

# Artificial Intelligence Development Impact on the Lithuanian Agri-Food Industry

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## Abstract

Agri-food industry faces challenges to increase productivity and is one of the most unproductive industries. The intensity of agriculture is low, due to the insufficient level of automation and the lack of application of innovative solutions. Artificial intelligence can be rapidly integrated into agriculture due to its wide functional spectrum. Artificial intelligence technology is considered to be the most important moment in the digital transformation. Digital transformation is also envisaged in the supply chain of the agri-food industry. Increasing demands are placed on the actors of the supply chain in relation to environmental requirements, the implementation of sustainability changes, and the aim is to make the supply chain more efficient, focusing on the needs of consumers. Artificial intelligence technologies are being developed in Lithuania, which are applied in the agri-food industry, but the successful integration of artificial intelligence is hindered by social, technological and economic barriers. The object of research is artificial intelligence development in the agri-food industry. The aim of the research is to investigate the impact of artificial intelligence development on the Lithuanian agri-food industry. The study found that the main impact of artificial intelligence is to increase labor productivity. Other important functional impacts of artificial intelligence are the ability to control soil properties and water. The management of soil properties and water, the reduction of the probability of human error leads to higher productivity in the agri-food industry.

**Keywords:** development economics; digital transformation; economic growth; supply chain; technology development