THE INFLUENCE OF ARTIFICIAL INTELLIGENCE ON FINANCIAL MANAGEMENT DECISION

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Abstract

Artificial intelligence (AI) has made significant advances in financial management, providing opportunities for decisions using improved risk management, as well as to implement adaptive financial strategies that capitalize on developments in the financial market. AI has the potential to bring valuable knowledge and insights into various financial aspects, and by understanding the benefits, challenges and associated risks, companies and decision-makers can take strategic steps to effectively implement artificial intelligence (AI), thus contributing to sustainability and financial effectiveness in the digital era. This paper focus on the influence of artificial intelligence on financial management, providing a clearer perspective on the paradigm of financial decisions in the digital era. This study used a systemic content analysis methodology of peer-reviewed journals in order to assess related literature publications on our research interest. Our study's direction was determined by the phrase "artificial intelligence financial management decision organization" and the Web of Science (WoS) platform and the Google Scholar database were used for the search. After ordering the academic articles according to their relevance, we included in the study those articles that most closely matched the content of the terms in the search engine. The research aims to identify both the advantages and limitation aspects in what concerns AI and financial management decision-making process. Our findings highlight several important aspects regarding AI's influence on financial management decisions as increased efficiency and productivity, decision-making, risk management, data security and ethical issues, and regulation and compliance. Although, artificial intelligence can provide substantial benefits to decision-making in financial management. There are ethical challenges related to the responsibility and social impact of these decisions, as well as those related to the control of risks and regulations related to the development of AI. As artificial intelligence becomes more deeply integrated into financial management, new opportunities are opening up for increased efficiency, accuracy and creativity in the sector. Increasingly, artificial intelligence is used by organizations to detect mistakes and establish optimal investment strategies, as well as to automate transactions, mainly based on market dynamics. To effectively manage these financial decisions, companies need to understand

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how AI works for effective risk monitoring and long-term management. The implementation of AI undoubtedly brings remarkable benefits, but the collaboration between human capital and software can lead to the development of reliable artificial intelligence.

Keywords
Artificial Intelligence (AI), financial management, decision-making, risk management, data security, predictive analysis, financial ecosystem.

JEL Classification
O16, O32

Introduction

In the era of rapid digital transformation, technology has become a central component in many areas of life, even in financial management. Even if digital technology is reshaping global business by creating new paradigms, there still remains a knowledge gap that needs addressing.

The rapid advancement of digital technologies such as digital payment systems, big data analytics, and artificial intelligence (AI) has significantly transformed the business environment. Companies and financial institutions face growing pressure to swiftly adapt to these innovations while also capitalizing on emerging opportunities. In this evolving landscape, achieving operational efficiency, improving customer insights, and driving innovation have become essential. Beyond transactional changes, digital technology profoundly influences strategic decision-making within companies, pushing them to adapt their business models to keep pace with technological advancements. Businesses, particularly those in complex and fast-paced environments, are increasingly integrating digital solutions into their financial systems embracing digital payments, using big data for financial forecasting, and deploying AI for decision-making (Harkut & Kasat 2019).

Although digital technology is becoming increasingly integrated into the financial ecosystem, this research highlights the continued necessity for companies to thoroughly comprehend and adapt to the evolving landscape of digital transformation (Akour et al., 2023). Such an understanding will better equip them to tackle future challenges and capitalize on emerging opportunities within the financial sector.

Alongside its benefits, the integration of AI into financial management presents several challenges. Ethical concerns surrounding automated decision-making, data security risks, and the complexity of algorithms have become essential topics in discussions about the use of artificial intelligence in the financial sector.

Given these profound changes, comprehensive and systematic research is becoming increasingly crucial. A literature review exploring the impact of AI on financial management not only offers a detailed overview but also highlights critical areas that need further exploration. This research is vital for understanding the complexities and potential of artificial intelligence in shaping a future for financial management that is both efficient and adaptable to the dynamic shifts in the market.

1. Review of the scientific literature

Artificial intelligence has brought significant changes to the financial industry, being applied across various sectors to optimize processes and reduce costs. In the financial sector, AI is used to save time, enhance customer support, and increase performance and revenue. International financial organizations are relying on AI to exploit technological advancement, thereby providing superior operational support and better financial results. Studies on artificial intelligence in financial management have noted significant developments in its implementation. Significant progress has been highlighted, enabling the development of financial applications that have had a substantial impact on the industry. (Ren, 2021). However, before adopting certain artificial intelligence decisions, risks must be identified and managed to ensure sustainable improvement. Artificial intelligence enhances human capabilities by providing customers with access to higher quality services while also helping organizations detect potential anomalies and develop more optimal investment strategies (Babel et al., 2019).

As artificial intelligence (AI) drives rapid and transformative changes, it is essential for financiers and market analysts to be aware of the associated consequences and impacts while also identifying emerging opportunities in the business sector.

The use of artificial intelligence in making financial management decisions, in the context of global digitization, represents a significant transformation phenomenon (Babel et al., 2019). The benefits of implementing artificial intelligence are well known, bringing added value in the financial field, but unfortunately it also comes with some problems that need to be understood in more detail. Operational efficiency, faster decision-making and better risk management are just some of the benefits of implementing artificial intelligence in financial management. Many of the existing studies focus on the technical aspects of the implementation and use of artificial intelligence in financial management, thus not exploiting the ethical and social consequences of the use and application of financial decisions with the help of artificial intelligence. A problematic aspect is the ethical uncertainty associated with automating the decision-making process. Complex AI algorithms can make decisions that can raise ethical, social, accountability and transparency issues due to the influence of people's financial lives. Taking into account the huge volume of financial information processed with the help of artificial intelligence can lead to problems of violation of rules regarding the safety and protection of both organizations and customers. In this problematic context, cybersecurity becomes vital.

Digital transformation is a very current phenomenon that has significantly reshaped today's business landscape, whether we refer to big data analysis or the use of artificial intelligence. From this perspective, companies and financial institutions must quickly adapt to these changes and capitalize on new opportunities that may arise. Along with this transition, the demands for increasing operational efficiency, gaining a deeper understanding of customer needs, and innovating in product development become essential. The results of this literature research are expected to provide a fresh perspective on how decision-making in company financial management is impacted, as well as the methods of implementing these changes.

The influence of artificial intelligence on financial management decision-making can be viewed from two perspectives. Firstly, the advantages of its implementation, which include improved efficiency, better data analysis, and enhanced financial management

decision-making. Secondly, we must also consider the disadvantages of using AI, as well as the ways to address and resolve these issues. This study examines the challenges and risks associated with the implementation of artificial intelligence in financial management. We can create effective mitigation strategies by identifying ethical risks, as well as data security issues and uncertainties. However, we must ensure that the use of these technologies is closely aligned with financial objectives and ethical values. Research on AI in the financial sector has shown significant advancements in creating professional tools that enhance service quality and support optimal investment strategies. Organizations are increasingly using AI to identify anomalies and integrate trading algorithms to adapt to market changes.

Research into the challenges of incorporating AI into the financial sector has shown that, although AI is a powerful tool extensively utilized by financial institutions, its implementation presents considerable obstacles. The swift increase in AI investments has heightened concerns about data security and transparency, resulting in unclear data management practices. A major concern is the large volume of sensitive data being collected, which could be vulnerable to misuse for fraudulent purposes (Harkut & Kasat 2019).

Another major challenge involves maintaining accurate and reliable data across operations, as ongoing access to fresh information is crucial for effective system interpretation. Many financial institutions face difficulties in integrating this data, which restricts their capability to deliver dependable services. This issue could be addressed by hiring qualified professionals and providing training to facilitate effective system integration.

Organizations transitioning from traditional systems face challenges in evaluating their AI investment returns. Focusing on short-term gains can reduce productivity, leading to an overreliance on systems for decision-making instead of using personal expertise. (Ren, 2021) Leaders must help employees understand system requirements to promote acceptance and collaboration, ultimately improving the quality and reliability of information interpretation.

Artificial intelligence (AI) plays a crucial role in transforming the financial sector, with various applications that enhance the efficiency and accuracy of processes. First, predictive analysis allows AI to examine large volumes of market data, predicting price movements of stocks and other assets by identifying complex patterns, thus generating more precise investment signals. (Al Ameri, 2021)

Machine learning algorithms also contribute to predicting companies' financial performance, based on historical data and external factors, thereby supporting strategic planning and long-term decision-making. Automating routine financial processes reduces human errors and increases efficiency, facilitating tasks such as invoice processing and preparing financial reports.

Regarding risk management, AI systems can analyze transaction patterns to detect the possible fraudulent activities, learning from suspicious behaviors and automatically issuing warnings.

Finally, AI analyzes customer data to understand their needs and behaviors, allowing companies to offer personalized products and services tailored to individual preferences. Thus, the applications of artificial intelligence demonstrate how it is becoming an

essential tool in optimizing processes and improving decision-making in financial management, generating added value through more sophisticated data analysis and more flexible solutions.

2. Research methodology

This research represents a literature review conducted through a systematic method aimed at analyzing the influence of artificial intelligence on financial management decisions. The first step in conducting a comprehensive study was identifying the key terms: "Artificial Intelligence (AI)", "Financial Management", "Decision-Making". Next, a detailed analysis of existing research related to the impact and influence of artificial intelligence on financial management was carried out. Considering the fact that a separate search for each key term would have expended the results of the search area too much, we considered it more objective to use all at once the same key terms within the databases used for research. Therefore, the phrase used for shaping the direction of our study was "artificial intelligence financial management decision organization". The search was conducted using Web of Science (WoS) platform and Google Scholar database. In what concerns the articles selection, the only filter we used was their source of publication, namely peer-reviewed journals. We set the ordering of the articles according to their relevance. Even if the period of publication was not a selection criterion, the articles resulting as relevant, taking into account the terms used in the search engine, do not have the publication year before 2018. Certainly, we chose only the articles up to the limit where the relevance was no longer maintained on the main objective of our study which was to analyse the influence of artificial intelligence on financial management decisions of the organizations. The following stage involved synthesizing articles'content and extracting relevant results and findings for the drafting of the present study. The purpose of this literature review is to provide continuous monitoring of trends and research conducted, offering an updated view of the influence of AI in the financial sector.

Table no. 1. The analyzed articles collected from the Web of Science (WoS) platform that influenced the course of the research

No.	Author(s)	Article Title	Source of Publication/
			Journal Impact Factor
			Quartile Category
			Publication Year
1	Yang, N.	Financial Big Data Management and Control and Artificial Intelligence Analysis Method Based on Data Mining Technology	Wireless Communications and Mobile Computing
			2.146
			Q3
			2022

Objectives/ Purpose of the Research: The paper aims to examine the company's intelligent financial reengineering process and offer guidance to other businesses looking to upgrade comparable financial systems. **Results and Findings:** Through a new method of financial risk analysis based on bilateral alliance rules, the paper offers the group decision-making body risk control early warning and decision-making suggestions. It also assesses the financial impact of the group's decision-making and paves the way for financial intelligence.			
2	Ashta, A., Herrmann, H.	Artificial Intelligence and Fintech: An Overview of Opportunities and Risks for Banking, Investments, and Microfinance	Strategic Change 3.6 Q1 2021
Objectives/ Purpose of the Research: The main focus of the research focuses is on brief case studies of practitioners using AI in financial businesses. **Results and Findings:** AI is being used by financial institutions either internally, externally, or through ecosystems. The rise of AI-powered fintech companies has prompted a number of mergers and acquisitions between wealth managers and financial service providers as they struggle with ambiguity, complexity, volatility, and uncertainty. In the financial industry, artificial intelligence is opening up a world of opportunities, but financial organizations must be mindful of the risks involved.			
3	Jain, M., Gupta, S., Gupta, S., Pandey, M.K.	Content Intelligence Technology: A Business Transformation Tool in Emerging Economies	Journal of Information and Optimization Sciences 1.1 Q3 2022
Objectives/ Purpose of the Research: The purpose of the paper is to explore whether content intelligence is changing business procedures in emerging economies. Furthermore, its objective is to provide comprehensive understanding of the patterns and factors propelling the expansion of content intelligence methodologies in developing nations. **Results and Findings:** Organizations seek to extract pertinent information from a variety of content, whether it is structured or unstructured, and the combination of artificial intelligence, the internet of things, and machine learning technologies helps them accomplish this goal.			
4	Hu, K.H., Dong, C., Chen, F.H., Lin, S.J., Hung, M.C.	A Fusion Decision-Making Architecture for COVID-19 Crisis Analysis and Management	Electronics 2.6 Q2 2022
Objectives/ Purpose of the Research: The current study presents a fusion architecture that combines artificial intelligence with multi-criteria decision-making to identify the interconnected relationships between dimensions and criteria, exploit critical risk			

factors, and help managers prioritize improvement plans and allocate resources to critical areas efficiently. **Results and Findings:** Based on the impact measurement, the result showed the precise improvement priorities, which were in the following order: internal business processes, customer and stakeholder learning and growth, financial sustainability, and enablers. The approach presented here will assist an organization dealing with COVID-19 in effectively and efficiently supporting crisis management. The most effective criterion for crisis management out of all of them was keeping fixed reserves.			
5	Diab, B., El Hajj, M.	Ethics in the Age of Artificial Intelligence: Unveiling Challenges and Opportunities in Business Culture	Cogent Business & Management 3 Q2 2024
Objectives/ Purpose of the Research: The purpose of this paper is to investigate how organizational culture-primarily ethics-affects artificial intelligence. It specifically looks into how ethics play a role in the application of artificial models created for financial decision-making in businesses. However, the ultimate objective was to determine whether the same model would be dependable across cultures because it relies on objective metrics and criteria (like financial ratios) or whether certain elements (like organizational culture and ethics) might serve as obstacles to the best use of AI algorithms and models in organizations with a particular culture. **Results and Findings:** The empirical results showed that the main challenges to the eficient implementation of AI in organizations are a lack of moral organizational behavior, a high degree of corruption, and inadequate official governance.			
6	Sujith, A., Qureshi, N.I., Dornadula, V.H.R., Rath, A., Prakash, K.B., Singh, S.K.	A Comparative Analysis of Business Machine Learning in Making Effective Financial Decisions Using Structural Equation Model (SEM)	Journal of Food Quality 2.7 Q2 2022
Objectives/ Purpose of the Research: This research focuses on how machine learning (ML) is being used to help businesses make better financial decisions. ML has become a vital technology in today's cutthroat market, and it has given business executives more chances to take advantage of the vast amount of data available to them. **Results and Findings:** As a result, it can be concluded from the overall analysis that the main independent variables-risk management, area analysis to improve financial performance, and machine learning-based cash management-are very benefic for making prompt financial decisions. Companies are well-positioned to concentrate on areas where they can increase profits; risk management is a crucial quality, and the use of machine learning tools and techniques can predict results, allowing leaders to make the right financial decisions to maximize profits.			
7	Sharma, V.K., Kumar, H.	Enablers Driving Success of Artificial Intelligence in Business	IEEE Transactions on Engineering Management

		Performance: A TISM-MICMAC Approach	4.6
			Q1
			2024

Objectives/ Purpose of the Research: The purpose of this study is to look into the main factors that influence AI's ability to boost a company's values and financial performance. The new hierarchical model explains the emergence of AI by establishing the interrelationships among variables. "Total Interpretive Structural Modeling" and "Cross-Impact Matrix Multiplication Applied to Classification" were used in the study to create a hierarchical model that would analyze the relationships between the determined key variables.
Results and Findings: The findings provide valuable information for strategic decision-making and help companies invest in cutting-edge technology, like artificial intelligence (AI), to boost revenue and business performance both domestically and internationally. Analysis-derived insights will support business firms' expansion in a competitive environment. The suggested hierarchical model can be used by decision makers to automate processes and improve business performance. The ecosystem that influences business performance can be understood by using the discovered interactions between the important variables.

Source: Author's analysis

Table no. 2. The analyzed articles collected from the Google Scholar database that influenced the course of the research

No.	Author(s)	Article Title	Source of Publication/ Publication Year
1	Xiaojing, Y.	Research on Decision Analysis of Human Resources and Financial Management Based on Artificial Intelligence Technology	Revista Argentina de Clínica Psicológica 2021

Objectives/ Purpose of the Research: The study uses relational databases and data warehouses and data mining technologies to store massive amounts of business data, which improves the system's capacity to grow for large data management.
Results and Findings: Financial management concepts have been reformed, business rules have been innovated, and financial management models have been upgraded as a result of the shift in artificial intelligence development and application from quantitative to qualitative changes.

2	Naveen, K.H.	Artificial Intelligence and human collaboration in financial planning	Journal of Emerging Technologies and Innovative Research 2018

Objectives/ Purpose of the Research: This study listed a number of benefits that artificial intelligence (AI) can provide for financial planning, followed by its drawbacks and difficulties. Finally, when corporate decision-making processes are

complicated, uncertain, and unclear, this article explores how humans and AI might work together to offer a more strategic and realistic viewpoint. **Results and Findings:** Although AI has demonstrated several benefits in data analysis and insight delivery for investment plan development, it lacks the emotional intelligence needed to handle more complex investing requirements. The application of artificial intelligence in financial planning has also raised concerns about client security and privacy. Since artificial intelligence is still a relatively new development in a field where millions of dollars have been invested, some industry insiders are worried that the company could be hacked because cyber-security isn't as sophisticated as the technology.			
3	Shrestha, Y.R., Ben-Menahem, S. M., von Krogh, G.	Organizational Decision-Making Structures in the Age of Artificial Intelligence	California Management Review 2019
Objectives/ Purpose of the Research: The specificity of the decision search space, interpretability of the decision-making process and outcome, size of the alternative set, decision-making speed, and replicability are the five main contingency factors that this article uses to identify the peculiarities of human and AI-based decision-making. **Results and Findings:** The article presents a novel framework that compares human and AI-based decision making along these dimensions and explains how both approaches can be combined to maximize the quality of organizational decision making.			
4	Ren, S.	Optimization of Enterprise Financial Management and Decision-Making Systems Based on Big Data	Journal of Mathematics 2022
Objectives/ Purpose of the Research: This study examines four aspects of the mechanism of big data's influence on financial decision-making: how big data improves forecasting information bases, how big data makes decisions more relevant, how big data creates new competitive advantages, and how big data encourages dynamic decision-making. Second, we concentrate on the actual management issues and the impact of using big data platforms to solve them by analyzing particular implementation cases of enterprise big data in financial decision-making. **Results and Findings:** It is concluded that in the big data era, enterprise decision-making can be deeply aided by massive data, which can break down financial and business barriers, improve decision-making efficiency and quality, optimize personnel and organizational structure, and improve prediction and early warning capabilities. The utilization of big data tools has emerged as a crucial element in supporting financial decision-making and augmenting enterprise value.			
5	Mullangi, K., Yarlagadda, V.K., Dhameliya,	Integrating AI and Reciprocal Symmetry in Financial Management: A	International Journal of Reciprocal Symmetry and Theoretical Physics

	N., Rodriguez, M.	Pathway to Enhanced Decision-Making	2018
Objectives/ Purpose of the Research: This study looks at how artificial intelligence (AI) can analyze intricate financial data and identify trends in interconnected financial networks. Reciprocal symmetry and its implications for comprehensive and contextually aware financial decision-making are also examined in the study. **Results and Findings:** By providing comprehensive insights into market dynamics, enhancing risk assessment and mitigation strategies, and facilitating adaptive responses to market complexity, the study demonstrates how integrating AI into reciprocal symmetry enhances decision-making. Ethical and fair financial regulations as well as responsible AI deployment depend on addressing data quality, AI algorithm biases, and ethical concerns. This study demonstrates how reciprocal symmetry and AI could enhance financial innovation and decision-making.			
6	Melnychenko O.	Is Artificial Intelligence Ready to Assess an Enterprise's Financial Security?	Journal of Risk and Financial Management 2020
Objectives/ Purpose of the Research: This study examines current methods for evaluating financial security and focuses on one that is grounded in behavioral economics: managers' or other stakeholders' perceptions of financial security are shaped by their individual knowledge of data, information, and business in general, as well as the cognitive limitations that affect their ability to make decisions regarding investments, company growth, and other matters. **Results and Findings:** As a result, creating artificial intelligence to evaluate a company's financial security runs the risk of producing a skewed evaluation of the business's operations generally and its financial security specifically.			
7	Avelar, E.A., Dias Jordão, R.V.	The Role of Artificial Intelligence in the Decision-Making Process: A Study on the Financial Analysis and Movement Forecasting of the World's Largest Stock Exchanges	Management Decision 2024
Objectives/ Purpose of the Research: The purpose of this paper is to examine how well various artificial intelligence (AI) algorithms predict future changes in the major indices of the biggest stock exchanges in the world. **Results and Findings:** Performing better than the return expectations of the markets, all AI-based models supported organizational, strategic, and financial decisions. Better-performing models could be developed thanks to the number of days needed to compute the technical indicators. The random forest algorithm-based ones outperform other AI algorithms, irrespective of the performance metric used.			

Source: Author's analysis

3. Results and discussion

After a review of the specialized literature and an in-depth analysis, a series of factors and results have been identified that equally contribute to understanding the interaction between artificial intelligence and the financial practices of organizations.

1. Increased efficiency and productivity

Integrating AI into financial management plays a crucial role in enhancing the operational efficiency of organizations. AI systems can automate routine tasks, process data, and manage financial records, allowing human resources to focus on more complex strategic decision-making (Al-Blooshi & Nobanee, 2020; Al Ameri & Nobanee, 2021). Data mining, deep learning, image recognition, natural language processing, knowledge graphs, and intelligent decision-making are examples of AI technologies that can be integrated with IT to improve financial department efficiency, decrease manual accounting, and streamline financial processes (Yang, 2022). Following a systematic review of the specialized literature, the implementation of AI in the financial sector enhances productivity and efficiency by automating processes, reducing errors and human biases, thus ensuring more transparent and accurate decision-making. Buchanon (2019) demonstrated how AI made bookkeeping procedures faster and more accurate. Also, the use of AI not only optimize the workforce and organizational structure (Ren, 2022), but for automating financial transactions significantly reduced operational costs (Jain et al., 2022).

2. Decision-making

The comprehensive integration of digital technology in strategic decision-making is essential for modern business management. Artificial intelligence (AI) plays a crucial role by enabling companies to analyze big data with unprecedented accuracy and speed, enhancing their understanding of market trends and consumer behavior (Ahbabi et al., 2019). Complex issues are very unstructured, which affects the business greatly and necessitates a high level of cooperation between humans and machines (Yang, 2022). This thorough data analysis supports informed and reliable strategic decisions. Hu et al. (2022) stated that in crises, enhancing internal decision-making speed can improve an organization's chances of surviving. AI helps increase the speed of reaction in terms of decision-making. When it comes to large amounts of information, but also user reactions, AI works according to algorithms that help adapt to consumer behaviour, which makes the efficiency, accuracy and speed of decision-making increase over time (Shrestha et al., 2019). In this context, involving humans in decision-making would likely result in a crippling delay and lower decision-making quality. However, the significance of human involvement and presence in the decision-making process is not diminished by AI (Diab & El Hajj, 2024). Additionally, AI aids in long-term planning by providing deeper insights and projections based on historical and current data, allowing companies to adapt to changing market conditions swiftly. By using AI, the management can forecast in order to make better decisions (Sujit et al., 2022). The performance of all AI-based models exceeded expectations, supporting, therefore, the organizational, strategic, and financial decisions (Avelar & Dias Jordão, 2024). Overall, leveraging digital technology and AI fosters innovation, growth, and sustainability, giving businesses a competitive edge in today’s dynamic environment (Sharma & Kumar, 2024).

3. Risk management

The implementation of artificial intelligence (AI) in risk management helps companies identify potential risks early and develop effective mitigation strategies by detecting anomalies in financial transactions. With the integration of digital technology in financial management, organizations need to assess the uncertainties and associated risks generated

by rapid changes in the business environment (Xiaojing, 2021). These risks may include data security issues or system failures, requiring proactive management. By addressing these challenges, companies can improve their adaptability and operational efficiency while ensuring sustainability and long-term success.

On the other hand, organizations must understand the risks associated with using AI. Risk is caused by non-representative data, bias in representative data, algorithm selection, and human judgments based on AI interpretations (Ashta & Herrmann, 2021). The issue here is who takes the responsibility for a mistake in nonrepresentative data. To be meaningful, data must be accurate. Because AI learns from past data and reacts accordingly, there are situations when this prevents the change that people are looking for, situation in which, for example, the increase in unethical bias becomes greater. Although expert assessment is considering as being the most objective approach, it has drawbacks related to individual cognitive limitations (Melnychenko, 2020), limitations that can be reduced with the help of AI. Also, implementing new regulations and auditing protocols for AI algorithms are a must in order to integrate algorithmic decision making into organizations (Shrestha et al., 2019).

4. Data security and ethical issues

Data security has emerged as a crucial focus in the literature surrounding the integration of digital technology in financial management, as information is considered a highly valuable asset. Addressing cybersecurity challenges should be a top priority to uphold the integrity and trust of stakeholders. Digital transformation extends beyond merely adopting new technologies; it necessitates a reconfiguration of the business model to foster an open, data-driven organizational culture. (Al Ameri, 2021)

Furthermore, the growing reliance on technology calls for employees to acquire new skills in managing digital tools and data analysis. The literature highlights that the primary challenges in transitioning to technology-driven financial management include ensuring data protection, adapting business models, and investing in ongoing employee training (Vesna, 2021). However, many security analysts have been replaced by AI algorithms (Ashta & Herrmann, 2021).

Data security significantly impacts economic oversight, with cybersecurity threats and privacy concerns being key considerations. Security breaches can result in substantial financial losses and tarnish a company's reputation, underscoring the need for advanced data protection systems. Another risk is that the abundance of false financial information on the internet could affect the technology's ability to make sound financial decisions regarding investments (Naveen, 2018). Thus, data protection should be regarded not just as a technical requirement but as a strategic imperative in the implementation of digital technology, enhancing the sustainability and competitiveness of organizations in leveraging technology for financial decision-making.

According to Diab & El Haji (2024) research, the implementation of AI is hampered by a number of issues, including unethical management practices, widespread corruption, and inadequate government governance. Moreover, a company culture that reaches a high level of ethical IT compliance is likely to result in a high level of IT governance (Smeureanu & Diab, 2020) and the subsequent use of AI.

5. Regulation and Compliance

Regulatory and compliance factors are essential for integrating digital technology in financial management. AI-powered solutions are able to identify potential regulatory violations, and ensure that the rules are being followed (Mullangi et al., 2018). Companies must follow established regulations, which encompass legal requirements, ethical responsibilities, and data security measures, to ensure operational sustainability and protect their reputation. For ethical and equitable financial regulations as well as responsible AI deployment, it is imperative to address data quality, AI algorithm biases, and ethical issues (Mullangi et al., 2018). Understanding these regulations helps organizations evaluate risks and create a secure, transparent environment (Budiasih, 2024). Thus, effective regulatory and compliance management not only fulfill legal obligations but also provides a proactive strategy for navigating the challenges of digital integration in finance.

This literature review reveals that the influence of artificial intelligence on financial management extends beyond mere efficiency gains; it also brings about a significant shift in how organizations handle risk management, decision-making processes, and client interactions. Although the advantages are substantial, it is crucial to acknowledge the potential challenges and risks associated with adopting this technology. In summary, this research offers important insights for crafting regulatory strategies and best practices for effectively integrating artificial intelligence within the evolving landscape of financial management.

Conclusions

The analysis of literature and discussions about the application of artificial intelligence (AI) in financial management highlight numerous ways in which AI has influenced in a positive sense, bringing advantages to financial management in general, and to the decision-making process of financial management within organizations in particular. Financial management plays a crucial role in promoting sustainable procedures, facilitating the measurement and evaluation of progress. Implementing AI in major financial practices allows organizations to benefit from increased operational efficiency, advanced predictive analysis, and improved risk management.

Financial decision-making process is now much more accurate and efficient thanks to AI. Decisions can be made more quickly and intelligently thanks to AI systems' capacity to process massive volumes of data in real time. Financial professionals can use AI technology to make well-informed decisions because AI systems are excellent at analyzing complex data patterns and identifying systemic connections. Additionally, more accurate forecasting has been made possible by AI-driven tools. Although, there are advantages, the use of AI in financial decision-making has its limitations, not to call them disadvantages. Considering the multitude of advantages of using AI in decision-making, surely these shortcomings of the technology will be overcome with the help of innovation. There is already a substantial amount of data showing that AI-based financial decisions intensify human biases in algorithmic predictions. Vulnerable groups in our society suffer the most from bias and unfairness ingrained in AI decisions. When it comes to lending and credit scoring decision-making, this is especially crucial. To address these serious issues, more attention must be paid to creating algorithms that can reveal biases in data and human judgment, and a more precise regulatory frameworks must be established.

Additionally, the AI community, legal professionals, policymakers, corporations, and scientists must work together to create new policies that ensure AI is applied in organizations in a fair, accountable, and transparent manner.

High implementation costs, data privacy issues, and the requirement for specialized skills are some of the obstacles to the widespread use of AI in financial management. The financial burden of implementing AI is particularly difficult for small and medium-sized financial organizations.

The use of AI is expanding rapidly, with both significant advantages and even unexpected challenges. Executives are compelled to improve their knowledge of technology and set a clear, accountable course for successfully integrating AI into their business plans and overarching strategic objectives. A deeper integration of AI with other cutting-edge technologies like blockchain and quantum computing is essential for the future of financial management. AI systems will play an even more crucial role in fostering innovation and enhancing decision-making as they develop.

The systematic literature review highlights the significant impact of digital technology on financial management, bringing efficiency to daily processes and facilitating rapid adaptation to market changes. These studies can contribute to a better understanding of the role of AI in finance and can stimulate innovation and continuous improvement of financial practices.

Overall, this research on the influence of artificial intelligence on financial management decisions is more than a study and aims to provide insights into the adaptation of AI in the context of this digital era in the financial sector. This systematic review of the specialized literature which was carried out by analyzing and synthesizing already existing information will make a relevant contribution to the development of policies and strategies that reflect the increasingly pronounced role and necessity of artificial intelligence in financial management.

In conclusion, the integration of AI into financial management not only transforms financial practices, but also opens up opportunities for closer and more positive relationships between organizations and clients, marking an important step towards a modern era in the financial sector.

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