

Business Transformation: Economics, Administration, and AI in Accounting and Decision-Making

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Abstract

The integration of artificial intelligence (AI) into business processes has significantly transformed economics and administration, especially in key areas such as accounting transparency and strategic decision-making. This article analyzes how the convergence of these disciplines impacts modern business management. Through a qualitative methodology based on documentary review and recent case studies, the benefits, challenges and opportunities offered by AI are examined. The results highlight the importance of interdisciplinary collaboration to optimize accounting accuracy and foster informed decision-making. It is concluded that the implementation of AI can increase organizational efficiency, but requires clear ethical and regulatory frameworks to ensure its effectiveness.

Keywords: artificial intelligence, accounting transparency, decision-making, economy, administration, business transformation.

Introduction

In the context of a globalized and digital economy, companies face constant pressure to adapt to technological changes and ensure efficient processes that promote economic sustainability and competitiveness. Business transformation not only involves the adoption of new technologies, but also a change in organizational dynamics that impact key areas such as accounting, administration, and corporate strategy. Artificial intelligence (AI) is positioned as a key tool to address these challenges by enabling process automation, the management of large volumes of data, and the optimization of decision-making (Martínez & López, 2023).

In the accounting field, financial transparency has become relevant as a fundamental element for trust between stakeholders, investors and regulators. According to García (2020), accounting digitization, powered by AI, can guarantee accuracy in records and minimize human errors. This is particularly relevant in an environment where financial integrity and accountability are essential requirements to attract investment and comply with international regulations (Rodríguez et al., 2021). For its part, management has evolved towards a data-driven approach, where strategic decisions are supported by advanced algorithms that analyze large volumes of information in real time (Johnson et al., 2023). This approach not only improves operational efficiency, but also makes it possible to foresee market trends, manage risks, and formulate strategies aligned with organizational objectives (Pérez & Gómez, 2023).

However, the implementation of AI in businesses also poses significant challenges. These include resistance to change, a lack of technical skills in work teams, and ethical concerns related to the use of data and automated decision-making. Additionally, the absence of clear regulatory frameworks can limit their adoption or lead to their ineffective implementation, leaving companies vulnerable to financial and reputational risks (Smith & Johnson, 2022).

The present research aims to analyze how the intersection between economics, management, and AI impacts two critical areas for modern companies: accounting transparency and strategic decision-making. This interdisciplinary approach allows us to understand how these technological tools can contribute to business transformation and what measures are necessary to maximize their benefits and mitigate their risks. According to García (2020), integrating AI into business processes is not only a technological issue, but also a strategic and organizational challenge that requires interdisciplinary collaboration.

Likewise, a hypothesis is proposed that highlights the ability of AI to optimize organizational management, as long as it is implemented under ethical principles and aligned with the specific needs of each organization. As Smith and Johnson (2022) point out, effective business transformation requires a balanced integration of technology and humanism to ensure sustainable and socially responsible outcomes.

This research seeks to contribute to the academic and practical debate on the role of AI in the modernization of companies, providing a comprehensive vision that combines theory and practice by reviewing recent studies and real cases of technological implementation.

Theoretical Framework

Contemporary business transformation is deeply influenced by the convergence between traditional disciplines, such as economics and management, and emerging technologies, such as artificial intelligence (AI). This theoretical framework explores the conceptual pillars that underpin this intersection, highlighting its impact on accounting transparency and strategic decision-making. The main dimensions of this transformation are developed below.

1. Digital Economy and Business Innovation

The digital economy is characterized by the integration of advanced technologies into all aspects of economic activity. According to Smith and Johnson (2022), digitalization has changed the dynamics of global trade, allowing companies to access wider markets and optimize their operations. AI, as an integral part of this evolution, offers advanced capabilities to analyze economic data and generate accurate predictions, facilitating more informed strategic decisions (Martínez & López, 2023).

Table 1: Impacts of the Digital Economy on Companies

Aspect	Impact	Fountain
Cost reduction	Process optimization and automation	Smith & Johnson (2022)
Access to new markets	Increased global connectivity	Pérez & Gómez (2023)
Product Innovation	Using Data for Personalization	Rodríguez et al. (2021)
Decision-making	Real-time big data analysis	Johnson et al. (2023)

2. Accounting Transparency and Accountability

Accounting transparency is a prerequisite for ensuring confidence in the markets and business sustainability. AI contributes significantly to this area by automating audits, detecting fraud, and improving the accuracy of financial reports (García, 2020). In addition, machine learning algorithms make it possible to identify anomalies in real time, minimizing risks and strengthening corporate governance (Rodríguez et al., 2021).

Table 2: Benefits of AI in Accounting Transparency

Benefit	Description	Fountain
Error reduction	Automation of calculations and validations	García (2020)
Fraud detection	Early Identification of Anomalies	Rodríguez et al. (2021)
Greater accuracy	Minimization of human intervention	Pérez & Gómez (2023)
Audit efficiency	Faster and more detailed processes	Martínez & López (2023)

3. AI-Based Strategic Decision-Making

Modern management has evolved towards data-driven models, where AI plays a key role. According to Pérez and Gómez (2023), companies that integrate AI tools into their decision-making processes can anticipate market trends, manage risks more effectively, and optimize resources. A prominent example is the use of predictive algorithms to develop dynamic pricing strategies in real-time (Johnson et al., 2023).

Table 3: Applications of AI in Strategic Decision-Making

Area	Application	Fountain
Risk Management	Adverse scenario prediction	Johnson et al. (2023)
Marketing	Data-driven campaign personalization	Martínez & López (2023)
Financial strategy	Investment optimization	García (2020)
Logistics	Route and supply chain optimization	Smith & Johnson (2022)

4. Ethical and Regulatory Challenges

Implementing AI in business is not without its challenges. According to Rodríguez et al. (2021), ethical issues related to the use of sensitive data and automated decision-making are critical issues that need to be addressed. In addition, the lack of specific regulation on AI can lead to legal uncertainty and risks for organizations (Smith & Johnson, 2022).

Table 4: Main Ethical and Regulatory Challenges in the Use of AI

Challenge	Description	Fountain
Data Privacy	Unauthorized Use of Sensitive Information	Rodríguez et al. (2021)
Algorithmic biases	Decisions influenced by unrepresentative data	Martínez & López (2023)
Absence of regulation	Lack of clear legal frameworks	Pérez & Gómez (2023)
Resistance to change	Lack of preparation in organizations	García (2020)

Methodology

The present research was carried out using a qualitative approach that combines systematic literature review and case study analysis. This methodological design allows for an in-depth exploration of the concepts related to the intersection between economics, management, and artificial intelligence (AI), and their impact on accounting transparency and strategic decision-making. The key stages of the methodological process are described below.

1. Study Design

The study design was based on an exploratory-descriptive approach. According to Creswell and Creswell (2021), this type of design is ideal for understanding complex phenomena in dynamic contexts. The research was structured in two main phases: a documentary review and a case study analysis.

2. Bibliographic Review

A systematic literature review was conducted to identify the main theoretical and empirical contributions on the use of AI in accounting transparency and decision-making. The inclusion and exclusion criteria are detailed below:

Table 1: Inclusion and Exclusion Criteria

Criterion	Description
Years of publication	Articles published between 2019 and 2024
Language	Publications in English and Spanish
Thematic	AI in economics, management, and accounting
Sources	Journals indexed in Scopus, Web of Science and academic databases
Exclusion	Articles not peer-reviewed or without access to the full text

The review included a total of 42 articles selected from an initial universe of 150. This process made it possible to identify the main trends, challenges and applications of AI in the business environment.

3. Analysis of Case Studies

To complement the literature review, two case studies were selected that exemplify the implementation of AI in accounting transparency and strategic decision-making:

1. **Global technology company:** Implementation of AI systems for automated audits.
2. **Regional financial institution:** Use of predictive algorithms for strategic planning.

Case study data was collected through corporate reports, expert interviews, and analysis of related publications. This approach allowed for a practical understanding of the impact of AI in real-world contexts (Smith & Johnson, 2022).

4. Data Analysis Techniques

Data analysis was carried out using thematic coding and information triangulation techniques, which guaranteed the validity and reliability of the results (Martínez & López, 2023). The coding was performed using NVivo qualitative analysis software, which allowed the identification of key patterns and categories in the data.

Table 2: Stages of Data Analysis

Stage	Activity	Fountain
Thematic coding	Identifying recurring themes in the data	Creswell & Creswell (2021)
Information triangulation	Compare data from different sources	Johnson et al. (2023)
Validation	Peer review to confirm results	Rodríguez et al. (2021)

5. Limitations of the Study

The following limitations are recognized:

- **Geographic scope:** The research focused on companies located in the Americas and Europe, which could limit the generalizability of the results to other cultural and economic contexts.
- **Data access:** Some companies restricted the full disclosure of their AI strategies, which affected the depth of analysis.

6. Research Schedule

The research was carried out over a period of 12 months, following the stages described in the table below:

Table 3: Research Schedule

Stage	Activity	Duration
Literature review	Literature search and selection	3 months
Case Study Analysis	Data collection and analysis	5 months
Preparation of the report	Writing and validating results	4 months

The methodology used ensures a comprehensive understanding of the researched topic, combining theoretical and practical perspectives to offer a holistic view on the impact of AI on business transformation.

Results

The integration of artificial intelligence (AI) in companies, analyzed through literature review and case studies, shows a significant impact in two key areas: accounting transparency and strategic decision-making. The findings highlight operational benefits, improvements in accuracy, and new challenges related to ethics and regulation.

1. Accounting Transparency

The analysis showed that AI has transformed accounting processes by automating repetitive tasks, such as internal audits and financial reconciliations. This has led to a significant reduction in human error and increased efficiency. According to García (2020), the implementation of machine learning algorithms in automated audits increased the accuracy of financial reports by 35% in companies that adopted this technology.

Table 1: Impact of AI on Accounting Transparency

Indicator	Before AI	After AI	Increase (%)	Fountain
Reporting accuracy	80 %	95 %	35 %	García (2020)
Anomaly detection	60 %	85 %	41 %	Rodríguez et al. (2021)
Average audit time	4 weeks	2 weeks	-50 %	Johnson et al. (2023)

Likewise, AI systems have allowed managers and auditors to access reports in real time, which improves transparency and streamlines financial decision-making (Smith & Johnson, 2022).

2. Strategic Decision Making

In the realm of decision-making, AI has proven to be an invaluable resource. Companies that use AI-based tools have achieved a greater ability to predict market trends and adjust their strategies quickly. For example, the analysis of the case study in the regional financial institution showed that the use of predictive algorithms increased the accuracy of investment decisions by 28% compared to traditional methods (Pérez & Gómez, 2023).

Table 2: Strategic Benefits of AI

Application Area	Benefit	Percentage of Improvement	Fountain
Market Analysis	Identifying emerging trends	28 %	Pérez & Gómez (2023)
Risk Management	Reduced financial risks	22 %	Martínez & López (2023)
Strategic planning	Resource optimization	30 %	Johnson et al. (2023)

Companies have also been able to respond to abrupt market changes, such as economic fluctuations or global emergencies, thanks to the advanced analytical capabilities of AI (Martínez & López, 2023). These technologies make it possible to integrate large volumes of data, identifying patterns that would be impossible to detect manually.

3. Operational Benefits

A cross-sectional benefit identified in the case studies was operational optimization. Companies reported significant reductions in costs and processing times. For example, the global technology company managed to reduce its operating costs by 25% by integrating AI into inventory management and the supply chain (Smith & Johnson, 2022).

Table 3: Impact of AI on Operational Optimization

Indicator	Before AI	After AI	Reduction (%)	Fountain
Operating costs	\$1,000,000	\$750,000	-25 %	Smith & Johnson (2022)
Processing Time	10 days	6 days	-40 %	Pérez & Gómez (2023)
Inventory errors	15 %	5 %	-66 %	Rodríguez et al. (2021)

4. Identified Challenges

Despite the benefits, the results showed significant challenges. Among them, the most prominent are:

1. **Lack of Regulation:** The lack of a clear regulatory framework on the use of AI generates legal uncertainty and risks for companies (Rodríguez et al., 2021).
2. **Resistance to Change:** 40% of employees in the companies studied expressed concerns about job losses due to automation (Pérez & Gómez, 2023).
3. **Ethical Problems:** The possible appearance of biases in AI algorithms can generate unfair decisions, affecting business reputation (Martínez & López, 2023).

Conclusion of the Results

The findings of this research confirm that AI has a positive impact on business transformation, improving accounting transparency and facilitating more accurate strategic decisions. However, the success of its implementation depends on overcoming ethical and regulatory challenges, as well as the continuous training of the human teams involved.

Conclusions

Business transformation driven by artificial intelligence (AI) at the intersection of economics and management has demonstrated a profound impact on accounting transparency and strategic decision-making. The results obtained highlight a number of significant implications, which are summarized below.

1. Impact on Accounting Transparency

Automating accounting processes using AI has enabled unprecedented levels of accuracy and efficiency. According to García (2020), the reduction of human error and real-time access to financial data have strengthened trust in corporate governance systems. This is crucial in a business environment where transparency is an essential requirement to attract investment and comply with international regulations.

However, these developments also require a rethinking of the technical skills needed in finance departments. Companies must prioritize the training of their personnel to ensure the optimal use of technological tools and avoid excessive dependencies on automated systems that, although efficient, are not without limitations (Rodríguez et al., 2021).

2. Improved Strategic Decision-Making

AI's ability to process large volumes of data and generate predictive insights has proven to be an invaluable resource for strategic planning. Companies that integrate AI tools into their decision-making processes have been able to respond more quickly to market fluctuations and anticipate emerging trends (Martínez & López, 2023). This data-driven approach strengthens business resilience and positions organizations at a competitive advantage.

However, the implementation of AI in strategic decision-making poses ethical challenges, particularly in relation to fairness and transparency in algorithms. According to Pérez and Gómez (2023), the possibility of algorithmic bias remains a concern that must be addressed through regular audits of systems and inclusive design in the technologies used.

3. Cross-cutting operational benefits

The positive impact of AI is not limited to accounting and strategic areas, but also extends to operational efficiency. Companies have reported significant reductions in costs and times, as well as an improvement in operational accuracy. For example, case studies analyzed indicate that implementing AI in inventory management reduced errors by 66% and operational costs by 25% (Smith & Johnson, 2022).

These benefits, however, are not automatic. They require strategic planning that considers the existing technology infrastructure and the specific needs of each organization. In addition, the lack of technical

preparation in small and medium-sized enterprises remains a major barrier to the adoption of these technologies.

4. Ethical and Regulatory Challenges

A cross-cutting finding in the research is the urgent need for clear regulatory frameworks tailored to the use of AI in business environments. According to Rodríguez et al. (2021), the absence of specific regulation generates legal uncertainty and can compromise stakeholder confidence. Likewise, ethical concerns about data privacy and the potential replacement of human jobs by automated systems remain critical challenges.

Regulatory efforts must be accompanied by increased awareness of the responsible use of AI. This includes the creation of global ethical standards that balance technological innovation with the protection of human and labor rights (Pérez & Gómez, 2023).

5. Future Prospects

The use of AI in business transformation will continue to evolve, with significant opportunities to expand its impact into other organizational areas, such as marketing and logistics. According to Johnson et al. (2023), companies that take a proactive approach to AI will be better positioned to adapt to market changes and lead in their respective industries.

Future research should focus on exploring how to democratize access to these technologies, especially for small and medium-sized enterprises, and on measuring the long-term effects of AI on business performance. It is also essential to address the social and ethical implications of this technological transformation in a more comprehensive way.

Concluding Summary

In conclusion, AI represents a catalyst for business modernization, improving accounting transparency, optimizing strategic decision-making, and increasing operational efficiency. However, its effective implementation depends on a balance between technological innovation, human training and ethical regulation. The intersection between economics, administration and artificial intelligence not only redefines business management, but also sets new standards for sustainable development in an increasingly digitalised world.

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