Research on Application Strategies of Artificial Intelligence in Enterprise Economic Management

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Abstract: This study explores the application strategies of artificial intelligence in corporate economic management, analyzing its practical effects in areas such as financial management, marketing, and supply chain management. It was found that AI optimizes the management processes of enterprises through data analysis and automated decision-making, improving operational efficiency and decision-making quality. Especially in terms of financial risk control, customer demand forecasting, and supply chain optimization, AI plays an important role. However, issues such as data quality, technology adaptation, and privacy protection remain challenges for businesses. Enterprises should ensure the effective application of AI technologies by improving data governance, selecting appropriate technology architecture, and developing technical talent. In conclusion, AI is of great value in improving corporate management efficiency and market competitiveness.

Keywords: Artificial Intelligence, Corporate Economic Management, Financial Management, Marketing, Supply Chain Management

DOI：10.63887/jber.2025.1.2.9

Introduction

Artificial intelligence, as a technology that simulates human intelligence processes, has attracted global attention in recent years for its widespread use in various industries. Its development process began in the mid-20th century. With the improvement of computing power and breakthroughs in big data technology, artificial intelligence has developed rapidly and gradually matured. Especially in the field of corporate economic management, the application of artificial intelligence has demonstrated its great potential and has become an important tool for improving corporate competitiveness, optimizing operational efficiency, and promoting management innovation. Whether it's financial analysis, marketing, supply chain management, or the optimal management of human resources, AI can provide efficient and precise solutions that can transform a business's management model and help it achieve sustainable growth.

1 Literature review

1.1 Overview of AI Technology

AI is a technology that enables computer systems to simulate the behavior of human intelligence, including abilities such as perception, reasoning, learning, and self-correction. In recent years, with the improvement of computing power and continuous optimization of algorithms, artificial intelligence has developed rapidly [1]. The main technologies include machine learning, deep learning, natural language processing, etc. They are widely used in scenarios such as speech recognition, image analysis, and data modeling. In the field of corporate economic management, artificial intelligence improves the scientificity and efficiency of management by analyzing massive amounts of data to assist in decision optimization and business forecasting.

1.2 Key areas of business economic management

Corporate economic management covers many aspects such as finance, marketing, manpower and operations, and artificial intelligence can play a huge value in these links. Financial management uses AI for budget forecasting and risk control to reduce misjudgments and delays, and marketing improves marketing accuracy through customer behavior analysis and demand forecasting [2]. Human resources use AI to streamline recruitment processes, strengthen performance evaluation, and improve organizational efficiency. Operations management uses AI to optimize scheduling and inventory control to achieve higher production efficiency and response capabilities.

1.3 Current status of application of artificial intelligence in enterprise economic management

At present, artificial intelligence has been implemented in many fields, and it has shown good results especially in data processing, financial auditing, and market analysis. Large enterprises have improved the automation level of financial work by establishing intelligent systems to realize automatic generation of financial data and abnormality identification [3]. The marketing field uses user behavior data to implement precise recommendations, significantly improving customer conversion rates. Supply chain management combined with prediction algorithms to complete production plan adjustment and logistics deployment, effectively reducing operating costs. However, technical barriers and data security issues still restrict the deepening of applications for small and medium-sized enterprises.

1.4 Challenges and opportunities of artificial intelligence in business management

Challenges of AI applications include insufficient data quality, complex integration of technical systems, and increasingly stringent data privacy protection regulations. Especially when it comes to personal versus sensitive data, businesses need to process it in compliance and have well-established security mechanisms in place. In terms of opportunities, the continuous maturity of AI technology gives management processes automatic learning and optimization capabilities, promotes the transformation of enterprise operating methods from experience-driven to data-driven, and provides new paths in cost control, efficiency improvement, risk prediction, etc. [4].

2 Analysis of the application fields of artificial intelligence in enterprise economic management

2.1 AI applications in financial management

The application of artificial intelligence in financial management is increasingly important, especially in financial forecasting and budgeting. Traditional methods rely on historical data with lags and inaccuracies. After the introduction of artificial intelligence, companies analyze large amounts of financial data through machine learning algorithms and use forecast models to accurately predict revenue, expenses and cash flow, thereby improving budgeting accuracy [5]. AI dynamically adjusts budgets through real-time data analysis, helping companies adapt to changing economic environments. AI has also shown potential in risk control and auditing, automating the screening of unusual transactions and potential fraud, improving financial management transparency, and optimizing internal controls.

2.2 AI applications in marketing

Artificial intelligence has improved enterprises' market demand prediction and consumer behavior analysis capabilities in the marketing field. By analyzing market data, AI is able to identify market trends, predict consumer demand, and, in turn, adjust marketing strategies. Based on machine learning algorithms, AI extracts information from multiple data sources such as customer purchasing behavior and social media to

generate accurate market demand forecasts. In terms of personalized marketing, AI uses customer data analysis to accurately group and develop personalized strategies to improve customer satisfaction and loyalty. The AI recommendation system recommends products based on customer history to improve conversion rates and customer satisfaction.

2.3 Artificial intelligence applications in human resource management

In terms of recruitment and employee screening, AI uses automated resume screening to quickly and accurately select the most suitable candidates based on factors such as job requirements, educational background, and work experience. Through big data analysis, AI can also identify potential talents and conduct in-depth matching to improve recruitment efficiency. In terms of performance evaluation and employee management, AI helps companies analyze data on employees' work performance, teamwork, etc., provide objective performance evaluation, and discover employees' strengths and weaknesses through the data, thereby formulating personalized growth suggestions and optimizing human resource management.

2.4 AI applications in supply chain and operations management

In supply chain management, AI optimizes inventory management versus production scheduling. Through real-time analysis of data such as market demand, production capacity, and supplier delivery times, AI can predict demand fluctuations, automatically adjust production and inventory strategies, reduce inventory backlogs, reduce warehousing costs, and improve supply chain efficiency. The application of artificial intelligence in intelligent production and operation scheduling has also achieved remarkable results. By monitoring data in the production process in real time, it optimizes resource allocation, improves production efficiency, and reduces waste. AI technology can also optimize transportation, warehousing and distribution links, reduce logistics costs, and improve operational efficiency and market competitiveness.

The application of artificial intelligence in these fields has helped enterprises to make precise decisions, improved operational efficiency, and ultimately maximized the optimization of resource allocation and management goals.

3 Implementation strategies for AI applications

3.1 Strategic framework for the introduction of AI in enterprises

When companies implement AI technologies, they first need to develop a clear strategic framework. This framework involves not only technology selection, but also matching the long-term goals of the enterprise. Enterprises should comprehensively assess and select suitable AI technologies based on business models, technology needs, and industry characteristics. Data-intensive businesses can focus more on big data and machine learning technologies, while those that need to process unstructured data may rely on technologies such as natural language processing. To ensure successful implementation, businesses should advance AI applications in stages and ensure that each stage has clear goals and evaluable results, thereby reducing uncertainty, optimizing scenarios, and ensuring that final results are as expected.

3.2 Data governance and technology architecture

Data governance is fundamental for the successful application of AI. Enterprises should ensure data quality and accuracy, and implement data collection, cleaning and integration efforts. Through data cleaning, businesses ensure that data entered into AI systems is reliable. In terms of technology architecture selection, enterprises need to choose an architecture that is flexible and scalable, ensuring that AI systems can smoothly interface with

existing business systems and support long-term development. Build an AI platform that suits your needs and can ensure the stable operation of the system and efficient data processing.

3.3 Convergence of AI with existing processes in enterprises

The successful application of AI cannot be separated from deep integration with existing processes in enterprises. AI can break down data silos and improve the automation and intelligence of processes. Through the analysis of vast amounts of historical data, AI can identify and optimize bottlenecks and inefficient links in business processes. For example, AI can monitor data in real time in supply chain management, automatically adjust production and logistics plans, and optimize resource allocation, thereby dramatically improving operational efficiency and reducing costs.

3.4 Talent development and organizational change

The introduction of AI is not only a change at the technical level, but also involves the adjustment of corporate culture and organizational structure. Businesses need to recruit technical talent capable of data analysis and machine learning, and regularly train existing employees to upgrade their skills and help them adapt to changes brought about by new technologies. The implementation of AI means the redistricting of work processes and job functions. Enterprises should motivate employees to actively participate in digital transformation through training and cultural construction, ensuring organizational adaptability and continuous development.

4 Case analysis: the application practice of artificial intelligence in the economic management of enterprises

4.1 Corporate background and application scenarios

In this study, a medium-sized manufacturing company was selected as a case study, which mainly produces high-precision electronic components and faces problems such as complex production scheduling, inaccurate inventory management, and inaccurate market demand forecasting. Traditional methods of human decision-making and management cannot adapt to market changes, and companies have decided to introduce artificial intelligence technology with the goal of improving management efficiency, optimizing resource allocation, and reducing costs through data-driven use. This case represents a real-world problem for many medium-sized companies and provides valuable experience for others.

4.2 AI application cases in financial management

The business introduced artificial intelligence in financial management for risk control and financial automation. Using machine-learning algorithms to analyze historical data, a real-time monitoring system based on a risk prediction model has been established, which can automatically identify financial risks and provide timely warnings. AI also enables automatic generation of financial statements, reducing human intervention and improving work efficiency. Despite the significant implementation, data-washing algorithms need to be optimized for greater accuracy. Table 1 shows the changes in the processing time and accuracy of financial statements.

Table 1 Comparison of financial statement processing time and accuracy

Time (hours)	Manual handling	AI processing
Monthly statement processing time	20	8
Error rate	5%	1%

As can be seen from Table 1, following the introduction of artificial intelligence, the financial statement processing time was significantly shortened and the accuracy was significantly improved.

4.3 AI application cases in marketing

In marketing, the business uses AI for market segmentation and prediction of customer behavior. AI analyzes customer data, accurately predicts consumer demand, and adjusts marketing strategies. Personalized recommendation system boosts customer experience and conversion rates.

Table 2 Change in sales after customer grouping

Client groups	Sales before introduction of AI (10,000 yuan)	Sales after introduction of AI (10,000 yuan)	Growth rate
High-value customers	500	800	60%
Medium-value customers	300	450	50%
Low-value customers	100	120	20%

Through precise clustering using artificial intelligence, the company's overall sales increased significantly, especially among high-value customer groups, which increased by more than 60%.

4.4 AI application cases in supply chain management

The business applies AI in supply chain management for inventory optimization and production scheduling. By analyzing data in real time, AI helps companies reduce inventory backlogs and out-of-stock phenomena, automatically adjust production and purchasing plans, and ensure optimal allocation of resources. AI also optimizes production scheduling and repair planning, reduces production downtime, and improves production efficiency and supply chain response speed.

4.5 Analysis of results and summary of experience

Through case analysis, we can see that the successful application of AI in financial management, marketing, and supply chain management has significantly improved corporate operational efficiency and market competitiveness. Despite challenges related to data quality assurance, talent shortage, and technological adaptability, businesses need to strengthen in areas such as data governance, technology optimization, and employee training to ensure that AI technologies continue to work. Through these practices, companies can learn from experience, improve implementation paths, and ensure the effective application of AI in economic management.

5 Challenges faced and strategies to respond

5.1 Challenges at the technology and data level

During the implementation of AI technologies, companies often face problems with data quality and technology adaptation. Data quality directly affects the effectiveness of AI applications, and many businesses have problems with incomplete, duplicated, or inaccurate data. To solve this problem, companies need to strengthen data collection, cleaning and standardization to ensure data accuracy and consistency. Data diversity is also a major challenge, and compatibility issues often arise when integrating data across departments. Enterprises should build a data management platform to integrate and optimize data.

The issue of technology adaptation cannot be ignored either, as many enterprises encounter incompatibilities with existing systems when selecting technologies. To overcome this challenge, businesses should choose a flexible and scalable technology architecture that ensures systems can continue to evolve and be compatible with existing enterprise information systems.

Table 3 Challenges and solutions to the implementation of AI technology in enterprises

Technological challenges	Specificproblemdescription	Resolution strategy

Data quality issues	Missing, duplicated, inaccurate data	Strengthen data collection, cleaning and standardizatio n to ensure consistency
Data diversity issues	Data formats are not uniform and difficult to integrate	Building a data integration platform to implement harmonised data processing standards
Technical adaptation issues	Poor compatibility of new technologies with existing systems	Choose a scalable and compatible technical architecture to ensure interconnecte d systems
Difficulty in training models	Insufficient training data or poor model performance	Enhance data collection, optimize model algorithms, and improve training effects

Through data governance and the selection of appropriate technical architecture, enterprises can effectively respond to technological challenges and ensure the smooth application of artificial intelligence.

5.2 Regulations & Ethical Issues

The application of AI raises privacy protection and data security issues. Enterprises are required to comply with relevant laws and regulations when collecting large amounts of customer data, ensure data encryption and desensitization processing, and protect personal privacy. Data security issues cannot be ignored; companies need to take measures such as encryption technology and firewalls to ensure data security. Compliance issues also need attention, and companies should ensure that the use of AI technologies complies with local laws and avoid legal risks due to illegal use of data.

5.3 Corporate culture and organizational adaptability

The introduction of AI is not only about technological change, but also about the adaptation of corporate culture and organizational structures. While traditional culture focuses on interpersonal communication and teamwork, AI emphasizes data - and technology-driven decision-making, and companies need to foster a culture of innovation that encourages employees to embrace new technologies. Organizational adaptability is also a big challenge, and companies should adapt their organizational structures to ensure effective collaboration between technology departments and other departments. Through training and cultural development, businesses can improve their employees' understanding of AI and ensure smooth integration of technology and management processes.

5.4 Strategies to improve the success rate of AI applications

Key factors for improving the success rate of AI applications include strategic planning, talent development, and technology assurance. In terms of strategic planning, companies need to clarify the goals of AI applications, develop implementation plans and evaluation criteria, and ensure consistency with corporate strategies. In terms of talent training, companies should increase the introduction of technical personnel and the skills improvement of existing employees, especially in

data analysis and artificial intelligence algorithms. In terms of technical support, companies should build efficient technology platforms and architectures to ensure stable system operation, and they should strengthen data governance and privacy protection measures to ensure compliance and security. Through these measures, companies can improve the success rate of AI applications, improve management efficiency, and market competitiveness.

6 Conclusion

This study focuses on the analysis of the application strategies of artificial intelligence in corporate economic management and finds that it has effectively improved the operational efficiency and decision-making quality of companies in the fields of financial management, marketing, and supply chain. In terms of financial management, artificial intelligence optimizes report processing and risk control processes, realizes customer grouping and demand forecasting in marketing, and improves the intelligence level of inventory scheduling and resource allocation in the supply chain. AI not only drives process optimization, but also facilitates the transformation of business management models. Although there are still challenges related to issues such as technology integration, data quality and privacy protection, by improving planning and strengthening technical architecture and talent training, artificial intelligence has the real potential and strategic value to promote the sustainable development of enterprises.

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