VIII. International Applied Social Sciences Congress 2024

FULL PAPER PROCEEDINGS BOOK

L-Università ta' Malta

SINDIRGI KENT KONSEYİ

Academia de Studii Economice din Moldova

SVEUČILIŠTE U RIJECI UNIVERSITY OF RIJEKA
FAKULTET ZA MENADŽMENT U TURIZMU I UGOSTITELJSTVU
FACULTY OF TOURISM AND HOSPITALITY MANAGEMENT
OPATIJA, HRVATSKA CROATIA

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VIII. INTERNATIONAL APPLIED SOCIAL SCIENCES CONGRESS (C-IASOS 2024) PROCEEDINGS BOOK

02nd-05th October 2024

"Applicable Knowledge for a Sustainable Future"

Editor in Chief

Dr.Ercan ÖZEN

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Dr. Simon GRIMA **Dr. Halit SHABANI**
Dr. Adalet HAZAR **Dr. Ibish MAZREKU**
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FOREWORD

Dear participants, scholars and researchers

It is with immense pride and great enthusiasm that I welcome you to the 8th International Applied Social Sciences Congress (C-IASOS 2024), hosted by Haxhi Zeka University in the beautiful city of Peja, Kosovo. This prestigious congress is a testament to the collective efforts of scholars and researchers from around the world, united in their pursuit of advancing knowledge and fostering collaboration across disciplines.

The theme of this year's congress, "Managing Risks towards a Sustainable Future," is both timely and significant. It challenges us to explore innovative solutions to the pressing issues of our time, emphasizing the critical role of applied social sciences in addressing global risks and ensuring a sustainable future for all. Haxhi Zeka University is honored to serve as a platform for such vital discourse, bringing together minds that shape the future of our societies.

As the Rector of Haxhi Zeka University, I am delighted that this congress embodies the spirit of interdisciplinary collaboration and international partnership. Our partners—the University of Malta-FEMA, the University of Rijeka-Faculty of Tourism and Hospitality Management, and the Academy of Economic Studies of Moldova—exemplify the strength of academic networks in overcoming boundaries and enriching the scope of scientific exploration.

I extend my heartfelt gratitude to all authors, participants, and organizers who have contributed to this event. The diversity of perspectives, with contributions from over 40 countries, reflects the truly global nature of this congress. It is my hope that the discussions and insights shared here will not only contribute to the academic community but will also inspire tangible solutions to real-world challenges.

Let this Book stand as a record of the ideas, efforts, and aspirations that make C-IASOS 2024 a cornerstone for the advancement of applied social sciences. I wish you all fruitful discussions, enriching collaborations, and an unforgettable experience in Peja.

With warm regards,

Prof. Dr. Armand Krasniqi

Rector, Haxhi Zeka University

SUMMARY FOR CIASOS CONGRESS 2024

CiasoS Congress 2024 was held in Peja- Kosovo, at the Haxhi Zeka University as hybrid form during 02-05 October 2024 by CiasoS Science Platform which inludes Malta University (Malta), Academy of Economic Studies of Moldova (ASEM) (Moldova), University of Rijeka - Faculty of Tourism and Hospitality Management (Croatia) and Haxhi Zeka University, Business Faculty (Kosovo), host University of CiasoS Congress 2024.

There are participants from 41 different countries at the congress as follows: Albania, Austria, Azerbaijan, Bosnia and Herzegovina, Bulgaria, China, Croatia, England, Georgia, Germany, Hungary, India, Indonesia, Iran, Italy, Kazakhstan, Kyrgyzstan, Kosovo, Latvia, Lithuania, Malaysia, Malta, Moldova, North Macedonia, Nigeria, Oman, Pakistan, Philippines, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, South Africa Republic, Spain, Switzerland, Türkiye, TRNC, Ukraine and USA.

37 of 158 papers were presented onsite form at the Haxhi Zeka University, Business Faculty while others were presented virtually. From 41 different countries about 250 authors contributed the CiasoS 2024. As we see detailed program of 2024 event, 28,48% of the all papers were presented by Turkish participants. 18,13% of the papers comes from India, 10,11% from Kosovo, 6,19% from Romania, 5,27% from Moldova, 3,70% from North Macedonia and other 28,02% of the papers were from other 35 countries.

The special topic of the CiasoS 2024 was “Managing Risks towards a Sustainable Future” thus there were two keynote speakers on the preliminary session on the line with the Congress topic. Session started by the welcome speech of Prof.Dr. Armand Krasniqi who is the rector of Haxhi Zeka University. Vice rector Prof.Ass.Dr Alma Shehu Lokaj and Prof.Dr. Halit Shabani who the dean of the Faculty of Business delivered speech on Haxhi Zeka University and Peja city.

First keynote speaker Prof.Dr.Ercan Özen talked on “*Sustainable Development in Turkish Insurance Sector*.” And, another keynote speaker Prof. Dr.Eleftherios Thalassinos presented his study titled “*Exploring the Relationship between Corporate Governance, Corporate Social Responsibility and Financial and Non-financial Reporting: A Study of Large Companies in Greece*”

The Congress committee held in 4 October 2024 Friday in Business Faculty for technical meeting. Finally the event ended by the social trip on Saturday, 05 October 2024.

CIASOS CONGRESS 2024 AWARDS

Award Name:VIII. C-iasoS Congress Science Award
Paper Title : On the influence of survival risk on forest valuation
Author/s : Dr. Thomas Burkhardt

Award Name:CiasoS Congress Thematic Award - Managing Risks towards a Sustainable Future
Paper Title : The Economic Challenges of Natural Disaster Risk Management: a Bibliometric Analysis
Author/s :Dr. LoredanaMirra & Dr. InnaRomānova

Award Name: Online Presentation Award- First Paper
Paper Title : ExploringtheDynamics of Export Quality, EconomicGrowth, andCarbonEmissionsin Türkiye: An Advanced CausalityandWaveletAnalysis
Author/s : Aslı Özen Atabey, Mustafa Karakuş& Sevilay Ece GümüşÖzuyar

Award Name: Online Presentation Award- Scond Best Paper
Paper Title : Evaluation of the use and importance of green logistics: implementation of eco-friendly solutions among green warehouses in Poland -a practical dimension
Author/s : Robert Stanisławski

Award Name: Online Presentation Award- Third Best Paper
Paper Title :Evaluating Risks and Sustainability in the Technological Transfer of Biofuel Optimization Software
Author/s : Ștefan-AlfredMariș, EvelynePop, Adriana Secoșan& SiminaMaris

CIASOS Congress 2024 Full Program

02.10.2024 Wednesday

Welcome meeting: Business Faculty

03.10.2024 Thursday

PRELIMINARY SESSION

09:00- 10:00: Registration: **Amphitheater 1** (**Faculty of Law**)

10:00-10:30: Welcome Note: **Prof..Dr. Armand Krasniqi** - Rector

Prof.Ass.Dr Alma Shehu Lokaj - Vice Rector for Teaching and Scientific Research

Prof.Dr. Halit Shabani - Dean of the Faculty of Business

10:30-12:00: Keynote Address **Prof..Dr. Ercan Özen**

Sustainable Development in Turkish Insurance Sector.

Prof Dr.Eleftherios Thalassinos

Exploring the Relationship between Corporate Governance, Corporate Social Responsibility and Financial and Non-financial Reporting: A Study of Large Companies in Greece

12:00-13:00: Lunch

13:00-17:30: Parallel Sessions- Face to Face- **Business Faculty** / Online – meet.google links

04 October 2024 Friday

09:00-12:45: Parallel Sessions- Face to Face- **Business Faculty** / Online – meet.google links

12:45-13:15: Technical Committee Meeting

13:15-14:00: Lunch

14:00-18:00: Local Trip (Guide: Prof.Asoc.Dr. Alberta Tahiri): City Museum, Istog-(School of Mehmet Akif Ersoi), Mountains of Rugova, the river of white wood.

20:00-23:00: Gala Dinner- **Hotel Dukagjini**

05 October 2024 Saturday

09:00-17:30: Full Day Trip, Starts in Peja, Stops in Prishtina.

PLENARIES

03 October 2024 Thursday 13:00 - 14:30

Hall A 5: Session Chair: Dr. Fisnik Morina- Kosovo

24-023- Loredana Mirra, Inna Romānova- Italy, Latvia
The Economic Challenges of Natural Disaster Risk Management: a Bibliometric Analysis
24-024-Thomas Burkhardt - Germany
On the influence of survival risk on forest valuation
24-075-Ibish Mazreku, Fitore Gashi, Simon Grima- Kosovo, Kosovo, Malta
The Influence of Risk Management on the Strategic Stability of the Insurance Industry in Kosovo: Navigating Market Fluctuations, Interest Rate Variability, and Economic Conditions
24-069 - Ali Erdogan, Ahmet Atakişi, Erdem Oncu, Onur Ustaoglu- Türkiye, Türkiye, Türkiye
Assessing TRNC Banks' Financial Strength and Risk Profiles: Insights from the Bankometer Method

Blue hall: Session Chair: Dr.Margarita Dunska- Latvia

24-008- Milian Neguoiu – Romania
The Correlation between Education and the Objective Dimensions of the Quality of Life
24-037-Melike Gül, Bilge Villi – Türkiye, Türkiye
Determining University Students' Awareness Levels Regarding Ecological Literacy: Balıkesir University Example
24-145 - Fethi Kayalar, Filiz Kayalar - Türkiye, Türkiye
The Importance of Individual Differences in Language Learning

24-050-Viktorija Piščalkienė, Lijana Navickienė, Evelina Lamsodienė- Lithuania, Lithuania Lithuania
Expectations of teaching among neurotypical students and students with Attention Deficit Hyperactivity Disorder (ADHD), and Autism Spectrum Disorders (ASS): a comparative analysis
24-161- Driton Sylqa, Ylber Januzaj- Kosovo, Kosovo
Enhancing Organizational Performance Through Quality Information Systems

Hall A6: Session Chair: Dr. Sertaç Güngör - Türkiye

24-004-Sertaç Güngör- Türkiye
Investigation of Physical Activity and Social Interaction Behaviours in Elderly Individuals in the Case of Bosna Hersek Neighbourhood Parks
24-005-Sertaç Güngör- Türkiye
Investigation of Social Interaction Behaviours of Young Individuals Who Come to Parks to Use Bicycle and Skateboard: The Case of Konya Ihlamur Park
24-007-İsmail Fatih Ceyhan, Özden Karapolat- Türkiye, Türkiye
How Did The Pandemic Affect The Major Airline Companies? Comparing Two MCDM Methods
24-062-Elif Habip , Zehra Binnur Avunduk, Türkiye

The Place of Innovation in Blue Entrepreneurship

03 October 2024 Thursday 14:45 - 16:15

Hall A 5: Session Chair: Dr.Ibish Mazreku - Kosovo

24-150- Fisnik Morina, Arizona Mulaj, Besfort Ahmeti –Kosovo, Kosovo, Kosovo
The Impact of Corporate Social Reportıng on the Company's Reputatıon in the Context of the Economy of Kosovo

24-059 -H. Gonca Diler, Münevvere Yıldız, Serap Vurur, Letife Özdemir- Türkiye, Türkiye, Türkiye, Türkiye
The Impact of Financial and Green Innovation on Green Economic Growth: An Empirical Study on OECD Countries

24-036-Valdrin Misiri, Liridona Nikqi, Leutrim Nikqi – Kosovo, Kosovo, Kosovo
The Impact of Inflation Expectations on Economic Behavior in Central European Countries: An Econometric Analysis (2012-2022)

24-122- Kadë Morina, Fisnik Morina- Kosovo, Kosovo
The impact of financial development on economic growth: Empirical analysis of European countries in transition

Blue hall: Session Chair: Dr. Thomas Burkhardt - Germany

24-127- Popa Marina, Plămădeală Olivia- Moldova, Austria
Risk Management of Talent' Migration and Diaspora Inclusion in the Republic of Moldova and Bosnia and Herzegovina

24-047- Zahir Arifovic, Hajrija Skrijelj – Kosovo, Kosovo
Legal regulations for the operation of national restaurants in the region and Kosovo

24-153- Arbër Krasniqi, Valdrin Misiri- North Macedonia, Kosovo
Military expenditure and its effect on economic growth in OECD countries: A panel data analysis

24-151- Arbër Çavdarbasha, Vjosa Hajdari- Kosovo, Kosovo
Digital Marketing: A Key Strategy for the Growth of Financial Institutions

Hall A 6: Session Chair: Dr. Macide Berna Çağlar, Türkiye

24-015 - Reyhan Can- Türkiye
The Effects of Loans Received from EBRD on the Financial Performance of Firms in Turkey

24-018-Reyhan Can, Saliha Tuncel Yada, Doğan Ali Koç – Türkiye, Türkiye, Türkiye
Research Trends in Decentralized Finance: Results of a Bibliometric Analysis

24-076- Gizem Esra Kızıl , Ufuk Selen- Türkiye, Türkiye
From Theory to Practice: The Role of Functional Public Expenditures in Realizing Capabilities in Türkiye

24-101- Kasım Kiracı, Mehmet Yaşar, Ahmet Zelka, Cemile Angay- Türkiye, Türkiye, Türkiye, Türkiye
Analysis of the Causality Relationship Between the Airline Index and the Dollar Index and Oil Prices

04 October 2024 Friday 09:30 - 11:00

Hall A 5: Session Chair: Dr.Inna Romanova- Latvia

24-116-- Margarita Dunska - Latvia
Foreign Trade Flows under Single Market Conditions
24-045 -Duresa Kilaj, Argjent Berisha, Fisnik Morina- Kosovo, Kosovo, Kosovo
Correlation Between Public Debt, Economic Growth and Private Consumption: An Econometric Analysis for Countries in Transition
24-108- Safete Hadergjonaj, Duresa Kilaj – Kosovo, Kosovo
The Economic Consequence of the Conflict in Ukraine for the Western Balkan Countries
24-146 -Arbër Krasniqi, Arta Krasniqi Markaj – North Macedonia, North Macedonia
Impact of Government Consumption on Economic Growth

Blue hall: Session Chair: Dr. Loredana Mirra- Italy

24-063- Zehra Binnur Avunduk, Elif Habip- Türkiye, Türkiye
The Mediating Role of Environmental Values in The Impact of Producer Reliability on a Sustainable Environment
24-126-Liridona Nikqi, Leutrim Nikqi , Fisnik Morina – Kosovo, Kosovo, Kosovo
The Impact of International Trade Agreements on Financial Flows and the Development of the Banking Sector
24-034-İbrahim Halil Efendioğlu- Türkiye
Artificial Intelligence and Consumer Behavior: The Future of Marketing
24-035-A.Selcuk Köylüoglu – Türkiye
Theoretical Research on the Effect of Dopamine and Serotonin Hormones on Marketing

Hall A 6: Session Chair: Dr. Reyhan Can- Türkiye

24-031-Macide Berna Çağlar- Türkiye
The Impact of Leadership on the Practices of Supply Chain Management in Logistics Service Providers
24-032- Burak Kırca, Hakan Dilek, Tuğrul Tekin Tunalılar – Türkiye, Türkiye, Türkiye
The Effect of Organizational Climate Created by Democratic Leadership on Social Loafing
24-106- Jiyan Kılıç, Esat Saçkes, Fulya Güngör- Türkiye, Türkiye, Türkiye
Relationship Between Globalization And Tourism In Selected Countries: Panel ARDL Model
24-124- Fulya Güngör, Esat Saçkes, Jiyan Kiliç- Türkiye, Türkiye, Türkiye
Digital Women Entrepreneurship and Tourism Examples from Turkey

ONLINE SESSIONS

03 October 2024 Thursday 13:00 - 14:00

WEBINAR 1 -Session Chair : Dr.Esra N. Kılcı – Türkiye
-Moderator : Dr. Suada A. Dzogovic- Kosovo

24-001 - Fitim Deari, Mara Madaleno, Nicoleta Barbuta-Misu, Florina Oana Virlanuta- North Macedonia, Portugal, Romania, Romania
The relationship between working capital management and profitability: Evidence from EU firms

24-003-Esra N. Kılcı - Türkiye
Analysis of the Relationship Between Real Sector Confidence Index, Electricity Consumption, Manufacturing Industry Capacity Utilization Rate and Industrial Production Index in Turkiye

24-030 -Kanika Thapliyal, Chandan Gupta, Jyoti Kumari, Praveen Singh- India, India, India, India
Impact of Green Financing and Green Banking Practices on Banks' Environmental Performance

24-049-Luan Vardari, Kushtrim Gashi –Kosovo, Kosovo
Technological Innovations in Risk Management for a Sustainable Future

WEBINAR 2 -Session Chair : Dr. Luminita Diaconu – Moldova
-Moderator : Dr. Dr.Vlora Berisha- Kosovo

24-002 -Luminita Diaconu - Moldova
Environmental Control and The Human Settlements Protection Regime

24-033 -Veaceslav Zaporojan - Moldova
Protecting human rights by managing economic and climate risks in the European Union

24-055- Nazim Muzaffarli (Imanov), Rasmiyya Abdullayeva- Azerbaijan, Azerbaijan
Assessment and management of risks in the labor market of Azerbaijan: Based on the results of a sociological survey

24-064-Sachin Chaudhary, Prasenjit Chatterjee – India, India
Psychological States of Indians During the Second Wave of Covid19

WEBINAR 3 -Session Chair :Dr. Bogdan Patrut– Romania
-Moderator :Dr. Elvis Elezaj- Kosovo

24-006 - Sanjay Taneja, Neha Saini- India, India
Exploratory Analysis of ICT, Knowledge Acquisition, Agripreneurial Innovation, and Sustainable Development

24-009-Mia Poledica – Croatia
Innovative approach: sustainability aspects in safety risks assessment in construction

24-010 - Bogdan Patrut, Monica Patrut, Simona-Elena Varlan – Romania, Romani, Romania
PRINFO: An Advanced Educational Platform for Effective Programming Instruction, with AI elements

24-020-Ștefan-Alfred Mariș, Evelyne Pop, Adriana Secoșan, Simina Maris- Romania, Romani, Romania, Romania

Evaluating Risks and Sustainability in the Technological Transfer of Biofuel Optimization Software

WEBINAR 4 -Session Chair : Dr. Suna Korkmaz – Türkiye
-Moderator : Msc.Besfort Ahmeti- Kosovo

24-013- Kenan İlarslan- Türkiye
Examining the Effects of Inflation and Interest Rates on Stock Market Index Using Threshold Regression Method

24-042 - Hatice Kübra Özyurt, İbrahim Halil Ekşi, Samet Günay – Türkiye, Türkiye, Hungary
Covid-19 Pandemic and its Financial Contagion Effects on Stock Exchange Indices of Developing Countries (E7 Countries)

24-048 - Suna Korkmaz, Oya Korkmaz- Türkiye, Türkiye
The Relationship between Debit and Credit Card Expenditure and Inflation in the Turkish Economy

24-100- Bade Ekim Kocaman – Türkiye
The Impact of Non-Performing Loans on Bank Cost Structure: An Analysis of OECD Banks

03 October 2024 Thursday 14:10 - 15:10

WEBINAR 1 -Session Chair :Dr.Paolo D'Anselmi– England
-Moderator :Dr. Suada A. Dzogovic- Kosovo

24-016- Paolo D'Anselmi- England
The Social Responsibility of Public Administration Cases, Models Nuances

24-025- Petya Petrova- Bulgaria
Sustainability Accounting: A Risk-based Approach

24-027-Liudmila Lapiţkaia – Moldova
Application of cloud technologies in accounting

24-028- Yeşim Şendur-Türkiye
The Impacts of Deepfake Technologies on Global Financial Markets

WEBINAR 2 -Session Chair :Dr.Tulin Ural– Türkiye
-Moderator :Dr.Vlora Berisha- Kosovo

24-017-Timotej Jagrič, Aljaž Skaza- Slovenia, Slovenia
Does Strong ESG Performance Create Company Value for Investors? Evidence from Publicly Traded Companies

24-019- Mia Poledica, Mladen Božić- Croatia, Serbia
Implementation of Sustainable Logistics Practices in Retail: Analysis of the Current State and Proposals for Improvement

24-043 -Larisa Savga, Ghenadie Savga-Moldova/Romania-Moldova
Strategic Areas of the Consumer Cooperatives Sustainable Development in the Republic of Moldova

24-046 -Elyesa Eyinç, Tulin Ural – Türkiye, Türkiye
The Impact of blockchain technology on brand loyalty in the context of sustainability in the fashion industry

WEBINAR 3 -Session Chair :Dr. Alberta Tahiri – Kosovo
-Moderator :Dr. Elvis Elezaj - Kosovo

24-021 -Simina Maris, Doina Darvasi, Titus Slavici – Romania, Romania, Romania
Artificial Intelligence for Risk Assessment and Sustainability Analysis in the Financial Sector

24-022- Mirela Goje, Mircea Cricovean, Ștefan-Alfred Mariș, Mircea Untaru – Romania, Romania, Romania, Romania
Risk Management and Sustainability in Marketing and Finance of Companies from the DKMT Euroregion

24-026-Marica Mazurek- Slovakia
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İbrahim Halil Efendioğlu [30]

Abstract

Introduction: In recent years, the significant increase in the use of artificial intelligence (AI) in marketing has also impacted consumer behavior. Consequently, marketing research that considers AI and consumer behavior together has steadily increased. However, the wide variety of research scopes makes it difficult to achieve consistent and universally applicable results in this field. This situation hinders a full understanding of the relationship between AI and consumer behavior and creates a significant research gap in the area.
Aim: The aim of this study is to examine the recent marketing literature on consumer behavior and AI, providing a general perspective on the focus areas of the publications and identifying gaps in the literature. Additionally, the study aims to create a detailed roadmap for future researchers and industry experts working in this field.
Method: The study employs the systematic literature review (SLR) approach, utilizing the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol. A comprehensive search strategy was applied in the Web of Science (WoS) database, and 24 publications focusing on "consumer behavior," "AI," and "marketing" between 2021 and 2024 were selected based on inclusion and exclusion criteria.
Findings: The study reveals the strong impacts of AI on marketing strategies and consumer behavior. The findings show that AI significantly enhances personalization, data analytics, and consumer interactions in marketing. However, more research is needed in areas such as ethical issues and how AI is perceived in different cultural contexts.
Conclusion: This study demonstrates that AI possesses a transformative power over marketing strategies and deeply influences consumer behavior. It is evident that challenges such as data privacy and ethical usage, in addition to the opportunities presented by AI, must be carefully addressed. Future research should focus on the ethical use of AI, its cultural adaptation, and its long-term effects.
Originality and value: This study offers original contributions to the literature by comprehensively examining the effects of AI on marketing strategies and consumer behavior. By deeply analyzing the innovative applications of AI in marketing and the ethical challenges encountered, the study identifies existing knowledge gaps in the field. This research serves as a valuable resource for academics and practitioners who seek to better understand the strategic use of AI in the marketing domain.
Key Words: Artificial Intelligence**,** Consumer Behavior, Marketing, Systematic Literature Review
Jel Codes: M30, M31

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1. INTRODUCTION

Currently, 90% of marketers use AI tools to automate customer interactions. It is estimated that by 2028, the global market revenue for AI in marketing will reach $107 billion (Carpena, 2024).

AI, as a branch of computer science, emerged in the mid-20th century and has made significant technological advancements over the years. The foundations of AI are built on the ability of machines to mimic human-like thinking, learning, and decision-making processes. Since the 2000s, developments in areas such as big data analytics and machine learning have enabled AI to evolve into more complex and effective systems (Evans, 2017). The commercial applications of AI have particularly increased in the fields of digital marketing and e-commerce.

AI is a field of science that refers to the capacity of computer systems to perform human-like cognitive functions. These cognitive functions include abilities such as learning, reasoning, problem-solving, perception, and natural language processing. AI aims to enable machines to make independent decisions, autonomously perform various tasks, and adapt to their environments by attempting to replicate human intelligence and behavior (Konar, 2018).

In recent years, the impact of AI on consumer behavior has been intensely researched. AI-powered personalized marketing strategies are used to optimize consumer experiences, increase customer satisfaction, and predict purchasing behaviors (Haleem et al., 2022). These technologies enable the personalization of products and services offered to consumers, leading to better fulfillment of consumer expectations.

The applications of AI in various areas such as online shopping, digital advertising, and customer service directly influence consumer decision-making processes (Sharma et al., 2023). For example, recommendation systems provide product suggestions based on consumers' previous behaviors, which increases consumer loyalty.

The impact of AI on consumer behavior holds great significance both academically and practically. While AI allows companies to make their marketing strategies more effective, it also helps consumers make more informed choices in their decision-making processes (Dwivedi et al., 2021). Optimizing consumers' experiences in the digital world provides a competitive advantage for companies.

However, the potential issues related to ethics and privacy in AI must also be carefully addressed. Topics such as the protection of consumer data, the transparency, and fairness of AI applications are among the important focus areas of research in this field.

In this Systematic Literature Review (SLR), we aimed to gain a deep understanding of the effects of AI on consumer behavior and digital marketing strategies. The study aims to examine how AI has created a transformation in marketing practices, the impact of this transformation on consumer trust and satisfaction, the emerging issues related to ethics and privacy, and the long-term outcomes on digital marketing performance. In this context, the following key questions were focused on:

RQ1: What is the impact of AI-supported marketing strategies on consumer behavior?

RQ2: How is the effectiveness of AI-supported consumer segmentation and personalization being shaped?

RQ3: What are the effects of AI-based services on consumer satisfaction and trust?

RQ4: Are there ethical issues and impacts on consumer privacy related to AI applications?

RQ5: Could AI and automation have long-term effects on digital marketing performance?

The article is organized as follows: Section 2 explains the selected key concepts, research areas, relevant terms, and the theoretical development of topics related to AI and consumer behavior. Section 3 applies the review methodology based on the PRISMA guidelines. Section 4 presents the reviews that address the research questions. In Section 5, the findings related to the review are discussed, and directions for future research are suggested.

2. LITERATURE REVIEW

2.1. Artificial Intelligence

AI is the ability of computer systems to exhibit human-like intelligence. These systems can perform tasks that are characteristic of human intelligence, such as learning, problem-solving, planning, understanding language, perception, and decision-making (Garg et al., 2021). AI technology, using algorithms and data analytics, can make predictions based on past data, recognize patterns, and make automated decisions (Sarker, 2022).

2.1.1. The Historical Development of AI

The historical development of AI is filled with various ups and downs, technological advancements, and milestones. The concept of AI emerged in the 1950s, with Alan Turing's famous "Turing Test" marking a significant milestone during this period The Turing Test was designed to determine whether a machine could think like a human. In 1956, AI research officially began when John McCarthy introduced the term "AI" at the Dartmouth Conference. This conference laid the foundation for many innovations and research in the AI field (Anderson, 2024).

In the 1960s, researchers focused on enhancing the logical reasoning and problem-solving capabilities of computers. For instance, the "General Problem Solver" (GPS) algorithm developed by Newell and Simon modeled specific problem-solving strategies. ELIZA, developed by Joseph Weizenbaum, was one of the first chatbots to interact with humans in natural language using simple patterns. ELIZA gained attention as a program that played the role of a psychotherapist (Khan et al., 2021).

In the early 1970s, interest and funding for AI research waned, leading to what is known as the "AI Winter." The slowdown in research was due to high expectations and the limited practical applications of AI. Towards the late 1970s, AI research regained momentum. Expert systems, which used specialized knowledge to make decisions in specific fields, were developed. For example, MYCIN was a system that provided medical diagnosis and treatment recommendations (Toosi et al.,2021).

In the 1980s, AI began to be used in commercial applications. Expert systems were applied in various fields such as finance, manufacturing, and healthcare. However, in the late 1980s, AI research entered another period of stagnation. The failures and costs associated with expert systems were among the reasons for this second "AI Winter" (Shao et al., 2022)

The 1990s saw significant progress in data mining and machine learning. The extraction of meaningful information from large datasets and the development of learning algorithms expanded the practical applications of AI. Deep Blue, developed by IBM, achieved a major milestone in 1997 by defeating world chess champion Garry Kasparov (Bory, 2019). This marked an important turning point in AI's capabilities in game strategies and decision-making.

From the mid-2000s onwards, significant advancements were made in deep learning. By using multi-layered neural networks (deep neural networks), significant successes were achieved in areas such as visual recognition, speech recognition, and language processing (Naskath et al., 2023).

In the 2010s, big data became an important factor in enhancing AI's power. Large datasets enabled AI algorithms to produce more accurate and effective results (Maisonobe, 2022).

In the 2020s, research on Artificial General Intelligence (AGI) gained momentum. AGI refers to AI with human-level general intelligence capabilities and remains largely a theoretical goal (Obaid, 2023).

The development of AI technologies has also raised ethical and social questions. Issues such as data privacy, algorithmic fairness, transparency, and the social impact of AI have started to receive more attention from researchers and policymakers.

The European Union's (EU) new Artificial Intelligence Act, a comprehensive regulation establishing harmonized rules for the development, marketing, and use of AI, came into effect on August 1, 2024. The Act is designed to be applicable not only within the EU but also globally. It covers all providers and users of AI systems offering services in or to the EU market. Specifically, AI systems' outputs produced or used within the EU will be subject to the Act. This means that even companies outside the EU will fall under the scope of the regulation if the outputs of their AI systems are used in the EU.

The Act classifies AI systems based on their risk levels (Laux et al., 2024):

Unacceptable Risk: Systems that manipulate human behavior or violate human rights are prohibited. For example, social credit scoring systems and real-time emotion recognition systems fall into this category.

High Risk: Systems used in critical infrastructure, education, employment, and healthcare fall into this category. These systems will be subject to strict regulations and supervision.

Limited Risk: These are less critical systems but are still subject to certain regulations.

Minimal Risk: No regulation is required for these systems.

2.1.2. The Functions of AI

AI collects and understands environmental data through perception, makes logical decisions from data using its learning and reasoning abilities, and solves complex problems, understands human language, and achieves strategic goals with its problem-solving, natural language processing, and planning capabilities. These functions are illustrated below (Chowdhary, 2020):

Perception: This is the ability of AI systems to collect, understand, and interpret environmental information. This capability includes processing sensory data such as images, sounds, and text. For example, computer vision techniques enable the analysis and interpretation of images.

Learning: Also known as machine learning, this ability refers to the process by which AI systems learn from experiences or data. Different learning methods include supervised learning, unsupervised learning, and reinforcement learning.

Reasoning: This is the ability to make logical inferences and decisions. AI systems can make data-driven decisions using specific rules and algorithms. For example, expert systems can generate recommendations and decisions by using knowledge and rules related to a specific domain.

Problem Solving: This is the ability to solve complex problems and achieve specific goals. AI systems can find the best solutions using optimization and search algorithms. For instance, AI-based chess programs evaluate moves in the game to determine the best strategy.

Natural Language Processing (NLP): This is the ability to understand, interpret, and generate human language. NLP includes applications such as language translation, speech recognition, text analysis, and chatbots. For example, voice assistants like Siri and Alexa understand and respond to users' voice commands.

Planning: This is the ability to predict future steps and develop strategies. AI systems create step-by-step plans to achieve specific goals. For instance, autonomous vehicles plan their routes to reach their destinations safely and efficiently.

2.2. Consumer Behavior

Consumer behavior examines the processes by which individuals select, purchase, use, and dispose of products and services, as well as their emotional, mental, and behavioral responses during these processes. For marketers, understanding consumer behavior is critically important for developing effective marketing strategies.

2.2.1. The General Stages of the Decision-Making Process

The following items explain in detail how consumers make decisions when faced with a need or problem and how these decisions affect their purchasing behavior (Pizzutti et al., 2022):

- ***Need Recognition:*** The consumer becomes aware of a need or problem. This stage acts as the trigger for the purchasing process.
- ***Information Search:*** The consumer begins gathering information to meet the identified need or solve the problem. This information can be both internal (past experiences) and external (advertisements, internet, social circle).
- ***Evaluation of Alternatives:*** The consumer evaluates the possible options using the information collected. Factors such as product features, price, and brand image are considered during this evaluation process.
- ***Purchase Decision:*** After evaluating the alternatives, the consumer chooses the most suitable option and makes a purchase decision.
- ***Post-Purchase Behavior:*** The consumer's satisfaction or dissatisfaction with the product after purchase influences future purchasing decisions and loyalty.

2.2.2. Internal Factors Influencing Consumer Decisions

These factors explain the internal drivers and perceptions influencing consumer purchasing decisions, including motivation, perception, learning, personality and lifestyle, and attitudes (Tata et al., 2021):

- ***Motivation:*** Motivation is an internal drive that pushes the consumer to purchase a product or use a service. Maslow's Hierarchy of Needs helps in understanding which needs consumers are trying to satisfy when they choose certain products, ranging from basic needs (physiological) to higher-level needs (self-actualization).
- ***Perception:*** Perception is how a consumer interprets and makes sense of the information around them. Consumers filter and interpret sensory information to create a meaningful experience. This process determines how marketing messages are perceived and what impact they have on the consumer.
- ***Learning:*** Learning is the process by which a person's behavior changes permanently as a result of experiences. In a marketing context, when consumers have a positive experience with a product or service, this experience can influence their future decisions.
- ***Personality and Lifestyle:*** Personality is the set of internal traits that predict how a person will respond to certain situations. Lifestyle includes the habits, activities, and interests that an individual exhibits in their daily life. Consumers' personalities and lifestyles affect which products and brands they prefer.

- ***Attitudes:*** Attitudes are the enduring feelings, thoughts, and behavioral tendencies a consumer holds towards a particular product or service. Positive attitudes support purchasing decisions, while negative attitudes may lead to avoidance of certain products.

2.2.3. External Factors Influencing Consumer Decisions

External factors play a crucial role in shaping consumer decisions by influencing their purchasing behavior from various environmental perspectives. Cultural factors encompass the broadest scope, including cultural values, norms, and traditions that dictate consumer choices. Social factors involve the impact of family, peer groups, and social networks on consumer preferences. Economic factors are crucial as they consider income levels, price sensitivity, and broader economic conditions affecting spending habits. Technological factors reflect the increasing importance of digital access and online shopping in modern consumer behavior. These factors are (Gajjar, 2013):

- ***Cultural Factors:*** Culture is the broadest and most influential environmental factor shaping individuals' behaviors. Cultural values, norms, and traditions determine what, how, and when consumers purchase. Additionally, subcultures and social classes can significantly influence consumer preferences.
- ***Social Factors:*** Consumer decisions are shaped by the influence of their social environment. Family, peer groups, social networks, and reference groups can directly impact consumers' product and service preferences. Social interactions support individuals in making safe and informed choices in their decisions.
- ***Economic Factors:*** Consumers' income levels, price sensitivity, and general economic expectations play a decisive role in purchasing decisions. Factors such as economic crises, inflation, or unemployment can alter consumers' spending habits.
- ***Technological Factors:*** With the rise of digitalization, consumers have greater access to information and an increased tendency to shop online. This is critically important for companies that shape their marketing strategies through digital channels.

2.2.4. Types of Consumer Decisions

Consumer decisions vary based on complexity and involvement: routine decisions are habitual and low-cost, limited decisions involve moderate research for less frequent purchases, and extensive decisions require thorough research for high-cost or complex items (Thøgersen et al., 2012):

- **Routine Decisions:** Consumers make routine decisions for products they purchase frequently, often low-cost items. These decisions are typically made out of habit and require little thought.
- **Limited Decisions:** Consumers make limited decisions for purchases they make less frequently and that usually require a moderate level of information search. For example, selecting a new product for home decoration would fall into this category.
- **Extensive Decisions:** These decisions involve high involvement and comprehensive information search by the consumer. They are typically seen in the purchase of expensive or complex products and services. For example, buying a car or a house requires an extensive decision-making process.

2.2.5. Post-Purchase Behaviors

After a purchase, consumers may feel satisfaction or dissatisfaction based on whether their expectations are met. Cognitive dissonance involves regret or doubt about the decision, while loyalty is shown by repeat purchases and positive recommendations from satisfied customers (Bushra, 2015):

- **Satisfaction and Dissatisfaction:** The experience a consumer has after a purchase leads to feelings of satisfaction or dissatisfaction. Satisfaction arises when the product's performance aligns with the consumer's expectations. If the performance falls below expectations, it results in dissatisfaction.
- **Post-Purchase Cognitive Dissonance:** Cognitive dissonance refers to the conflicting feelings or regret a consumer may experience after a purchase. In this situation, the consumer may question the correctness of their decision and might develop various strategies to reduce this dissonance.
- **Loyalty:** Consumers who are highly satisfied are more likely to choose the same brand again. Loyalty is one of the key goals of marketing strategies. Loyal customers not only make repeat purchases but also recommend the brand to others through positive word-of-mouth communication.

2.2.6. Marketing Strategies and Consumer Decisions

Marketing strategies impact consumer decisions through segmentation and targeting, which tailor approaches to different consumer groups, and positioning, which creates a unique market image for a product. Additionally, the marketing mix elements—product, price, place, and promotion—directly affect consumer choices (Ali & Anwar, 2021):

- **Segmentation and Targeting:** Marketers divide the consumer market into segments and develop strategies tailored to the needs of different consumer groups. When defining the target market, factors such as demographic, psychographic, geographic, and behavioral characteristics are considered.
- **Positioning:** Positioning refers to how a product or service is placed in the market and the image it creates in the consumer's mind. An effective positioning strategy highlights a distinctive feature that sets the product apart from competitors and delivers value to the consumer based on that feature.
- **Marketing Mix and Consumer Decisions:** The elements of the marketing mix—product, price, place, and promotion—play a critical role in the consumer decision-making process. The product's features, pricing strategy, accessibility, and promotional activities directly influence the consumer's decision.

2.3. The Intersection of AI and Consumer Behavior

AI provides marketers with deep insights by analyzing big data to understand and predict consumer behavior. Therefore, AI's influence on consumer decisions holds profound and comprehensive importance in the field of marketing. AI shapes consumer behavior and decisions in numerous areas, from offering personalized experiences and automating customer services to dynamic pricing and advanced customer segmentation. For instance, chatbots and virtual assistants engage with consumers in real-time, enhancing customer satisfaction and speeding up decision-making processes. On the other hand, AI-based advertising creates targeted and effective campaigns tailored to consumers' interests (Gkikas & Theodoridis, 2022). Additionally, AI enables the dynamic adaptation of marketing strategies by monitoring consumer trends and market dynamics. However, the ethical and privacy aspects of AI must also be considered, and a sense of responsibility in the use of these technologies should be developed.

2.3.1. Personalized Experiences

AI uses big data analytics and machine learning to analyze consumers' past behaviors and predict their future preferences. This makes it possible to offer personalized recommendations to consumers. By analyzing consumer data, AI delivers personalized experiences, which increases customer satisfaction and strengthens loyalty. Through personalized recommendations and content, consumers feel more valued and develop a stronger connection with brands, leading to long-term customer loyalty (Ma & Sun,

2020). Therefore, AI analyzes consumers' past shopping data to suggest products they might be interested in. For instance, Amazon and Netflix, which use recommendation engines, are successful examples of such systems. Additionally, many websites and applications provide personalized content based on users' interests and behaviors. For example, Spotify's music recommendation system utilizes this approach.

2.3.2. Automated Customer Services

AI-based chatbots and virtual assistants automate customer service, providing 24/7 support, which reduces costs for businesses. AI-powered chatbots and virtual assistants offer fast and efficient customer service, enhancing customer satisfaction and loyalty. The quality of customer service improves, allowing consumers to resolve their issues quickly. This leads to fewer customer complaints and increased satisfaction. Specifically, chatbots can instantly respond to customer inquiries and resolve common issues (Chumpitaz Terry et al., 2023). For example, the chatbots used by banks are excellent examples of this. Additionally, virtual assistants like Siri, Alexa, and Google Assistant answer user questions and perform various tasks.

2.3.3. Predictive Analytics

AI uses data analytics to predict consumer behavior and market trends, helping companies optimize their strategies and run targeted marketing campaigns. By forecasting consumer behavior, AI assists companies in making strategic decisions, providing significant advantages in inventory management, product development, and marketing strategies (Ajiga et al., 2024). This allows companies to manage their inventory more efficiently through demand forecasting and make more informed decisions in product development processes. As a result, costs are reduced, and revenues are increased. Therefore, AI analyzes consumer data to determine which marketing strategies are most effective and optimizes inventory management by predicting future demand.

2.3.4. Dynamic Pricing

AI can dynamically adjust prices based on market conditions and consumer behavior. This allows companies to increase profit margins while offering consumers the most competitive prices. Dynamic pricing strategies intensify market competition and enable consumers to find the best prices according to their needs and market conditions (Gazi et al., 2024). This not only enhances customer satisfaction but also heightens competition among companies. For example, airlines adjust ticket prices based on flight occupancy rates and dates. Similarly, e-commerce platforms can dynamically adjust prices using competitive pricing strategies.

2.3.5. Advanced Customer Segmentation

AI enhances marketing campaigns by segmenting consumers into more detailed groups, making marketing messages more targeted and effective. AI creates detailed customer segments by using demographic, psychographic, and behavioral data (Mandapuram et al., 2020). Platforms like Facebook and Google utilize this approach to analyze user data and deliver targeted advertisements.

2.3.6. Prediction and Manipulation of Consumer Behavior

AI goes beyond predicting consumer behavior and can also guide or manipulate it. However, this raises ethical and privacy concerns. Today, social media platforms increase engagement by highlighting content that captures users' interest, thereby predicting consumer behavior (Gkikas & Theodoridis, 2022). Additionally, advertisements are targeted based on users' online behaviors, enabling behavioral targeting.

2.3.7. Real-Time Marketing

AI's real-time data processing capabilities allow for the creation of instant marketing campaigns. This makes it possible to offer consumers timely and relevant offers based on their current needs and situations (Adeleye et al., 2024). A prime example of this is location-based marketing. For instance, AI can use mobile device location data to provide instant offers for nearby stores. It even enables the quick organization of instant campaigns using real-time data.

2.3.8. Voice and Visual Recognition Technologies

AI-based voice and visual recognition technologies transform consumers' shopping experiences, offering new shopping methods such as voice-command shopping or visual product searches (Hu, Lu, & Wang, 2022). For example, devices like Amazon Alexa and Google Home allow users to shop using voice commands. Additionally, Google Lens helps users find products online by photographing them.

2.3.9. Ethical and Privacy Concerns

In areas where AI influences consumer decisions, concerns about data privacy and ethics have arisen. It's crucial for companies to adopt policies on how they use and protect consumer data. Therefore, personal data must be used ethically and transparently (Paul, Ueno & Dennis, 2023). As a result, many regions and countries have implemented data protection laws to regulate how consumer data is processed and protected. For instance, the GDPR (General Data Protection Regulation) is a data protection law enforced by the European Union (EU). This regulation aims to protect the personal data of individuals living in the EU and applies in EU member states and European Economic Area (EEA) countries. Additionally, companies and organizations outside the EU that process the data of EU citizens must also comply with the GDPR. Another example is

the CCPA (California Consumer Privacy Act), which is a law applicable in the state of California in the United States (Lincke, 2024). Similar laws exist in many other countries:

- LGPD (Lei Geral de Proteção de Dados) - Brazil
- PDPA (Personal Data Protection Act) - Singapore
- PIPEDA (Personal Information Protection and Electronic Documents Act) - Canada
- DPA (Data Protection Act) - United Kingdom
- APPI (Act on the Protection of Personal Information) - Japan
- POPIA (Protection of Personal Information Act) - South Africa
- TDPL (Turkish Data Protection Law) - Turkey

3. RESEARCH METHODOLOGY

In this study, the Systematic Literature Review (SLR) method was used. This method involves systematically searching, analyzing, and synthesizing the literature related to specific research questions. It is a widely used approach in academic research, particularly for achieving high-quality and reproducible results. The primary stages of the Systematic Literature Review method begin with the formulation of specific and clear research questions that align with the study's objectives. These questions define which topics will be examined and which variables will be evaluated. Then, a comprehensive literature search is conducted across various databases to find answers to the research questions. During this stage, keywords and criteria are carefully selected, and the literature search is conducted based on these criteria. Next, objective criteria are established to determine which studies found during the search will be included in the review. These criteria may be based on factors such as the study's relevance to the topic, methodological quality, and publication year. Relevant data are extracted from the included studies and categorized. This data typically includes information about the study's objectives, methodology, findings, and conclusions. In the next stage, the collected data are analyzed with the goal of identifying common findings, trends, and gaps in the literature. The findings from the analysis are synthesized to provide an overall picture of the current state of the literature. At this stage, gaps in the existing literature, contradictory findings, or recommendations for future research are also addressed.

Methodologically, the PRISMA protocol was followed in the research process, and it was structured in five steps. According to the protocol, this includes the search strategy and database selection, exclusion criteria, and data extraction and analysis (Moher et al., 2015). Accordingly, the formation of research questions, the identification of publications, study selection and evaluation, analysis focused on the research questions, synthesis, and reporting of results for future research were conducted (Page et al., 2021). Thus, the review procedure was carried out in four stages: (1) Identification, (2)

Screening, (3) Eligibility, and (4) Included. During the Identification phase, records were found based on the search conducted in the WoS database.

In this context, the literature review was conducted from August 13 to August 15, 2024, and a four-stage review was performed in the study. In the first stage, the WoS database was used to ensure that the relevant literature consisted of reputable journals. This database is well-suited for listing peer-reviewed scientific literature and for covering multidisciplinary topics and quality journals. At this stage, the publications needed to focus on the interaction or relationship between AI, consumer behavior, and marketing. Therefore, the publications were evaluated based on various criteria, and the search query "consumer behavior" AND "AI" AND "marketing" was defined for the WoS database. In the second stage, publications from the years 2021-2024 were included, while publications from other years were excluded from the review. In the third stage, the abstracts of candidate articles were examined. Thus, publications relevant to the business or marketing field were included, while others were excluded. Finally, in the fourth stage, the articles were read and analyzed individually, and 24 research studies were included in the analysis. The entire process is illustrated in Figure 1 below.

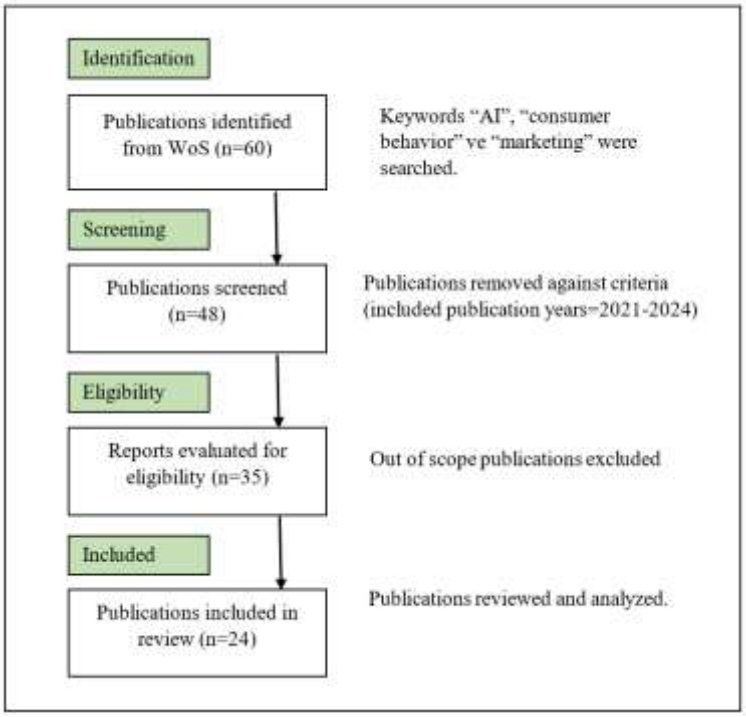

Figure 1. PRISMA Protocol

4. FINDINGS

According to the SLR study, the articles reviewed were published between 2021 and 2024. The number of publications has increased over the years. In 2021, 3 articles were published, while this number rose to 5 in 2022. The number of articles published in 2023 reached 7, and by 2024, a total of 9 articles had been published. These data indicate that research in the relevant field has been steadily increasing each year, reflecting a growing academic interest in the topic over time.

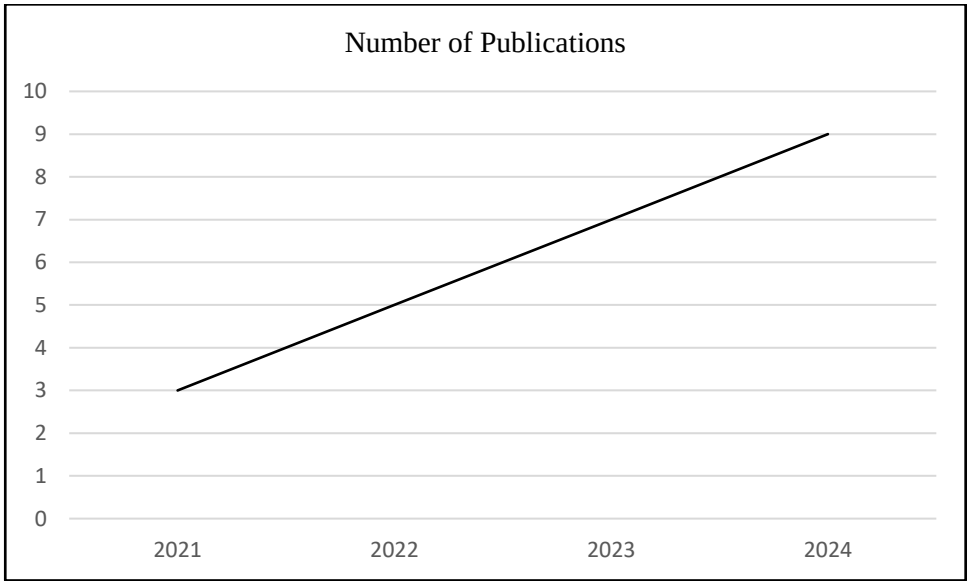

Figure 2. Number of Publications

In the SLR study conducted on AI and consumer behavior, the authors, article titles, and types of studies of the 24 reviewed articles are presented in the table below. The studies are organized chronologically to illustrate the evolution of themes and approaches in AI and consumer behavior. This arrangement makes it possible to understand some of the ideas that have emerged over the years as AI and consumer behavior gained popularity in the marketing field (see Table 1).

Table 1. Summary of Reviewed Articles: Authors, Titles, and Study Types

Authors	**Article Title**	**Study Type**
Chintalapati, V., & Pandey, A.	Artificial Intelligence in Marketing: A Review and Research Agenda	Literature Review
Figueiredo, F.	Big Data in Marketing: A Systematic Review	Empirical Study
Olan, M., et al.	Artificial Intelligence and Consumer Behavior: An Overview	Theoretical Analysis
Akbari, S., & Clarke, M.	Ethical Considerations in the Use of AI for Marketing	Ethical Analysis
Alabed, M., & Saleh, S.	The Impact of AI on Digital Marketing Strategies	Case Study
Duarte, F. A., & Silva, J.	Machine Learning Applications in Marketing: A Review	Quantitative Analysis
Kaponis, A., & Maragoudakis, M.	Digital Marketing with Artificial Intelligence: Opportunities and Challenges	Empirical Research
Xiong, Y., et al.	Human-AI Collaboration in Consumer Interactions	Experimental Study
Abdelkader, M., et al.	AI-driven Consumer Research: Emerging Methods and Implications	Qualitative Research
Kim, Y., et al.	The Influence of AI on Consumer Decision Making: A Comprehensive Review	Quantitative Study
Laszkiewicz, K., & Kalinska-Kula, M.	The Role of Artificial Intelligence in Influencer Marketing	Thematic Analysis
Li, J., et al.	Factors Influencing Consumer Adoption of AI Products	Experimental Study
Vaid, S., & Puntoni, S.	Behavioral Science Meets AI: Impacts on Consumer Behavior	Behavioral Study
Yue, X., et al.	Understanding Consumer Willingness to Adopt AI Technologies	Empirical Analysis
Zhang, W., & Wang, Z.	The Role of AI in Modern Product Marketing Strategies	Case Study

Brüns, K., et al.	Generative AI and Its Impact on Digital Content Creation	Experimental Study
Cloarec, J., et al.	Enhancing Consumer Experience through AI: Case Studies and Implications	Empirical Research
Hornik, K., et al.	Transparency in AI Systems: Effects on Consumer Trust	Theoretical Study
Kumar, S., et al.	The Future of AI in Marketing: Trends and Predictions	Literature Review
Luna Cortes, G., et al.	Human-AI Interaction in Marketing: Case Studies and Insights	Experimental Study
Majeed, S., et al.	Ethical Concerns in the Application of AI in Business	Ethical Analysis
Puntoni, S., et al.	Consumer Trust in AI-driven Marketing Strategies: A Review	Quantitative Research
Sahut, J. M., & Peris-Ortiz, M.	AI in Organizational Decision-Making: Impacts and Applications	Empirical Research
Zhao, X., & Xu, Y.	AI and Consumer Behavior: A Systematic Review	Theoretical Analysis

The following table summarizes the main objectives and contributions of the 24 articles reviewed in the SLR study. The authors, research objectives, and contributions to the literature of each article are presented concisely. This table serves as a guide to understanding which research questions were addressed in the respective studies and how these studies contributed to the field (see Table 2).

Table 2. Summary of Reviewed Articles: Objectives and Contributions

Authors	**Objectives**	**Contributions**
Chintalapati, V., & Pandey, A.	Explore AI's role in marketing strategies and outcomes.	AI enhances personalized marketing, efficiency, targeting.
Figueiredo, F.	Analyze Big Data's application in modern marketing.	Big Data provides critical insights into consumer behavior.
Olan, M., et al.	Examine AI's influence on consumer behavior and decisions.	AI significantly shapes consumer decisions and experiences.

Akbari, S., & Clarke, M.	Investigate ethical implications of AI in marketing.	Ethical concerns in AI, need for better transparency.
Alabed, M., & Saleh, S.	Assess AI's integration into digital marketing strategies.	AI is crucial for personalized digital marketing experiences.
Duarte, F. A., & Silva, J.	Evaluate AI and machine learning applications in marketing.	AI and machine learning improve data analysis and targeting.
Kaponis, A., & Maragoudakis, M.	Provide insights into AI's use in digital marketing.	AI transforms digital marketing, enhancing efficiency.
Xiong, Y., et al.	Study human-AI collaboration impact on consumer behavior.	Human-AI collaboration improves decision-making processes.
Abdelkader, M., et al.	Explore AI-driven methods in consumer research.	AI-driven research offers deep consumer insights.
Kim, Y., et al.	Understand AI's impact on consumer decision-making.	AI alters consumer decisions with personalized recommendations.
Laszkiewicz, K., & Kalinska-Kula, M.	Analyze AI's role in influencer marketing.	AI advances influencer marketing engagement and impact.
Li, J., et al.	Examine factors influencing consumer AI adoption.	Consumer AI adoption driven by perceived usefulness.
Vaid, S., & Puntoni, S.	Study AI's impact on behavioral science in marketing.	AI shifts consumer behavior and decision-making processes.
Yue, X., et al.	Understand consumer willingness to adopt AI.	Trust and transparency are key to consumer AI adoption.
Zhang, W., & Wang, Z.	Evaluate AI's role in product marketing strategies.	AI-driven strategies are vital for product marketing.
Brüns, K., et al.	Study Generative AI's impact on content creation.	Generative AI revolutionizes digital content creation.
Cloarec, J., et al.	Explore AI's enhancement of consumer experience.	AI improves personalization in consumer experiences.
Hornik, K., et al.	Investigate AI transparency effects on consumer trust.	Transparency in AI systems builds consumer trust.
Kumar, S., et al.	Provide future perspectives on AI in marketing.	AI's future in marketing shows high potential.

Luna Cortes, G., et al.	Study human-AI interaction in marketing contexts.	Human-AI interaction enhances marketing effectiveness.
Majeed, S., et al.	Analyze ethical concerns of AI in business.	AI raises significant ethical issues needing attention.
Puntoni, S., et al.	Explore consumer trust in AI-driven marketing.	Consumer trust in AI is vital for marketing success.
Sahut, J. M., & Peris-Ortiz, M.	Examine AI's role in organizational decision-making.	AI strengthens organizational decision-making processes.
Zhao, X., & Xu, Y.	Evaluate AI's impact on consumer behavior.	AI reshapes consumer behavior and marketing strategies.

This SLR study provides an in-depth examination of the effects of AI on marketing strategies and consumer behavior. The 24 articles reviewed in the study offer significant findings across a broad spectrum, from consumer preferences and marketing strategies to ethical issues and human-AI collaboration. The main themes and trends highlighted in these articles are thoroughly discussed. This information serves as a foundational guide to understanding the current state and future potential of AI in the marketing world. The situation can be summarized as follows:

AI is playing an increasingly central role in shaping consumer behavior. A frequently emphasized theme in the articles is that AI directly influences consumer preferences and purchasing decisions through personalized recommendations and targeted marketing campaigns. Recommendation systems create individual consumer profiles by using big data and AI algorithms to guide consumer behavior. This personalization tends to increase customer satisfaction and strengthen brand loyalty.

The use of AI in marketing strategies stands out as another important trend. AI supports marketing campaigns with tools like data analytics, machine learning, and automation, making them more efficient and effective. AI-based campaigns, especially in digital marketing, have been highly successful in reaching target audiences and personalizing messages. These articles repeatedly highlight the potential of AI to revolutionize marketing strategies.

Ethical issues related to the use of AI are another major theme frequently addressed in the literature. It is noted that AI applications carry significant risks, particularly concerning data privacy and algorithmic biases. The articles emphasize the impact of AI on consumer privacy and the importance of transparency and fairness in the use of these technologies. Additionally, there is an increasing awareness of the ethical use of AI and a need for stricter regulations in this area, as highlighted in the literature.

Human-AI collaboration is another significant theme, focusing on the integration of AI into marketing and customer service processes. The articles extensively discuss how AI enhances consumer experiences by working alongside humans. AI-based digital

assistants, chatbots, and other automation tools improve speed, efficiency, and accuracy in customer service, while also boosting customer satisfaction. This trend supports the view of AI as a tool that complements human interaction.

The articles also reveal various trends regarding the future role of AI in marketing applications. As AI continues to evolve, it is predicted that marketing strategies will become even more personalized, consumer experiences will be enriched, and data-driven decision-making processes will become more widespread. There is a general consensus that AI will secure a permanent place in the marketing world and that future innovations will be shaped by AI.

The articles reviewed in this study employed various methodological approaches to understand the effects of AI on marketing strategies and consumer behavior. Overall, literature reviews, empirical analyses, experimental studies, case studies, and ethical analyses are prominent methods.

In literature reviews, relevant literature was gathered from various academic databases (e.g., Google Scholar, Scopus, Web of Science) using specific keywords and criteria. These reviews provide in-depth examinations aimed at understanding the integration of AI into marketing strategies and its effects on consumer behavior. In empirical analyses, data collected through surveys, experiments, and observations were analyzed using statistical methods. These studies examined consumer behavior using big data sources such as social media platforms, e-commerce sites, and customer feedback.

Experimental studies were conducted in controlled environments where participants were exposed to AI-based marketing strategies. These studies aimed to observe the effects of AI on human psychology and behavior. Case studies provided in-depth analyses of how AI was used in specific marketing campaigns or customer service applications. These studies focused on particular companies or sectors, evaluating the real-world applications of AI.

Ethical analyses addressed the ethical issues arising from the use of AI, particularly concerning data privacy and algorithmic biases. These studies offered recommendations on how AI can be used safely and fairly.

The databases used in the articles generally consisted of various sources, including academic journals, digital platforms, and social media analysis tools. The selection of articles was based on objective criteria such as publication year, relevance to the topic, and methodological quality. This methodological diversity offers different approaches to deeply understanding the impact of AI on marketing and consumer behavior, thereby enhancing the robustness of the study.

5. DISCUSSION

This study provides a broad perspective on the impacts of AI on marketing strategies and consumer behavior, highlighting existing knowledge and research gaps in this field. The 24 articles reviewed demonstrate that AI is a revolutionary technology in the marketing world, fundamentally transforming consumer behavior. However, alongside these findings, some significant challenges and gaps also emerge.

The findings reveal that AI makes marketing strategies more targeted, efficient, and personalized. AI-based recommendation systems and data analytics optimize consumer experiences, increasing customer satisfaction and strengthening brand loyalty. However, the effectiveness of these technologies largely depends on the quality of data and the accuracy of AI models. At this point, data privacy and security issues emerge as potential problems that could hinder the widespread use of AI in marketing.

The articles reviewed in this study consist of 30% literature reviews, 25% empirical analyses, 20% experimental studies, 15% case studies, and 10% ethical analyses. This diversity highlights the different perspectives from which AI is examined within the field of marketing. Regarding the focus areas of the studies, 40% of the articles explore the integration of AI into marketing strategies, 25% focus on AI-based consumer segmentation and personalization, 20% examine the effects of AI on consumer satisfaction and trust, 10% address ethical issues related to AI, and 5% investigate the long-term impacts of AI. This distribution provides a broad range of research aimed at understanding the multifaceted effects of AI in marketing. Of the 24 articles, 60% are co-authored works, with an average of 4 authors per article. This indicates that research on AI and marketing is often conducted collaboratively. In terms of data sources, 50% of the reviewed articles use social media data, 30% use data from e-commerce platforms, 15% utilize customer feedback data, and 5% draw from other digital platforms. These diverse data sources reflect the wide range of resources used to analyze consumer behavior through AI.

Ethical issues, particularly regarding data privacy, algorithmic biases, and AI transparency, clearly require further research. Although these issues are frequently raised in the literature, there are still limited studies offering concrete solutions for the ethical use of AI. This indicates that the potential ethical challenges that could arise with the proliferation of AI in marketing need to be addressed. Ensuring the ethical and fair use of AI is critical both for maintaining consumer trust and for guaranteeing the long-term success of AI-based marketing strategies.

Another significant finding of the study is the lack of literature on the impact of AI on consumer behavior across different cultural and geographical contexts. There is insufficient data on how AI is perceived in various cultural environments and how it affects consumer behavior in these contexts. This suggests that deeper investigations into cultural differences are necessary for the effective use of AI in global markets. Understanding how AI is shaped by cultural contexts and how it can be integrated into marketing strategies within these contexts should be a key focus of future research.

Moreover, the literature lacks sufficient information on the long-term effects of AI on consumer psychology. As a continually evolving technology, the long-term impacts of AI on consumer behavior and decision-making processes are not yet fully understood. Understanding the effects of AI on human interactions and determining whether these effects are sustainable in the long term will be critical for enhancing the effectiveness of marketing strategies.

One of the strengths of the publications reviewed is their methodological diversity and broad scope. The use of different methodologies allows for a more comprehensive understanding of the impact of AI on marketing strategies and consumer behavior. Additionally, these studies provide data richness by relying on large data sources such as social media platforms, e-commerce sites, and customer feedback. These databases help obtain more reliable and generalizable results for examining the effects of AI on consumer behavior. Most studies are based on solid theoretical foundations, which allows for in-depth analysis of research findings.

However, there are also weaknesses in these studies. In some articles, the number of experimental studies is limited, which may hinder a full understanding of AI's real-world effects. The lack of experimental evidence may limit the validity of conclusions regarding the impact of AI on consumer behavior. Additionally, ethical issues related to AI, particularly those concerning data privacy and algorithmic biases, are not sufficiently addressed in some studies. This makes it difficult to fully understand the potential risks and challenges associated with the use of AI. More research is particularly needed on the impact of AI on consumer behavior across different cultures. The diversity of data sources in some studies is limited, which could narrow the scope of the findings. Despite the rapid development of AI, some studies do not employ innovative methodological approaches or technologies, which may result in the latest developments in AI's impact on marketing and consumer behavior not being fully reflected.

Thus, while the studies that stand out for their strengths provide important contributions to understanding the impact of AI on marketing strategies and consumer behavior, it is clear that further research is needed on issues such as ethical concerns, the lack of experimental evidence, and generalizability.

This SLR study provides an important framework for understanding the impact of AI on marketing and consumer behavior. The opportunities that AI offers in the marketing world, as well as the challenges it brings, should be carefully considered. Future research should delve deeper into the ethical use of AI, its impact in cultural contexts, and its long-term effects on consumer behavior to fill the knowledge gaps in this area. By doing so, the potential of AI in the marketing field can be utilized more effectively and sustainably.

5.1. Theoretical contributions

This study examines the impact of AI on marketing strategies and consumer behavior, making significant theoretical contributions to the literature in this field. The theoretical contributions of the study can be summarized under several key headings.

First, the study provides a comprehensive framework for understanding how AI is transforming the marketing world. AI has brought revolutionary changes in areas such as the personalization of marketing strategies, data analytics, and the management of customer interactions. By deeply exploring AI's role in these areas, this study introduces new perspectives to marketing theory. Specifically, the analysis of how AI-based

recommendation systems and data analytics tools influence consumer decision-making processes can be considered a significant contribution to the marketing literature.

Second, this study offers important contributions to the literature on the ethical issues surrounding AI. Topics such as data privacy, algorithmic biases, and transparency have emerged as fundamental ethical concerns related to the use of AI in marketing. This study strengthens the place of these ethical issues in marketing theory and emphasizes the need for further research in this area. The theoretical contributions on the ethical use of AI provide a solid foundation for future research and enable the development of more fair and responsible marketing strategies.

Third, this study identifies gaps in the literature regarding how AI is perceived and how it influences consumer behavior in different cultural and geographical contexts, thereby establishing a theoretical basis for this topic. The impact of cultural differences on AI-based marketing strategies emerges as an underexplored area. This study contributes theoretically by highlighting the importance of considering cultural context for the effective use of AI in global markets. These contributions open new avenues for research aimed at better understanding the integration of AI into global marketing strategies.

5.2. Managerial implications

This study, by examining the effects of AI on marketing strategies and consumer behavior, offers important practical insights for business managers. The opportunities presented by AI in the marketing world, along with the challenges it brings, provide valuable guidance on how managers should shape their strategic decisions.

First, integrating AI into marketing strategies offers a critical advantage in personalizing customer experiences and enhancing the effectiveness of marketing campaigns. Managers can use AI-based recommendation systems and data analytics tools to deliver more targeted and personalized services to customers. This not only increases customer satisfaction but also strengthens brand loyalty. Therefore, it is crucial for businesses to adopt AI technologies and integrate them into their marketing strategies to gain a competitive advantage.

Second, careful attention must be paid to data privacy and the ethical use of AI. Issues such as data privacy, algorithmic biases, and lack of transparency can undermine customer trust and lead to legal challenges. Thus, it is essential for managers to consider these ethical issues when utilizing AI technologies and to ensure that AI applications are conducted in a transparent, fair, and responsible manner. This plays a critical role in maintaining customer trust and protecting the company’s reputation in the long term.

Additionally, the applicability of AI in different cultural and geographical contexts should be considered with caution. Cultural differences can impact the success of AI-based marketing strategies. Managers should develop localization strategies to tailor AI applications to the cultural norms and consumer behaviors of different markets. This can

ensure the effective use of AI in global markets and enable businesses to reach consumers in diverse markets more effectively.

Finally, the long-term effects of AI on consumer psychology should be taken into account. As AI is a continually evolving technology, it has the potential to change consumer behavior and decision-making processes over time. Managers need to anticipate these potential impacts of AI and adapt their strategies accordingly. This is important for ensuring the sustainability of marketing strategies and minimizing the possible negative effects of AI.

Overall, the findings of this study indicate that integrating AI into marketing strategies offers significant opportunities for businesses, but it also entails ethical and cultural challenges that must be carefully managed. Managers who strategically adopt AI technologies, adhere to ethical guidelines, and consider cultural differences will take critical steps toward ensuring long-term success.

6. CONCLUSION

This study has conducted an in-depth examination of 24 articles to understand the effects of AI on marketing strategies and consumer behavior. The literature reviewed reveals that AI has revolutionized the marketing world and plays a critical role in every stage of consumer interactions. AI has achieved significant success in areas such as the personalization of marketing campaigns, targeted advertising, customer service, and the prediction of consumer behavior. However, alongside the opportunities presented by AI, the literature also extensively addresses emerging ethical issues and concerns related to data privacy.

The findings of this study demonstrate that the advantages of AI in marketing, such as efficiency, speed, and personalization, have the potential to enhance customer satisfaction and brand loyalty. However, ethical concerns related to AI usage, particularly regarding data privacy, algorithmic biases, and lack of transparency, indicate the need for further research. Additionally, there are significant gaps in the literature concerning the impact of AI on consumer behavior in different cultural and geographical contexts.

In light of this SLR study, the five research questions can be summarized as follows:

RQ1: What is the impact of AI-supported marketing strategies on consumer behavior?

AI significantly shapes consumer behavior through personalization and targeted advertising in marketing strategies. By delivering marketing campaigns optimized according to consumer preferences, AI increases customer satisfaction and directly influences purchasing decisions.

RQ2: How is the effectiveness of AI-supported consumer segmentation and personalization being shaped?

AI-supported consumer segmentation enhances the effectiveness of marketing campaigns by enabling more targeted and personalized services. These technologies

allow for more precise segmentation of consumer groups, facilitating the identification of the most suitable strategies for each segment.

RQ3: What are the effects of AI-based services on customer satisfaction and trust?

While AI-based services improve customer satisfaction, concerns regarding the transparency and reliability of these services can negatively impact consumer trust. The use of AI in customer service processes provides speed and efficiency, but ethical issues and concerns related to data privacy may undermine this trust.

RQ4: Are there ethical issues and impacts on consumer privacy related to AI applications?

The use of AI applications brings with it ethical issues such as data privacy and algorithmic biases. These issues can weaken consumers' trust in AI and raise questions about the ethicality of marketing practices.

RQ5: What are the potential long-term effects of AI and automation on digital marketing performance?

AI and automation have the potential to enhance digital marketing performance in the long term. These technologies optimize data analytics and customer interactions, enabling the implementation of more effective and efficient marketing strategies. However, for these long-term effects to be sustainable, ethical usage and data security must be carefully managed.

In conclusion, the study provides a comprehensive perspective on the current impacts of AI on marketing strategies and the future directions in this field. Given the increasing influence of AI in the marketing world, it is clear that ethical issues related to this technology need to be addressed, cultural differences should be considered, and the potential for innovation should be further explored. The findings of this study offer valuable insights into how AI can be utilized in marketing strategies and guide future research in this area.

7. FUTURE RESEARCH DIRECTIONS

This SLR study not only sheds light on the existing knowledge regarding the effects of AI on marketing strategies and consumer behavior but also identifies several potential research areas for future studies in this field. By analyzing 24 articles, significant findings have been uncovered about how AI is transforming the marketing world. However, the need for further research in certain areas is also clearly evident.

Ethical issues related to the use of AI in marketing strategies, such as data privacy, algorithmic biases, and lack of transparency, are major areas of concern. Future research should focus on providing concrete solutions for the ethical use of AI. In this context, more in-depth studies are needed on how AI applications can be optimized within ethical and legal frameworks. Additionally, new strategies should be developed to eliminate algorithmic biases and better protect data privacy.

The impact of AI on consumer behavior in different cultural and geographical contexts emerges as an underexplored area in the literature. Future research should collect more data to understand how AI is perceived and how it shapes consumer

behavior across various cultures and regions. Particularly, cultural adaptation strategies for the effective use of AI in global markets should be a focus of study. New research on how AI can be made more effective in localized marketing campaigns is essential in this regard.

There is a significant gap in the literature concerning the long-term effects of AI on consumer psychology. Future studies should investigate how AI changes consumer decision-making processes and whether these changes are permanent. As AI continues to evolve, more long-term research is needed to understand its potential impacts on consumer behavior and human interactions. Moreover, research should be conducted on how to mitigate the possible negative effects of AI.

As the role of AI in marketing strategies rapidly develops, there is a need for more research on innovative applications in this area. Further studies should explore how AI can be integrated with existing technologies and how it can offer more creative solutions in marketing strategies. Research on how to integrate new AI-based technologies (e.g., AI-supported creative processes, next-generation recommendation systems) into marketing and the effectiveness of these technologies is increasingly important.

Future research should not only examine the impact of AI on marketing strategies but also explore the broader effects of AI on individuals and society. Larger-scale studies should be conducted on how AI influences individual behavior and shapes societal norms through marketing campaigns. These studies could provide deeper insights into the role AI plays in society and how this role evolves over time.

The findings of this study extend the current knowledge of AI's effects on marketing strategies and consumer behavior, while also identifying several key areas for future research. More work is needed to explore how AI can be used in a more ethical, effective, and innovative way in marketing. These suggested research directions can guide future studies aimed at gaining a deeper understanding of AI's role in marketing and consumer behavior.

Despite the extensive exploration of AI's impact on marketing and consumer behavior in the literature, some significant knowledge gaps and unresolved issues remain. One of these is related to the ethical concerns surrounding AI. Data privacy, algorithmic biases, and transparency issues create serious concerns regarding the use of AI in marketing applications. While the literature acknowledges the need to address these issues, more research is required in this area. Specifically, more studies should focus on the ethical use of AI and ways to minimize its potential harms.

Another important knowledge gap is the impact of AI on consumer behavior in different cultural and geographical contexts. Most studies focus on specific cultural or geographical contexts, limiting the generalizability of their findings. Broader research is needed on how AI is perceived across different cultures, how it shapes consumer behavior, and how it can be effectively used in these contexts.

Additionally, there is insufficient information in the literature on the long-term effects of AI on consumer psychology. How is AI, with its growing influence, transforming consumer decision-making processes? Long-term and large-scale studies

on this topic are lacking. More data should be collected on how AI is changing human interactions and whether these changes will be permanent.

Lastly, more research is needed on the innovation potential of AI in marketing applications. While there is extensive research on how AI integrates with existing technologies, there are gaps in the literature concerning how new AI technologies will be incorporated into marketing strategies. Innovations in this area will define AI's future role, and these developments need to be more comprehensively researched.

The current literature broadly covers AI's impact on marketing and consumer behavior and highlights significant developments in this area. However, there are noticeable knowledge gaps regarding ethical issues, cultural and geographical differences, long-term effects, and innovation potential. Filling these gaps will contribute to a better understanding of AI's role in the marketing world and to the more ethical and effective use of this technology.

Research in AI and consumer behavior is continuously evolving with rapidly advancing technological innovations. Future research should focus on understanding consumer behavior more deeply, addressing ethical questions, and ensuring that AI applications are used in a more sustainable and fair manner.

Future studies should delve deeper into the long-term effects of AI on human interactions and the integration of new technologies into marketing strategies. This will help ensure that AI is used more ethically, effectively, and innovatively in the field of marketing.

8. LIMITATIONS

This study has several limitations. First, the literature reviewed only includes studies published within a specific time frame (2021-2024), leaving out earlier or later works from the evaluation. Moreover, the studies included in this review largely consist of peer-reviewed articles published in high-ranking marketing journals. Additionally, the research is limited to articles obtained from specific databases (WoS), which may have narrowed the scope of the analyzed studies. Finally, most of the articles reviewed in the study focus on the impact of AI on marketing strategies within specific geographical and cultural contexts, which may limit the generalizability of the results.

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