategies to address interoperability issues, optimize resource utilization, and enhance adaptability in heterogeneous deployment

scenarios. It may discuss the role of operating system architectures, middleware frameworks, and device management platforms in facilitating efficient IoT deployments. Additionally, the paper may explore emerging trends in IoT OS management, such as containerization, virtualization, and edge computing.

### **2.7. IoT in strategic management**

Ramachandran et al. (2023) present an exploratory analysis of IoT within the realm of strategic management. The paper likely investigates how IoT technologies influence strategic decision-making processes within organizations, examining factors such as competitive advantage, market differentiation, and business model innovation. It may offer insights into innovative strategies for leveraging IoT to achieve long-term viability and sustainable growth, considering both internal organizational dynamics and external market factors. Additionally, the paper may discuss case studies and empirical findings to illustrate the strategic implications of IoT adoption in various industries and sectors.

### **2.8. IoT trends, opportunities, and challenges**

Bashari Rad et al. (2017) provide insights into IoT trends, opportunities, and challenges. Through a critical examination of the IoT landscape, the paper likely explores emerging trends, potential applications, and the implications of IoT adoption across various domains. It may also discuss challenges such as security risks, interoperability issues, and regulatory concerns, offering recommendations for addressing these challenges. Additionally, the paper may highlight success stories and best practices in IoT deployment, providing practical guidance for organizations seeking to harness the transformative power of IoT technologies.

### **2.9. Implementation of IoT in residential and commercial buildings**

Lawal and Rafsanjani's work from 2022 was mostly about giving an in-depth look at all the studies that have already been done on the technologies and uses of IoT in homes and businesses. Three main types of studies look at domestic buildings: healthcare centers, home automation, and clever energy management systems. Four main types of business buildings have been written about recently: office buildings, healthcare facilities, educational buildings, and restaurants and shopping facilities. The trends, present pros and cons, and future problems of putting IoT into built settings are found and talked about based on a study of each area. The main problems with IoT adoption are putting together different IoT technologies that have different functions, storing and handling data, and protecting privacy and security. Results also show that the business building sector has gotten more attention than the private building sector. This study helps IoT makers and experts figure out what their efforts are and where their work ends. It does this by pointing the way for future research possibilities.

### **2.10. IoT Applications and Future Prospects in Healthcare, Agriculture, Smart Homes, Smart Cities, and Industry**

Chataut et al. (2023) reviewed the literature on the Internet of Things (IoT), focusing on the devices' recent proliferation, their most prevalent uses, and the potential future of this exciting area of computer science. Smart cities, healthcare, and agriculture are all part of the applications that have been studied. Even though IoT technology shows comparable patterns in implementation, this article will delve into several industries to uncover the minor differences. Understanding the factors propelling IoT development in different sectors is crucial for predicting its future. Readers will have a deeper appreciation for the circumstances that prompted technical progress and the elements that have driven the expansion of IoT devices by learning more about their origins. In light of the lightning-fast development of IoT, this study sheds light on the causes that have led up to this point and the current initiatives that are influencing IoT's trajectory. Researchers wishing to make contributions to and find their way around the constantly changing IoT ecosystem will find this article to be an invaluable resource due to its thorough examination of the present environment and possible future advances.

## 2.11. Summary of Reviewed Papers

**Table 1** Summary of Literature Review

Paper	Authors	Year	Summary
The possibilities and challenges of the application and integration of the Internet of Things for future marketing practice	Klopper, D.	2016	Investigates possibilities and challenges of using IoT-generated data for marketing, addressing privacy concerns and skills needed for IoT integration.
Cybersecurity Management for (Industrial) Internet of Things: Challenges and Opportunities	Maximilian, L., et al.	2018	Discusses challenges and opportunities in cybersecurity management for IIoT, emphasizing the need for robust security measures and tailored strategies.
Integration of Cloud Computing with Internet of Things: Challenges and Open Issues	Atlam, H. F., et al.	2017	Explores challenges and opportunities in integrating Cloud Computing with IoT, addressing data privacy, interoperability, and scalability concerns.
Internet of Things: Trends, Opportunities, and Challenges	Bashari Rad, B., et al.	2017	Examines trends, opportunities, and challenges in IoT, discussing implications across various domains and offering recommendations for addressing challenges.
On the interplay of Internet of Things and Cloud Computing: A systematic mapping study	Cavalcante, E., et al.	2016	Conducts a systematic mapping study on the interplay between IoT and Cloud Computing, identifying research gaps, trends, and challenges.
Internet of Things (IoT) Operating Systems Management: Opportunities, Challenges, and Solution	Bin Zikria, Y., et al.	2019	Explores opportunities, challenges, and solutions in IoT operating systems management, addressing interoperability issues and resource optimization.
Internet of Things (IoT) Exploratory Analysis in Strategic Management	Ramachandran, K., et al.	2023	Conducts an exploratory analysis of IoT in strategic management, investigating its influence on decision-making processes and organizational strategies.
A Review of Applications, Approaches, and Challenges in Internet of Things (IoT)	Sharma, A., et al.	2019	Provides a comprehensive review of IoT applications, approaches, and challenges, offering insights into various sectors and potential future research directions.
Trends, benefits, risks, and challenges of IoT implementation in residential and commercial buildings	Lawal and Rafsanjani	2022	Reviews the existing technologies and applications of IoT in residential and commercial buildings
Unleashing the Power of IoT: A Comprehensive Review of IoT Applications and Future Prospects in Healthcare, Agriculture, Smart Homes, Smart Cities, and Industry	Chataut et al. (2023)	2023	Examined the emergence of IoT devices, analyzed their common applications, and explored the prospects in several promising fields.

## 2.12. Research Gap

While the existing literature provides valuable insights into the applications, challenges, and integration of Internet of Things (IoT) technologies in various domains, there remains a notable gap in understanding the strategic implications of IoT adoption within organizations, particularly in the context of strategic management practices.

### 2.13. Research Objectives

- To investigate the strategic decision-making processes influenced by IoT technologies within organizations, focusing on the factors shaping their adoption strategies and competitive positioning.
- To identify the key barriers and challenges of the effective integration of IoT into strategic management practices, exploring potential mitigation strategies and best practices for successful implementation.
- To examine the impact of IoT-driven data analytics and insights on organizational performance and market competitiveness, assessing the role of IoT-generated data in informing strategic planning and decision-making processes.
- To propose a framework or model for integrating IoT technologies into strategic management processes, offering guidelines and recommendations for organizations seeking to use IoT for sustainable growth and innovation.

## 3. Methodology

The study discusses the adaptation of IoT technologies in strategic management activities in organizational structures. The discussion is carried out through a systematic review of the literature, where research studies focusing on the utilization of IoT in strategic management are selected, assessed, and evaluated to observe outcomes and findings. The study is constructed using a qualitative method by reviewing multiple research papers, articles, studies, and literature, which were developed between 2020 and 2024.

The research studies are obtained through online platforms, including Google Scholar, PubMed, CORE, and Library Genesis. The literatures are selected with the assistance of multiple keywords highly related to the concern of this study. The keywords used to select the research papers and necessary contents are internet of things, strategic management, IoT adaptation in Bangladesh, IoT in business, IoT in growth, managerial use of IoT, advantages of IoT in business management, IoT in strategic management, IoT in decision-making, IoT in development of organizational goals, and IoT in future business.

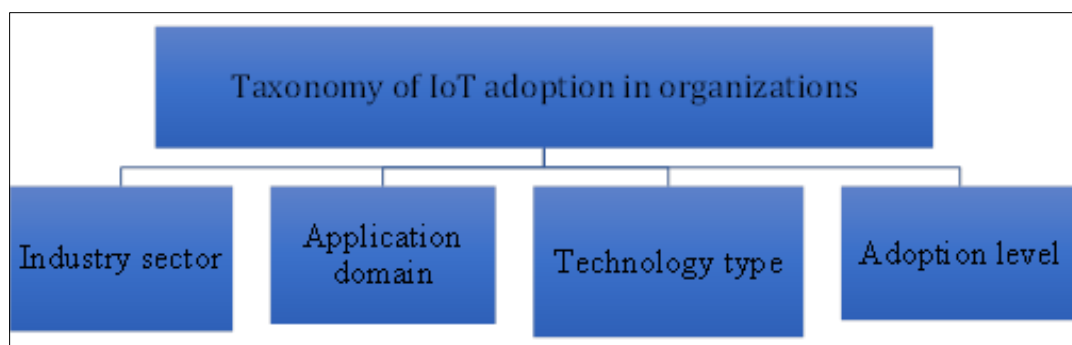
Literature from different sources is reviewed and evaluated to discuss comprehensively the integration of IoT in strategic management.

## 4. Results

This section presents the results of the systematic literature review on IoT adoption in organizations. The results are organized into four subsections:

### 4.1. Taxonomy of IoT adoption in organizations

Based on the analysis of the selected articles, a taxonomy of IoT adoption in organizations was developed. The taxonomy consists of four dimensions: (1) industry sector, (2) application domain, (3) technology type, and (4) adoption level. Figure 1 shows the taxonomy and the distribution of the articles across the dimensions.



**Figure 3** Taxonomy of IoT adoption in organizations

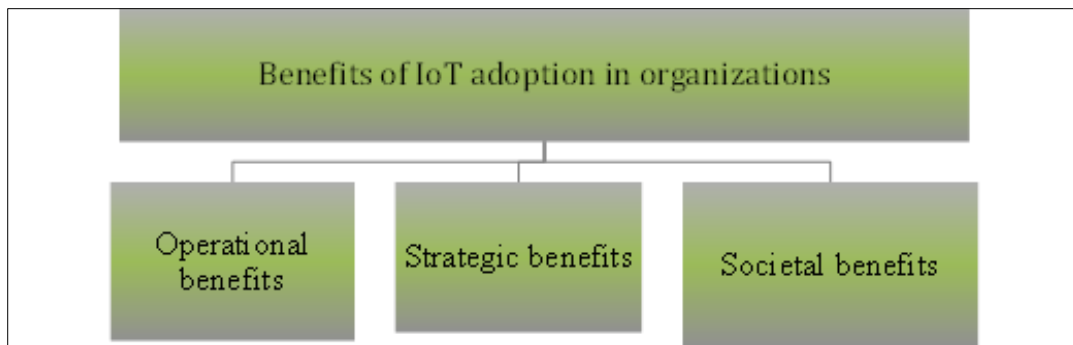
The industry sector dimension classifies the articles according to the specific industry sector where IoT adoption takes place, such as manufacturing, healthcare, agriculture, etc. The application domain dimension categorizes the articles based on the specific use case or function of IoT in the organization, such as smart factories, smart healthcare, smart

farming, etc. The technology type dimension identifies the articles based on the specific IoT technology or component used in the organization, such as sensors, RFID, cloud computing, etc. The adoption level dimension distinguishes the articles based on the degree of IoT adoption in the organization, such as awareness, intention, trial, or implementation.

The taxonomy reveals that the majority of the applications focus on the manufacturing sector, followed by the healthcare sector. The most common application domains are smart factories, smart healthcare, and smart logistics. The most frequently used IoT technologies are sensors, RFID, and cloud computing. The majority of the articles report on the implementation level of IoT adoption, followed by the trial level.

**4.2. Benefits of IoT adoption in organizations**

The benefits of IoT adoption in organizations can be classified into three categories: (1) operational benefits, (2) strategic benefits, and (3) societal benefits. Table 1 summarizes the benefits and provides some examples from the literature.



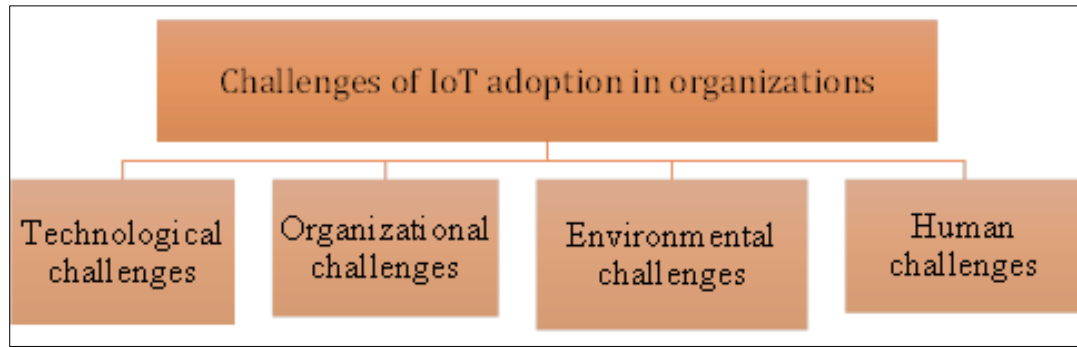
**Figure 4** Benefits of IoT adoption in organizations

**Table 2** Benefits of IoT adoption in organizations

Category	Benefit	Example
Operational	Improved efficiency and productivity	IoT enables real-time monitoring and control of production processes, reducing waste and downtime
Operational	Enhanced quality and reliability	IoT improves product quality and consistency by detecting defects and errors early
Operational	Reduced costs and risks	IoT lowers operational costs and energy consumption by optimizing resource utilization and maintenance
Strategic	Increased innovation and competitiveness	IoT fosters new product and service development and differentiation by leveraging data and analytics
Strategic	Improved customer satisfaction and loyalty	IoT enhances customer experience and value by providing personalized and customized solutions
Strategic	Strengthened collaboration and partnership	IoT facilitates information sharing and coordination among internal and external stakeholders
Societal	Environmental sustainability	IoT reduces greenhouse gas emissions and environmental impact by enabling smart energy management and waste reduction
Societal	Social welfare and inclusion	IoT improves health and well-being outcomes and accessibility for vulnerable and marginalized groups

**4.3. Challenges of IoT adoption in organizations**

The challenges of IoT adoption in organizations can be classified into four categories: (1) technological challenges, (2) organizational challenges, (3) environmental challenges, and (4) human challenges. Table 2 summarizes the challenges and provides some examples from the literature.



**Figure 5** Challenges of IoT adoption in organizations

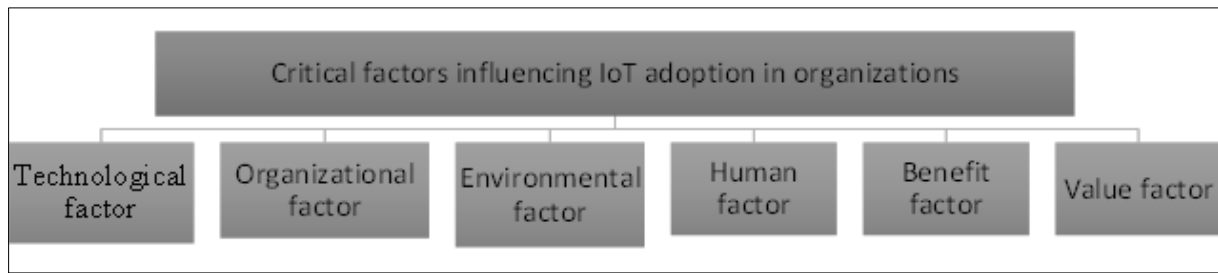
**Table 3** Challenges of IoT adoption in organizations

Category	Challenge	Example
Technological	Interoperability and compatibility	IoT requires integration and communication among heterogeneous devices, platforms, and standards
Technological	Security and privacy	IoT exposes sensitive data and systems to cyberattacks and unauthorized access
Technological	Scalability and performance	IoT generates massive amounts of data and demands high computational and network resources
Organizational	Strategy and vision	IoT requires alignment and adaptation of organizational goals, processes, and culture
Organizational	Leadership and governance	IoT requires clear roles and responsibilities and effective decision-making and coordination mechanisms
Organizational	Resources and capabilities	IoT requires adequate financial, technical, and human resources and skills
Environmental	Regulation and compliance	IoT faces legal and ethical issues and uncertainties regarding data ownership, usage, and protection
Environmental	Competition and collaboration	IoT creates opportunities and threats from existing and new competitors and partners
Human	Awareness and attitude	IoT requires awareness and understanding of the benefits and challenges of IoT adoption
Human	Trust and acceptance	IoT requires trust and confidence in the reliability and security of IoT systems and data
Human	Resistance and adaptation	IoT requires overcoming resistance and inertia and embracing change and learning

**4.4. Critical factors influencing IoT adoption in organizations**

Based on the critical review of the literature, six critical factors affecting and playing a key role in IoT adoption in organizations were identified: (1) technological factor, (2) organizational factor, (3) environmental factor, (4) human factor, (5) benefit factor, and (6) value factor. Figure 2 shows the conceptual model of the critical factors and their relationships.





**Figure 6** Critical factors influencing IoT adoption in organizations

The technological factor refers to the characteristics and capabilities of the IoT technology or system, such as functionality, usability, reliability, security, etc. The organizational factor refers to the characteristics and capabilities of the adopting organization, such as size, structure, culture, strategy, leadership, resources, etc. The environmental factor refers to the characteristics and dynamics of the external environment, such as market, industry, competition, regulation, etc. The human factor refers to the characteristics and behaviors of the individuals involved in the adoption process, such as awareness, attitude, trust, acceptance, resistance, etc. The benefit factor refers to the perceived advantages and outcomes of IoT adoption, such as efficiency, quality, innovation, customer satisfaction, etc. The value factor refers to the perceived worth and usefulness of IoT adoption, such as cost-effectiveness, profitability, competitiveness, etc.

Data suggests that the technological, organizational, environmental, and human factors influence the benefit and value factors, which in turn influence the adoption decision and behavior. It was also discovered that there are interrelationships among the factors, such as feedback loops, moderating effects, and mediating effects. For example, the benefit factor may affect the human factor by increasing awareness and trust, the value factor may affect the organizational factor by enhancing strategy and vision, and the environmental factor may affect the technological factor by creating interoperability and compatibility issues.

## 5. Discussion

The study revealed that IoT adoption has significant implications for strategic management in terms of enhancing the organization's performance, competitiveness, and sustainability. The study also identified and synthesized the benefits, challenges, and critical factors influencing IoT adoption in organizations, which can enhance the understanding and explanation of the IoT adoption phenomenon. The review also reveals the interrelationships and trade-offs among the factors, which can provide a holistic and dynamic perspective on IoT adoption. The benefits of IoT adoption include improving operational efficiency, flexibility, innovation, and integration, as well as achieving strategic advantages such as customer satisfaction, decision-making, and social responsibility. However, IoT adoption also poses various challenges that require careful management and mitigation. The challenges of IoT adoption include dealing with technological issues such as compatibility, complexity, reliability, and security, as well as organizational, environmental, and human factors such as culture, leadership, strategy, structure, competition, regulation, uncertainty, awareness, resistance, skills, and trust. Four critical factors that influence IoT adoption in organizations were also identified: technological, organizational, environmental, and human. These factors represent the key determinants and enablers of IoT adoption, as well as the potential barriers and inhibitors of IoT adoption. The review suggested that IoT adoption is a complex and dynamic process that depends on the interplay and alignment of these factors. Therefore, strategic management of IoT adoption requires a holistic and comprehensive approach that considers the multiple dimensions and aspects of IoT adoption, as well as the context and contingency of each organization. The taxonomy of IoT adoption in organizations can serve as a useful framework for classifying and comparing different IoT adoption scenarios and contexts. The taxonomy can also help identify the gaps and opportunities in the literature and guide future research inquiries.

### *Limitations*

The review also revealed some gaps and limitations of the existing literature on IoT adoption in strategic management. The main gaps and limitations are as follows:

The majority of the literature on IoT adoption in strategic management is conceptual or theoretical, with few empirical studies that provide evidence and validation of the proposed frameworks, models, and hypotheses. Moreover, most of the empirical studies are based on surveys or case studies, with limited use of other methods such as experiments,

simulations, or action research. Therefore, there is a need for more empirical studies that employ diverse and rigorous methods to test and verify the existing theories and findings, as well as to generate new insights and knowledge on IoT adoption in strategic management.

The majority of the literature on IoT adoption in strategic management is focused on specific industry sectors, application domains, technology types, or adoption levels, with few comparative and longitudinal studies that examine the differences and changes of IoT adoption across various contexts and over time. Moreover, most of the literature is based on developed countries, with limited attention to developing and emerging countries. Therefore, there is a need for more comparative and longitudinal studies that explore the similarities and variations of IoT adoption in different settings and periods, as well as the opportunities and challenges of IoT adoption in different regions and markets.

The majority of the literature on IoT adoption in strategic management is fragmented and siloed, with few integrative and multidisciplinary studies that combine and synthesize perspectives and insights from different disciplines and fields. Moreover, most of the literature is based on existing theories and models, with limited use of novel and innovative frameworks and approaches. Therefore, there is a need for more integrative and multidisciplinary studies that bridge and integrate the knowledge and wisdom from different domains and paradigms, as well as to develop and apply new and original theories and methods to IoT adoption in strategic management.

Based on the gaps and limitations of the existing literature, the following directions for future research on IoT adoption in strategic management are proposed:

- More empirical studies should be conducted that use diverse and rigorous methods to investigate and validate the benefits, challenges, and factors of IoT adoption in strategic management, as well as to generate new and valuable insights and knowledge on IoT adoption in strategic management.
- Researchers should conduct more comparative and longitudinal studies that examine and compare the differences and changes in IoT adoption in strategic management across various industry sectors, application domains, technology types, adoption levels, regions, and markets, as well as the opportunities and challenges of IoT adoption in strategic management in different contexts and over time.
- Lastly, integrative and multidisciplinary studies should be carried out that combine and synthesize the perspectives and insights from different disciplines and fields, such as management, engineering, computer science, information systems, economics, sociology, psychology, and ethics, as well as to develop and apply novel and innovative frameworks and approaches to IoT adoption in strategic management.

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## 6. Conclusion

This study has examined the current state of the art on IoT adoption in organizations, focusing on the benefits, challenges, and critical factors influencing the adoption process and outcomes. The review has also proposed a taxonomy of IoT adoption in organizations, based on four dimensions: industry sector, application domain, technology type, and adoption level. Moreover, the review has shed light on the critical factors influencing IoT adoption in organizations, based on four factors: technological, organizational, environmental, and human.

The review has several implications for theory and practice. For theory, it provides a comprehensive and critical overview of the existing knowledge on IoT adoption in organizations, as well as a theoretical foundation and a testable hypothesis for future empirical studies. For practice, it provides valuable insights and recommendations for practitioners and policymakers involved in IoT adoption in organizations, as well as some best practices and success factors for IoT adoption. The review also identifies some limitations and gaps in the literature and suggests some directions for future research on IoT adoption in organizations. Future research could conduct more empirical and longitudinal studies, more comparative and contextual studies, and more integrative and interdisciplinary studies on IoT adoption in organizations, to provide more robust and reliable evidence and insights on the IoT adoption phenomenon and its impacts and outcomes.

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## Compliance with ethical standards

### *Disclosure of conflict of interest*

No conflict of interest to be disclosed.

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