

The Impact Of Artificial Intelligence (AI) On The Labor Market In The Banking And Finance Sector

Tri Minh Phan

Faculty of Economics and Business, Hong Bang International University, Ho Chi Minh City,
Vietnam

Long Duy Nguyen

Faculty of Economics and Business, Hong Bang International University, Ho Chi Minh
City ,Vietnam

Abstract

The article interviewed and discussed financial and banking business groups that use artificial intelligence (AI) and explored the impact of AI on the labor market. It also provided recommendations for business managers using AI and for state regulatory agencies to limit the negative effects of AI systems on Vietnam's labor market.

Key Words: Labor market, finance, banking, AI.

Introduction

I. Research Overview

Artificial intelligence (AI) is changing the way industries operate around the world, and Vietnam has no exception. With rapid technological development, AI is creating groundbreaking opportunities while also posing significant challenges for the domestic labor market.

Artificial intelligence (AI) has changed the way the world interacts with and accesses information in today's digital world. In the financial and banking sector, AI plays an important role in generating, analyzing, and distributing content.

This article will dive into the applications of financial and banking systems combined with AI applications.

Artificial intelligence (AI) has become one of the key technologies driving the development of digital systems. AI not only plays an important role in enhancing user experience but also opens up many new opportunities for innovative applications in the financial and banking sectors. By using machine learning, natural language processing, and computer vision techniques, AI has helped enhance interactivity and personalization in financial and banking systems. Projects such as content recommendation systems, virtual assistants, and data analysis tools have demonstrated AI's capability to provide accurate, fast, and efficient information.

In addition, artificial intelligence also plays an important role in detecting and preventing inappropriate, fake, and harmful content on financial and banking platforms. By using algorithms and machine learning models, developers can build automated systems to control and manage credit and finance, ensuring a safe and high-quality system environment for users and promoting effective governance.

However, the application of artificial intelligence also poses certain challenges, including issues related to privacy, ethics, and information security. To ensure the sustainable and positive development of this field, careful consideration is needed in the application and management of artificial intelligence technology within the system.

In the future, the combination of artificial intelligence and digital systems in the banking and finance sector will continue to bring new opportunities and create profound changes in the way people interact with and access customer and financial information. This research analyzes 'The Impact of AI on the Labor Market in the Banking and Finance Industry' to identify AI's effects on the labor market and provide policy recommendations for government agencies.

II. Theoretical Basis And Research Methodology

Theoretical basis

Russell & Norvig [1] study the field of Artificial Intelligence (AI), including its history, methods, and applications in many different fields. The research paper focuses on problem solving through the use of AI techniques, including intelligent systems and multimedia.

Havaladar, Parag, & Gerard Medioni [2] researched algorithms, standards and practices in the field of multimedia systems. Research covers topics such as image processing, video processing, audio processing, encoding and decoding, data compression, communication protocols, and many other aspects related to multimedia.

Goodfellow, Ian, Yoshua Bengio, et al [3] provide AI theory and practical applications. The researchers are leading experts in the field and have created a comprehensive resource on how deep learning works, along with key AI methods and techniques.

Zeliski, Richard [4] is an important research text in the field of computer vision, providing an overview of algorithms and applications in image processing and computer vision. From basic concepts such as image processing and information filtering, to advanced topics such as feature analysis, object recognition, and deep learning, this book covers a wide range of issues and techniques in computer vision field.

Smith, Neil, Dave Chaffey [5] research information technology applications in the field of digital marketing, including online marketing planning, optimization and integration strategies. The study covers important aspects of online marketing such as strategy creation, online advertising, online customer relationship management, and results analysis. The study is an important read for those working in the field of digital marketing, including marketing professionals, managers, and those interested in developing online marketing skills.

Evans, Dave, Jake McKee [6] focus on the role of social media in marketing and how businesses can leverage social media to engage with customers and build relationships with them. It includes marketing strategies on popular social media platforms like Facebook, Twitter, LinkedIn, and more. This research provides an insight into how social media can be used to create business value and create customer engagement. It is an important read for marketers, entrepreneurs, and those interested in customer relationships in today's digital environment.

Charlene, Josh Bernoff [7] introduce the power of "digital platforms", the movement of attention, energy and power from media organizations to online communities. The authors analyze how businesses can leverage and engage with the platform to create business value and build customer relationships. This book provides an in-depth look at how to use it. social

technologies to create change and business success. It is an important read for managers, entrepreneurs and those interested in reaching and interacting with customers through social platforms.

Ryan, Calvin [8] provide an overview of digital marketing and marketing strategies to engage with the digital generation. The researcher explains how to use digital technologies such as the internet, mobile and social media to build customer relationships and create business value. This book is an important source of information for marketers, entrepreneurs, and those interested in digital marketing and how to leverage new technologies to enhance their marketing performance.

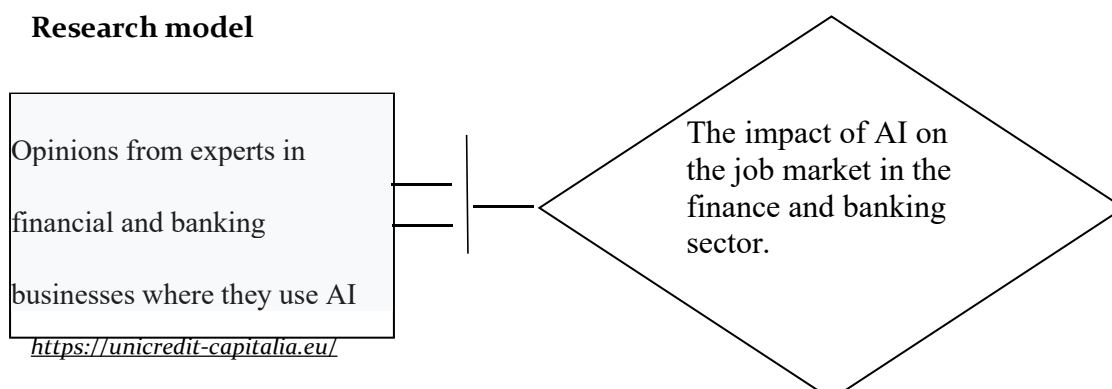
Nigel, Jenny's research [9] provides a comprehensive view of the technical and creative aspects of digital multimedia. The author covers basic and advanced concepts in the field of multimedia, including image processing, sound, video, and computer graphics. This book is an important reference for students, researchers, and professionals working in the field of digital multimedia. The study provides detailed and practical knowledge on how to work with different digital media and build multimedia applications.

The work of Goodfellow, Yoshua, et al [10] is an important resource on deep learning, including its theory and applications in the field of artificial intelligence. The author covers fundamental and advanced concepts in deep learning, including deep neural networks, reinforcement learning, and practical applications in natural language processing, computer vision, and more. other fields. This study is an important reference for students, researchers, and professionals working in the field of deep learning and artificial intelligence. It provides extensive knowledge of the field and provides a basis for the research and application of deep learning methods.

The study by Manning, Christopher, et al [11] is a fundamental and important document in the field of natural language processing (NLP), focusing on statistical and probabilistic methods in language processing. nature. The author explains basic and advanced concepts in NLP such as vocabulary processing, grammar, and semantics, as well as their applications in tasks such as machine translation, text classification, and many other fields. other area. This book is an important reference for students, researchers, and professionals working in the field of natural language processing. The authors provide a theoretical and practical basis for the research and development of effective natural language processing systems.

The study by X. Pan & C. Zinkhan [12] examined the impact of customer relationship management (CRM) in the banking and regeneration industry on customer loyalty, with the company's website playing a crucial role in the exchange of information between customers and the business.

Research model



Research method

This article uses a qualitative research method.

Qualitative research method: includes research based on a literature review and opinions from surveys of experts in the finance and banking industry.

Focus discussion: The main objective of the focus group discussion is to explore the impact of AI on the labor market in the finance and banking industry.

Implementation Process: First, the discussion participants are selected from a planned, convenient sampling approach. Participants must be cognitively and behaviorally normal. They must be willing to accept the invitation to participate in a comfortable and voluntary manner, and have the right to withdraw from the discussion at any time, as well as the right to ask questions, the right to request a break from the discussion, and the right to have their personal information kept confidential.

Discussion Participants: Experts from businesses in the finance and banking sector (10 experts) who utilize AI.

Results and discussions

70% of the expert group from businesses offered the following opinions:

- Artificial intelligence (AI) is profoundly changing the way industries operate worldwide, and Vietnam is no exception. With its rapid technological development, AI is creating both groundbreaking opportunities and significant challenges for the domestic labor market.

- AI Creates New Opportunities to Increase Productivity and Create Quality Jobs
- + AI Enhances Productivity and Efficiency:

Automation: AI automates repetitive and time-consuming tasks, especially in fields such as manufacturing, customer service (chatbots), and data entry. This frees up workers to focus on tasks requiring creativity, critical thinking, and complex human interaction. Therefore, jobs such as customer service in the banking and finance sector can use AI to replace a large number of workers.

-

AI provides the ability to analyze large amounts of data, helping Vietnamese businesses make more accurate and faster business decisions, thereby increasing their competitiveness in the international market. These projects and applications all demonstrate the power of digital systems in improving consumer experience and optimizing automated management processes. Therefore, middle management positions in the finance and banking sectors can be replaced by AI.

Other opinions from experts:

- Jobs such as credit business and financial business require the use of soft skills such as creativity, complex problem-solving, teamwork, and emotional intelligence. AI cannot yet replace humans because employees are the face of the business, introducing the company's products to corporate and individual customers, such as loan products, cross-selling different banking products, etc.

III. Conclusions And Recommendations

Conclusions

The integration of intelligent systems has shaped a bright future in customer engagement. However, the application of this technology also poses many challenges to information

management and ensuring transparency and reliability. At the same time, it opens up new opportunities for innovation and progress in this field.

Businesses can leverage these strengths of digital devices to build strong and lasting relationships with customers, from attracting and engaging them to retaining and growing them. By using technology intelligently and effectively, businesses can create a unique experience and capture customer attention in an increasingly competitive market.

Furthermore, the combination of artificial intelligence and digital systems offers great potential for creating, distributing, and accessing diverse and engaging content. However, the application of AI also poses challenges such as the risk of replacing manual labor like bank accountants, simple bank translation, and data entry, which can be performed quickly by AI. Banking services such as call center operators and cashiers could also be replaced by chatbots and self-service kiosks.

Recommendations

For financial and banking businesses:

In the context of Vietnam's increasing integration with the region and the world, foreign investors are investing more and more in Vietnam's information technology sector. Foreign investors tend to cooperate with Vietnamese information technology businesses. Vietnamese information technology businesses can collaborate, outsource, and partner with international information technology corporations to integrate Vietnamese applications in sales and integrate Vietnamese applications into international applications. Furthermore, this collaboration helps increase business value, anticipating the digitalization trend in line with government policy. Financial and banking businesses need to consider expanding their company scale and choosing appropriate investment options in software and hardware utilizing artificial intelligence (AI).

For government agencies:

Firstly, promote Reskilling & Upskilling: The government and businesses need to invest heavily in short-term and long-term training programs, focusing on digital skills, data science, and information technology for current workers.

Secondly, adjusting the education system: Reforming the curriculum from primary to university level, integrating Computational Thinking and AI/data knowledge to prepare the younger generation.

Thirdly, encouraging innovation: Creating a favorable environment (legal framework, investment capital) for domestic technology companies to develop "Make in Vietnam" AI solutions, boosting the demand for AI human resources.

Fourthly, flexible social security policies: Building a solid social safety net and policies to support career transitions for displaced workers.

Fifth, maximizing socio-economic development based on AI technology needs to be based on the specific circumstances of each country, including Vietnam. According to recent studies, the entrepreneurial spirit will have a positive impact on job development, increased labor productivity, opening up opportunities for innovation and growth in the current era of technological development. To foster this spirit, Vietnamese policymakers need to focus on developing simple, specific policies, using taxes and other incentives to promote the formation and development of small, medium, and micro-enterprises, creating opportunities for workers to start their own businesses.

Sixth, the issue of transforming and training human resources to serve socio-economic development in the era of AI and automation applications will require a synchronized solution between the state, businesses, and universities. As AI and automation develop and are widely applied in various aspects of life, economy, and society, they will create many new jobs but will also change, or even replace, a large number of old jobs, especially simple, repetitive manual labor. In Vietnam, the government is implementing policies to support and invest in human resource training within the education system to meet the emerging demands in the fields of information technology and artificial intelligence.

Seventh, social security issues need special attention for the workforce in industries heavily impacted by AI. Vietnamese policymakers need to prepare budgets to support retraining and promote lifelong learning for the workforce undergoing transformation, creating incentives for job creation in parallel with national plans, especially those requiring a large unskilled workforce. Training institutions must coordinate with businesses to develop training plans that are appropriate to the capabilities and requirements of the workforce, while also being cost-effective, thereby contributing to solving the workforce transformation problem for society as a whole.

Eighth, to ensure continued socio-economic development and prosperity for Vietnam, alongside leveraging the achievements of AI and automation technology, policymakers need to promptly consider solutions to social challenges in the rapid and powerful process of the Fourth Industrial Revolution.

References

1. Russell, Stuart, Peter Norvig, "Artificial Intelligence: A Modern Approach". 3rd ed., USA, Pearson, 2019,.
2. Havaladar, Parag, Gerard Medioni , "Multimedia Systems: Algorithms, Standards, and Industry Practices ". USA, Springer, 2021,.
3. Codfellow, Ian, Yoshua Bengio and Aaron Courville, "Deep Learning". USA, MIT Press, 2016,
4. Szeliski, Richard. "Computer Vision: Algorithms and Applications", USA. Springer, 2020,
5. Smith, N., and Chaffey, D, "Digital Marketing Excellence: Planning, Optimizing and Integrating Online Marketing", UK, Butterworth-Heinemann, 2015.
6. Evans, D., McKee, J. "Social Media Marketing: The Next Generation of Business Engagement", USA, Wiley, 2020,.
7. Li, C., Bernoff, J. "Groundswell: Winning in a World Transformed by Social Technologies". USA, Harvard Business Press. 2018
8. Ryan, D., Jones, C., "Understanding Digital Marketing: Marketing Strategies for Engaging the Digital Generation", UK, Kogan Page, 2019,
9. Chapman, Nigel, Jenny Chapman . "Digital Multimedia". USA, John Wiley & Sons, 2019,.
10. Goodfellow, Ian, Yoshua Bengio and Aaron Courville , "Deep Learning", USA MIT Press, 2016,
11. Manning, Christopher D and Hinrich Schütze, "Foundations of Statistical Natural Language Processing", USA MIT Press, 2019, .
12. X. Pan & C. Zinkhan, 2017 "The Impact of Customer Relationship Management on Customer Loyalty: The Moderating Role of Web Site Characteristics", *Journal of Marketing*, 76(6), 113-126