

JEL Classification: D81, L21, M21, O33

DOI: <http://doi.org/10.34025/2310-8185-2024-4.96.02>

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## **THE USE OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN E-COMMERCE: EUROPEAN EXPERIENCE AND PROSPECTS FOR UKRAINE**

### *Summary*

In the context of rapid digital transformation, artificial intelligence (AI) technologies implementation is becoming crucial for e-commerce competitiveness. According to Eurostat, in 2024, 13.48% of EU enterprises use AI technologies, showing growth from 8.0% in 2023. Given Ukraine's European integration aspirations, there is a need to study and adapt EU experience in implementing AI in e-commerce.

The research aim is to analyze transformation processes in e-commerce systems under AI technologies influence, study EU experience, and identify development directions for Ukraine. Methodology is based on a systematic approach combining: analysis of relationships between e-commerce components, statistical analysis of quantitative data, comparative analysis of EU and Ukraine indicators, and economic modeling to assess AI implementation effects.

Analysis revealed differentiation in AI implementation across the EU by enterprise size (from 11.21% for small to 41.17% for large companies) and countries (leaders - Denmark (27.58%), Sweden (25.09%), Belgium (24.71%)). In Ukraine, AI implementation is 6.9%. Priority areas identified: text processing (26.9%), speech generation (21.2%), and speech recognition (18.7%). Recommendations for phased AI implementation were developed considering enterprise size and industry specifics, with three implementation horizons and differentiated approach.

The recommendations can be used for e-commerce enterprises' digital transformation strategies and state support programs. The proposed adaptation mechanisms optimize AI implementation and enhance Ukrainian enterprises' competitiveness.

Further research will focus on industry-specific AI implementation strategies and their economic efficiency evaluation in European integration context.

**Keywords:** artificial intelligence, e-commerce, digital transformation, European integration, innovative development.

**Number of sources – 15, number of tables – 3, number of drawings – 2.**

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