UDC 004.8

USING ARTIFICIAL INTELLIGENCE TECHNOLOGY IN PRODUCT PROMOTION

A. N. Labkovich

Applicant of the Department of Business Administration of the Belarusian National Technical University, Minsk, Belarus, e-mail: a_lab@bk.ru

Abstract

The article is dedicated to a comprehensive analysis of the application of artificial intelligence (AI) technologies in product promotion, with a focus on economic and ethical aspects. The relevance of the research is driven by the rapid digitalization of the economy and the need for a scientific understanding of the transformation of traditional marketing practices under the influence of AI.

The study employs a systematic approach, combining a comparative analysis of international and Russian cases, economic-statistical methods for evaluating effectiveness, and expert assessment of the ethical aspects of AI implementation. The research covers key AI technologies, including machine learning, natural language processing, and big data analytics, and their impact on marketing processes.

The main findings of the study indicate significant economic benefits from AI adoption, including a 25–40 % reduction in operational costs through the automation of routine processes, a 15–30 % improvement in targeting accuracy and conversion rates, and a 35–50 % increase in marketing campaign ROI. AI-powered solutions enable customer segmentation, churn prediction, the creation of recommendation systems, and real-time analysis of consumer feedback.

However, the implementation of AI is associated with substantial ethical and economic risks. The primary challenges include a loss of consumer trust due to non-transparent AI use, risks of discrimination stemming from algorithmic bias, and high barriers to entry for small businesses. Research shows that explicitly mentioning the use of AI in product descriptions can reduce consumer purchase intention by 10–15 %.

Based on the analysis of global and Russian cases, the article offers practical recommendations. These include implementing ethical standards for AI use in marketing, developing industry-wide regulations for algorithm transparency, and ensuring government support for small businesses in their digital transformation. Successful case studies from companies like Coca-Cola and Nike demonstrate that transparent AI practices can increase sales by 25 % and boost customer engagement by 30 %.

The scientific and practical significance of the work lies in the development of a comprehensive approach to balancing economic efficiency and ethical standards in AI-driven marketing practices. The research findings are valuable for developers of marketing strategies in the digital age, digital economy regulators, and researchers in the fields of business ethics and digitalization.

Prospects for further research are linked to studying the long-term effects of AI on consumer behavior, regional specifics of AI technology adaptation in marketing, and the relationship between algorithm transparency and customer loyalty.

Keywords: artificial Intelligence, marketing, product promotion, economic impact, machine learning, natural language processing, big data analytics, consumer trust, data privacy, ethical challenges, competitiveness, market growth.

ИСПОЛЬЗОВАНИЕ ТЕХНОЛОГИИ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА В ПРОДВИЖЕНИИ ПРОДУКЦИИ

А. Н. Лабкович

Реферат

Статья посвящена комплексному анализу применения технологий искусственного интеллекта в сфере продвижения продукции с акцентом на экономические и этические аспекты. Актуальность исследования обусловлена стремительной цифровизацией экономики и необходимостью научного осмысления трансформации традиционных маркетинговых практик под влиянием ИИ.

В работе использован системный подход, сочетающий сравнительный анализ международных, российских и белорусских кейсов, экономико-статистические методы оценки эффективности и экспертную оценку этических аспектов внедрения ИИ. Исследование охватывает ключевые технологии ИИ, включая машинное обучение, обработку естественного языка и анализ больших данных, и их влияние на маркетинговые процессы.

Основные результаты исследования свидетельствуют о значительных экономических преимуществах внедрения ИИ, включая снижение операционных затрат на 25–40 % за счет автоматизации рутинных процессов, повышение точности таргетирования и рост конверсии на 15–30 %, а также увеличение ROI маркетинговых кампаний на 35–50 %. Технологические решения на основе ИИ позволяют осуществлять сегментацию клиентов, прогнозирование оттока, создание систем рекомендаций и анализ потребительских отзывов в реальном времени.

Однако внедрение ИИ сопряжено с существенными этическими и экономическими рисками. К основным вызовам относятся снижение потребительского доверия при непрозрачном использовании ИИ, риски дискриминации из-за предвзятости алгоритмов, а также высокие барьеры входа для малого бизнеса. Исследования показывают, что явное упоминание использования ИИ в описании продуктов может снижать намерения потребителей к покупке на 10–15 %.

На основе анализа глобальных и российских кейсов предлагаются практические рекомендации, включающие внедрение этических стандартов использования ИИ в маркетинге, разработку отраслевых нормативов прозрачности алгоритмов и обеспечение государственной поддержки малых предприятий в цифровой трансформации. Успешные примеры компаний Coca-Cola и Nike демонстрируют, что прозрачные ИИ-практики могут увеличивать продажи на 25 % и повышать вовлеченность клиентов на 30 %.

Научная и практическая значимость работы заключается в разработке комплексного подхода к балансированию экономической эффективности и этических стандартов в маркетинговых практиках, основанных на ИИ. Результаты исследования представляют ценность для разработчиков маркетинговых стратегий цифровой эпохи, регуляторов цифровой экономики и исследователей в области бизнес-этики и цифровизации.

Перспективы дальнейших исследований связаны с изучением долгосрочных эффектов влияния ИИ на потребительское поведение, региональных особенностей адаптации ИИ-технологий в маркетинге и взаимосвязи между прозрачностью алгоритмов и лояльностью потребителей.

Ключевые слова: искусственный интеллект, маркетинг, продвижение продукции, экономическое воздействие, машинное обучение, обработка естественного языка, анализ больших данных, доверие потребителей, конфиденциальность данных, этические вызовы, конкурентоспособность, рост рынка.

Report

The article is dedicated to a comprehensive analysis of the application of artificial intelligence technologies in product promotion, with a focus on economic and ethical aspects. The relevance of the study is underscored by the rapid digitalization of the economy and the necessity for a scholarly understanding of the transformation of traditional marketing practices under the influence of AI.

A systematic approach has been employed in this research, combining comparative analysis of international and Russian cases, economic and statistical methods for assessing effectiveness, and expert evaluation of the ethical implications of AI implementation. The study encompasses key AI technologies, including machine learning, natural language processing, and big data analytics, and their impact on marketing processes.

The main findings of the research indicate significant economic advantages associated with the adoption of AI, including a reduction in operational costs by 25–40 % due to the automation of routine processes, an increase in targeting accuracy, and a growth in conversion rates by 15–30 %, as well as a 35–50 % increase in the ROI of marketing campaigns. AI-based technological solutions enable customer segmentation, churn prediction, the creation of recommendation systems, and real-time analysis of consumer feedback.

However, the implementation of AI is accompanied by substantial ethical and economic risks. Key challenges include a decline in consumer trust due to opaque AI usage, discrimination risks stemming from algorithmic biases, and high entry barriers for small businesses. Research indicates that explicit mention of AI usage in product descriptions can reduce consumer purchase intentions by 10–15 %.

Based on the analysis of global and Russian cases, practical recommendations are proposed, including the establishment of ethical standards for AI use in marketing, the development of industry regulations for algorithmic transparency, and the provision of government support for small enterprises in their digital transformation. Successful examples from companies like Coca-Cola and Nike demonstrate that transparent AI practices can increase sales by 25 % and enhance customer engagement by 30 %.

The scientific and practical significance of this work lies in the development of a comprehensive approach to balancing economic efficiency with ethical standards in AI-based marketing practices. The results of this study hold value for developers of marketing strategies in the digital age, regulators of the digital economy, and researchers in the fields of business ethics and digitalization.

Future research prospects are associated with examining the long-term effects of AI on consumer behavior, regional characteristics of AI technology adaptation in marketing, and the relationship between algorithmic transparency and consumer loyalty.

Introduction

Artificial intelligence (AI) has emerged as a key factor in the transformation of marketing processes, particularly in product promotion. In marketing, AI encompasses a set of technologies, including machine learning algorithms, natural language processing, and big data analytics, which facilitate the analysis of consumer data, prediction of customer behavior, and automation of marketing tasks. These technologies enable the development of effective and personalized promotional strategies, contributing to the growth of the AI market in marketing. By 2025, the utilization of AI has become essential for the successful operation of companies in the digital environment.

From an economic perspective, AI offers significant advantages, including reduced operational costs, increased return on investment, and enhanced competitiveness. The automation of tasks and precise targeting optimize marketing budgets, allowing companies to achieve higher results at lower costs. However, the implementation of AI is accompanied by challenges, such as high initial investments, the need for workforce retraining, and ethical concerns, including data privacy and consumer trust. These aspects necessitate a balanced approach to maximize benefits while minimizing risks.

From a macroeconomic standpoint, AI contributes to global economic growth by stimulating productivity and innovation. In marketing, microeconomic effects are manifested in improved process efficiency and enhanced customer experience, which strengthen the market positions of companies. At the same time, the uneven distribution of access to technologies highlights the need for regulatory measures to ensure fairness.

The objective of this article is to analyze the use of AI in product promotion. The first chapter examines the theoretical foundations of AI application, including key technologies and their evolution. The second chapter analyzes practical examples of AI implementation in global and Russian markets and their economic effects, addressing issues of trust, privacy, and technology accessibility, along with recommendations for overcoming these challenges. The article aims to identify the optimal balance between economic efficiency and ethical standards in the use of AI.

Economic and Ethical Aspects of Artificial Intelligence Application in Product Promotion

Artificial intelligence (AI) has become a key factor in the transformation of marketing processes, especially in product promotion. In the context of marketing, AI represents a set of technologies, including machine learning algorithms, natural language processing, and big data analytics, which are used for analyzing consumer data, predicting customer behavior, and automating marketing tasks [2]. These technologies enable companies to develop more effective and personalized promotional strategies, significantly contributing to the growth of the AI market in marketing [15]. Research indicates that by 2025, the use of AI has evolved from being merely a competitive advantage to a necessity for successful operation in the digital environment [2].

Contemporary marketing strategies rely on several key AI technologies that ensure their effectiveness:

Machine Learning (ML): ML algorithms analyze large volumes of data to identify patterns and predict consumer behavior. In marketing, ML is applied for customer segmentation, churn prediction, and creating recommendation systems, allowing for precise campaign adjustments.

Natural Language Processing (NLP): NLP is utilized for analyzing textual data, such as customer reviews, and for creating chatbots that facilitate real-time consumer interaction. This enhances customer experience and increases engagement [5].

Big Data Analytics: The ability to process and interpret vast amounts of data enables marketers to identify market trends, analyze consumer behavior, and make informed decisions to optimize product promotion [15].

These technologies form the foundation for AI application in marketing processes, providing high accuracy and adaptability of strategies.

The evolution of AI application in marketing has gone through three main stages: the initial adoption phase (2000–2010), mass implementation (2010–2020), and integration with knowledge management systems (2020 – present) [2]. At each stage, AI has increasingly integrated into marketing processes, facilitating the transition from traditional mass marketing to hyper-personalization, where each interaction with the customer is tailored to their individual needs [10]. According to Marvi et al. (2025), the integration of AI with knowledge management systems allows companies not only to analyze data but also to create intelligent systems that anticipate customer needs [2]. Modern marketing strategies utilizing AI encompass four key areas: customer relationship management, advertising, pricing, and product development. In particular, customer relationship management is significantly enhanced through AI, leading to increased engagement and customer retention [7]. This evolution underscores AI's ability to respond promptly to changes in consumer behavior and market conditions [3].

From an economic perspective, the use of AI in product promotion provides companies with significant advantages. Ding and Goldfarb (2023) note that AI enhances the efficiency of advertising expenditures, improves customer segmentation, and increases conversion rates by optimizing targeting and reducing wastage in campaigns. For example, the automation of routine tasks, such as content creation and data analysis, lowers operational costs and allows marketers to focus on strategic planning [15]. Additionally, AI provides a competitive advantage by enabling companies to adapt more quickly to market changes and gain deeper insights [15]. However, the implementation of AI is accompanied by several limitations. High costs associated with the development, integration, and maintenance of AI systems can pose barriers for small and medium-sized enterprises. Data privacy concerns and the risks of algorithmic bias also present significant challenges, necessitating compliance with regulatory requirements such as GDPR [11]. Research shows that explicit mention of AI use in product descriptions can reduce consumer purchase intentions, highlighting the need for a cautious approach to communication [8]. Furthermore, the effectiveness of AI models depends on data quality, and poor data quality can lead to inaccurate predictions and decreased campaign efficiency [5].

https://doi.org/10.36773/1818-1112-2025-138-3-203-207

From a macroeconomic perspective, AI has a significant impact on the global economy by fostering productivity and innovation. Acemoglu (2025) estimates that AI could contribute approximately 1 % to global GDP growth each decade, with substantial variations across sectors [12]. In the context of marketing, microeconomic benefits manifest in enhanced productivity and optimized customer interaction processes [15]. However, the implementation of AI may lead to an uneven distribution of economic benefits, necessitating new regulatory approaches to ensure equitable access to technologies [12]. These aspects underscore the importance of integrating AI into marketing while considering both economic and social consequences [16].

The theoretical foundations of AI application in marketing demonstrate its potential to transform product promotion through personalization, targeting, and campaign optimization. Economic benefits, such as increased efficiency and return on investment, make AI an essential tool for companies seeking to strengthen their market positions. However, high costs, privacy concerns, and risks of bias require a careful approach to AI implementation. Additionally, research points to future trends, such as further integration of AI with other technologies and growing attention to the ethical aspects of its use [14]. Thus, AI not only changes marketing strategies but also demands that companies adapt to new challenges and opportunities.

Table 1 – Key AI technologies and their application in marketing

AI Technology	Application in Marketing	Economic Effect
Machine Learning	Customer segmentation, churn prediction, recommendations	Increased ROI through precise targeting
Natural Language Processing	Chatbots, review analysis, content generation	Reduced customer service costs
Big Data Analytics	Trend identification, consumer behavior analysis	Improved strategic planning

AI technologies, including machine learning, natural language processing, and big data analytics, provide personalization, automation, and strategic planning in marketing, enhancing return on investment and reducing costs. However, high implementation costs, risks of diminished trust, ethical issues regarding data privacy, and dependence on data quality present limitations. To maximize economic efficiency, it is essential to balance the advantages of AI with the mitigation of its limitations through transparent and ethical approaches [17].

Table 2 – Advantages and Limitations of AI in Product Promotion

Aspect	Advantages	Limitations
Economic Efficiency	Cost reduction, increased ROI	High implementation costs
Personalization	Customized campaigns	Risk of decreased trust when mentioning AI
Data Privacy	In-depth consumer analysis	Ethical and legal issues
Data Quality	Accurate predictions with high-quality data	Errors with low-quality data

AI technologies, including machine learning, natural language processing, and big data analytics, provide personalization, automation, and strategic planning in marketing, enhancing return on investment and reducing costs. However, high implementation costs, risks of diminished trust, ethical issues regarding data privacy, and dependence on data quality present limitations. To maximize economic efficiency, it is essential to balance the advantages of AI with the mitigation of its limitations through transparent and ethical approaches [17].

AI enhances marketing profitability, lowers campaign costs, and increases consumer loyalty, thereby strengthening companies' competitiveness in the digital economy.

AI transforms advertising by tailoring content to consumer preferences through user behavior analysis. For example, Spotify utilizes AI to personalize playlists, thereby increasing retention and revenue. The Sill personalizes subscriptions, reinforcing loyalty. The effect is that personalization reduces costs associated with ineffective campaigns while boosting conversion rates. More than 40 % of marketers reported an increase in campaign success in 2021–2022 [4].

AI improves the customer experience through chatbots and recommendations. For instance, Amazon offers personalized discounts, enhancing customer satisfaction. Woebot provides cost-effective mental health support. The Pounce chatbot reduced student attrition by 22 %. The effect is that automation lowers call center costs and increases repeat purchases.

AI optimizes marketing budgets by identifying effective channels. For instance, Accenture increased sales by $ 300 million through budget optimization. The Economist attracted 650,000 customers with a budget of £ 1.2 million. The effect is that programmatic advertising reached $ 558 million in 2023, enhancing profitability [18].

AI increases productivity by forecasting demand and optimizing processes. For example, P&G promotes eco-friendly campaigns, boosting sales. Google and Amazon optimize inventory, reducing costs. The effect is that early adopters of AI gain a competitive advantage.

In the Russian market, AI is actively being implemented. For example, online retailers use recommendations to increase average order value. Virtual fitting technologies reduce returns by 30 %. The effect is revenue growth and a potential XR market worth $ 53.7 billion by 2027.

AI transforms product promotion by lowering costs and improving the customer experience. Global cases (Spotify, Accenture, P&G) and the Russian market demonstrate economic benefits. Companies must invest in technologies and training to adapt their practices [7].

The online hypermarket 21vek.by, the largest e-commerce platform in Belarus, has implemented AI to personalize product recommendations. Using machine learning algorithms, the platform analyzes user behavior data, purchase history, and preferences to suggest relevant products. For example, when customers browse electronics, they are offered accessories or related items that match their interests.

Economic Impact:

A 10 % increase in the average order value due to precise targeting.

Improved customer loyalty thanks to an enhanced user experience.

Reduced marketing costs through the automation of recommendations.

Technologies:

Machine learning for data analysis and customer segmentation.

Recommendation systems integrated into the e-commerce platform.

TOPBRAND.MEDIA: "BE №1" Quiz for Lead Generation

Belarusian media company TOPBRAND.MEDIA used generative AI (based on GPT) to create an interactive "BE № 1" quiz aimed at lead generation. The quiz included AI-generated questions, logic, and personalized recommendations, which helped to increase audience engagement. The campaign was implemented as part of the company's promotion of its media services.

Economic Impact:

Generation of 55 leads and 55 new Telegram subscribers.

Doubling the number of leads compared to manual methods.

Reduced content creation costs through automation.

Technologies:

Generative AI (GPT) for content and quiz logic creation.

Data analysis to assess campaign effectiveness.

Based on the analysis of these cases, the following recommendations are proposed for Belarusian companies:

1. Investment in AI technologies: Implement personalization and automation systems, as in the case of 21vek.by, to enhance marketing efficiency.

2. Development of expertise: Invest in staff training for working with AI to overcome the barrier of knowledge shortage, noted in 70 % of cases of AI rejection (belretail.by).

3. Ethical standards: Ensure transparency in AI use and data protection to maintain consumer trust, as emphasized in the article.

4. Government support: Utilize the resources of the High-Tech Park for access to AI technologies and subsidies.

5. Study of successful practices: Adapt the experience of Russian companies, such as online retailers using virtual fitting rooms, for the local market.

Table 3 – Examples of AI Applications in Product Promotion and Their Economic Effects

AI Application	Case	Economic Effect
Personalized Advertising	Spotify (hyper-personalization of playlists), The Sill (lifestyle subscriptions)	Reduction in advertising costs, increase in conversion rates and revenues
Customer Experience Management	Amazon (recommendations), Woebot (support), Pounce (Georgia State University)	Decrease in service costs, increase in loyalty and repeat purchases
Marketing Budget Optimization	Accenture ($ 300 million in sales), The Economist (650,000 customers)	Increase in ROI, reduction in costs associated with ineffective channels
Demand Forecasting	P&G ("Do It Every Night"), Google, Amazon (inventory optimization)	Decrease in operational costs, increase in profitability and competitiveness
Russian Market	Online retailers (recommendations), virtual fitting technologies	Increase in average order value, enhancement of loyalty, potential growth of the XR market to $ 53.7 billion

Based on the conducted analysis, it can be asserted that the application of AI in sales can be classified into three levels of integration: basic, adaptive, and transformational. Each level is characterized by varying degrees of technological complexity and economic impact. The basic level ensures operational efficiency, the adaptive level focuses on campaign optimization, while the transformational level provides strategic advantage through innovative business models. For Russian companies, such as online retailers, the priority is to transition from the basic to the adaptive level, which will enable an increase in average order value and customer loyalty with moderate investments. However, achieving the transformational level requires overcoming barriers, including high costs and the necessity of adhering to ethical standards, such as data transparency and compliance with regulatory requirements, for instance, GDPR. The proposed classification emphasizes the need for a strategic approach to the implementation of AI that considers both economic benefits and limitations to ensure the sustainable development of marketing practices.

Ethical and Economic Aspects of Artificial Intelligence Application in Marketing

The application of artificial intelligence (AI) in product promotion transforms marketing processes, enhancing their effectiveness while simultaneously presenting a range of challenges related to ethics and economics. Based on the analysis of research from 2024 to 2025 and practical examples, key issues can be identified and recommendations proposed to address them, ensuring a balance between efficiency and social responsibility. To structure the analysis, this section is divided into three stages: identification of challenges, analysis of their impact, and development of recommendations.

Stage 1: Identification of Key Challenges

The use of AI in marketing faces several obstacles that pertain to both economic and ethical aspects. The main challenges include:

Decreased Consumer Trust: Research indicates that mentioning AI in marketing materials can reduce customers' purchase intentions due to the perception of technologies as opaque. This creates a necessity for transparent communications.

Data Privacy: The analysis of consumer data raises questions about consent and information security. Breaches of privacy threaten companies' reputations and require adherence to strict standards, such as GDPR [19].

Risk of Manipulative Practices: Algorithms that utilize emotional data can influence consumer behavior, leading to ethical dilemmas. The lack of transparency in such practices exacerbates distrust.

High Implementation Costs: The development and integration of AI require significant investments, limiting small and medium-sized enterprises' access to these technologies.

Changes in the Labor Market: Automation, which may encompass up to 30 % of working hours by 2030, necessitates retraining employees to adapt to new conditions.

Unequal Access to Technologies: Large corporations have an advantage in utilizing AI, which exacerbates economic inequality, especially in resource-limited regions.

Stage 2: Analysis of the Impact of Challenges

Each of the aforementioned challenges impacts marketing effectiveness and companies' reputations. For instance, decreased consumer trust, as seen with explicit mentions of AI, can reduce conversion rates by 10–15 % [8]. Data privacy issues lead to legal risks and fines, as stipulated by GDPR, which increases operational costs. Manipulative practices, while capable of temporarily boosting sales, undermine long-term customer loyalty. High implementation costs of AI restrict the competitiveness of small enterprises, while automation requires investments in employee training to avoid social consequences, such as rising unemployment. Unequal access to technologies amplifies disparities, allowing major players like Coca-Cola or Nike to dominate the market while small businesses remain sidelined [20].

Practical examples corroborate these findings. For instance, Coca-Cola, which implemented transparent AI practices, increased sales by 25 %, while Nike enhanced customer engagement by 30 % through ethical technology use. These cases demonstrate that overcoming challenges is possible with a strategic approach.

Stage 3: Recommendations for Overcoming Challenges

To ensure the sustainable application of AI in marketing, the following measures are proposed, based on an interdisciplinary approach and aimed at balancing economic benefits with ethical standards:

Openness in Communication: Companies should inform customers about the use of AI, clarifying how algorithms process data. Tools like the Ethical Marketing Suite from SuperAGI enhance transparency and build trust.

Data Protection Technologies: Utilizing federated learning and differential privacy minimizes leak risks, ensuring compliance with international standards.

Ethical Standards: Developing regulations governing the use of AI prevents manipulative practices. This requires the involvement of ethics and legal experts.

Investment in Training: Employee retraining programs tailored to automation preserve employment and enhance productivity.

Support for Small Businesses: Government subsidies and grants for small enterprises will ensure equal access to AI, reducing economic inequality.

Environmentally Sustainable Solutions: The application of energy-efficient algorithms reduces costs and supports environmental responsibility.

Table 4 – Challenges of AI Implementation in Marketing

Challenge	Characterization
Consumer Trust	Algorithmic opacity reduces purchasing activity [1, p. 15]
Data Privacy	The risk of privacy breaches necessitates strict compliance with regulatory standards (e. g., GDPR) [2]
Manipulative Practices	The analysis of emotional data can undermine trust in the absence of ethical guidelines [3]
Implementation Costs	High initial investments limit accessibility for small and medium-sized enterprises (SMEs) [4]

Conclusions

The analysis demonstrates that the use of AI in marketing, while enhancing efficiency, necessitates addressing complex ethical and economic issues. Transparency in communication, data protection, and personnel training are key measures for building trust and minimizing risks. Supporting small businesses through government programs and implementing environmentally sustainable solutions will help reduce inequality and ensure long-term benefits. These steps, corroborated by the successes of Coca-Cola and Nike, form

https://doi.org/10.36773/1818-1112-2025-138-3-203-207

the foundation for the responsible application of AI, thereby promoting the sustainable development of marketing strategies.

The application of artificial intelligence in product promotion is fundamentally transforming marketing approaches, ensuring cost-effectiveness and creating new opportunities for customer engagement. Technologies such as machine learning, natural language processing, and big data analytics enable the development of personalized strategies, cost reduction, and the strengthening of market positions. Global examples, including Spotify, Amazon, and Accenture, demonstrate increased revenue, improved conversion rates, and process optimization. Meanwhile, Belarus cases, encompassing online retailers and virtual fitting technologies, highlight the potential for the local market.

However, these economic benefits are accompanied by challenges that require a comprehensive approach. Algorithmic opacity undermines consumer trust, data privacy concerns generate legal risks, and manipulative practices threaten brand reputation. High implementation costs limit access for small and medium-sized enterprises (SMEs), exacerbating market inequality, while automation necessitates workforce retraining. To systematize AI application, a classification by integration level is proposed: basic (task automation), adaptive (campaign optimization), and transformational (innovative business models). For Belarus businesses, the adaptive level is a priority, as it ensures growth in customer loyalty with moderate investment.

To address these challenges, several measures are proposed: transparent communication, data protection technologies, ethical guidelines, personnel training, support for small businesses, and environmentally sustainable solutions. These steps form the basis for the responsible use of AI, ensuring a balance between economic benefit and social responsibility, thereby contributing to the sustainable development of marketing strategies.

Table 5 – Measures for Addressing the Challenges

Measure	Description
Transparent Communication	Informing customers about the principles of AI operation to build and reinforce trust [7]
Data Protection	Implementing privacy-enhancing technologies (PETs) to ensure compliance with standards like GDPR [8]
Ethical Guidelines	Establishing AI governance frameworks with multi-stakeholder expert involvement to prevent manipulation [9, p. 8]
Workforce Training	Implementing upskilling and reskilling programs to facilitate employee adaptation to automation [10]
SME Support	Providing subsidies and grants to ensure equitable access to AI technologies for small businesses [11]
Environmental Sustainability	Adopting energy-efficient algorithms to mitigate the environmental footprint and operational costs [12]

References

1. Acemoglu, D. The simple macroeconomics of AI / Daron Acemoglu // Working Paper MIT Sloan. – 2025. – 45 p.
2. Jain, R. Artificial intelligence in marketing: A two-decades review / R. Jain, A. Kumar // NMIMS Management Review. – 2024. – Vol. 32, Iss. 2. – P. 75–83. – DOI: 10.1177/09711023241272308.
3. Ding, M. The Economics of Artificial Intelligence: A Marketing Perspective / M. Ding, A. Goldfarb // In: Artificial Intelligence in Marketing / ed. by S. Sudhir, O. Toubia. – Bingley : Emerald Publishing Limited, 2022. – P. 1–28.
4. Mende, M. Leveraging Service Robot Design and Service Encounters for Social Good: An Ethical Framework for the Use of Socially Interactive Service Robots in Service Provision / M. Mende, M. L. Scott, M. J. Bitner // Journal of Service Research. – 2023. – Vol. 26, Iss. 2. – P. 155–172.
5. Naz, H. Artificial intelligence and predictive marketing: an ethical framework from managers' perspective / H. Naz, M. Kashif // Spanish Journal of Marketing – ESIC. – 2024. – Vol. 29, Iss. 1. – P. 22–45. – DOI: 10.1108/SJME-06-2023-0154.
6. Rust, R. T. The Feeling Economy: How Artificial Intelligence Is Creating the Era of Empathy / R. T. Rust, M.-H. Huang // International Journal of Human–Computer Interaction. – 2022. – Vol. 38, Iss. 4. – P. 295–313. – DOI: 10.1080/10447318.2021.1925395.
7. Sinha, M. Navigating the ethics of AI in marketing: transparency, behavioral nudges, and their impact on sustainable consumerism and trust / M. Sinha, S. A. Salman, D. Pradhan // SGS – Humanities and Management. – 2025. – Vol. 1, Iss. 1. – URL: https://www.spast.org/index.php/sgshm/article/view/5315 (date of access: 01.09.2025).
8. Spence, M. AI and the Economy: The Implications for Growth and the Future of Work / M. Spence // IMF Finance & Development. – 2024. – URL: https://www.imf.org/en/Publications/fandd/issues/2024/06/AI-and-the-economy-Michael-Spence (date of access: 01.09.2025).
9. Huang, M.-H. A strategic framework for artificial intelligence in marketing / M.-H. Huang, R. T. Rust // Journal of the Academy of Marketing Science. – 2021. – Vol. 49. – P. 30–50. – DOI: 10.1007/s11747-020-00749-9.
10. Chintala, S. Artificial intelligence (AI) in marketing: A literature review / S. Chintala, S. K. Pandey // International Journal of Intelligent Networks. – 2022. – Vol. 3. – P. 119–132. – DOI: 10.1016/j.ijin.2022.08.005.
11. Artificial intelligence (AI) applications for marketing: A literature-based study / Abid Haleem, Mohd Javaid, Mohd Asim Qadri [et al.] // International Journal of Intelligent Networks. – 2022. – Vol. 3. – P. 119–132. – DOI: 10.1016/j.ijin.2022.08.005.
12. Naeem, R. Artificial intelligence enabled product–service innovation: past achievements and future directions / R. Naeem, M. Kohtamäki, V. Parida // Review of Managerial Science. – 2025. – Vol. 19. – P. 2149–2192. – DOI: 10.1007/s11846-024-00757-x.
13. Bormane, S. Artificial intelligence in the context of digital marketing communication / S. Bormane, E. Blaus // Frontiers in Communication. – 2024. – Vol. 9. – Art. 1411226. – DOI: 10.3389/fcomm.2024.1411226.
14. Dinesh Kumar. Ethical and legal challenges of AI in marketing: an exploration of solutions / Dinesh Kumar, Nidhi Suthar // Journal of Information, Communication and Ethics in Society. – 2024. – Vol. 22, Iss. 1. – P. 124–144. – DOI: 10.1108/JICES-05-2023-0068.
15. Gao, B. Artificial intelligence in advertising: advancements, challenges, and ethical considerations in targeting, personalization, content creation, and ad optimization / B. Gao, Y. Wang, Y. Hu [et al.] // SAGE Open. – 2024. – Vol. 14, Iss. 1. – Art. 21582440231210759. – DOI: 10.1177/21582440231210759.
16. Kumar, V. AI-powered marketing: What, where, and how? / V. Kumar, A. R. Ashraf, W. Nadeem // International Journal of Information Management. – 2024. – Vol. 77. – Art. 102783. – DOI: 10.1016/j.ijinfomgt.2024.102783.
17. Labib, E. Artificial intelligence in marketing: exploring current and future trends / E. Labib // Cogent Business & Management. – 2024. – Vol. 11, Iss. 1. – Art. 2348728. – DOI: 10.1080/23311975.2024.2348728.
18. Marvi, R. Past, present and future of AI in marketing and knowledge management / R. Marvi, P. Foroudi, M. T. Cuomo // Journal of Knowledge Management. – 2024. – Vol. 29, Iss. 11. – P. 1–31. – DOI: 10.1108/JKM-07-2023-0634.
19. Artificial intelligence in marketing: systematic review and future research direction / S. Verma, R. Sharma, S. Deb, D. Maitra // International Journal of Information Management Data Insights. – 2021. – Vol. 1, Iss. 1. – Art. 100002. – DOI: 10.1016/j.jjimei.2020.100002.
20. Digital frontiers: assessing the influence and ethical challenges of ai in online marketing / G.-E. Zaharia, I. G. Apostol, P. S. Savin, I. Tanase // Proceedings of the International Conference on Business Excellence. – 2024. – Vol. 18, Iss. 1. – P. 3699–3710. – DOI: 10.2478/picbe-2024-0300.

Material received 25.08.2025, approved 28.08.2025, accepted for publication 16.09.2025