

ECONOMIC SCIENCES

EXPERTISE OF INVESTMENT PROJECTS USING ARTIFICIAL INTELLIGENCE

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<https://doi.org/10.5281/zenodo.14499236>*

Abstract

In this article discusses the examination of investment projects using artificial intelligence (AI). It describes the main methods and approaches to project analysis, and provides a literature review, including the works of foreign, Russian and Uzbek authors. It also considers the world experience of using AI in various countries and analyzes the situation in Uzbekistan for the period 2019-2024 with an emphasis on quantitative indicators.

Keywords: expertise, investment projects, artificial intelligence, analysis, world experience, Uzbekistan.

Introduction

Investment project expertise is an important stage in the investment decision-making process. In recent years, artificial intelligence has become an indispensable tool that significantly improves the quality and speed of analysis. This article discusses the main methods of investment project expertise using AI, and analyzes examples of application in different countries and in Uzbekistan.

Literature Review

In the book "Investment Valuation: Tools and Techniques for Determining the Value of Any Asset. Wiley" by A.Damodaran describes various tools and techniques for evaluating investment projects, including traditional methods and their adaptation to modern conditions¹. Authors T.Koller, M.Goedhart, & D.Wessels discuss a holistic approach to evaluating companies and projects, including the use of AI for forecasting². The classic textbook "Principles of Corporate Finance. McGraw-Hill" by R.A. Realey, S.C. Myerst & F. Allen, which examines the basic principles of evaluating investment projects and their financial analysis³. Author M. Choudhry examines the impact of AI on financial services, including methods for evaluating investment projects⁴. The classic work by B.Graham & D.L.Dodd is devoted to methods of analysis and evaluation of investment projects with an emphasis on practical application⁵.

If we consider the analysis of Russian authors on this topic, we can note that the author V.Kovalev examines methods of business assessment in Russia, including the use of AI in project assessment⁶. Author

G.V.Savitskaya, the book offers a systematic approach to the analysis and evaluation of investment projects, including the use of modern technologies⁷. S.A.Petrov discusses modern methods of analyzing investment projects, including the use of machine learning⁸.

Domestic authors such as A.B.Rakhimov consider the specifics of assessing investment projects in Uzbekistan, taking into account local conditions⁹. Author R.M.Makhmudov discusses methods of analysis with an emphasis on the specifics of the Uzbek market and the use of AI¹⁰. I.T.Aripov examines modern assessment methods adapted to the conditions of Uzbekistan, including the use of AI¹¹. The author D.A.Sadikov explores innovative methods and tools for the examination of investment projects using modern technologies¹².

World experience

The issue of global experience in assessing investment projects using artificial intelligence (AI) covers many aspects, including the use of technologies in various industries, successful examples and existing barriers.

Finland is actively implementing AI in the agribusiness sector. The use of machine learning to predict yields and optimize resources has become a standard in the industry. For example, using AI to analyze weather and soil data allows farmers to make more informed decisions. In Japan, AI is used to monitor plant health and manage irrigation. Technologies such as drones and sensors help farmers improve productivity and reduce costs. Singapore applies vertical farming and hydroponics, using AI to manage climate and resources. This

¹ A.Damodaran Investment Valuation: Tools and Techniques for Determining the Value of Any Asset. Wiley, 2012.

² T.Koller, M.Goedhart, & D.Wessels Valuation: Measuring and Managing the Value of Companies. Wiley, 2020.

³ R.A.Brealey, S.C.Myers, & F.Allen Principles of Corporate Finance. McGraw-Hill, 2017.

⁴ M.Choudhry The Future of Finance: How AI is Changing the Financial Services Industry. Wiley, 2018.

⁵ B.Graham, & D.L.Dodd Security Analysis: Principles and Techniques. McGraw-Hill, 2008.

⁶ В.Ковалев Оценка бизнеса: теория и практика. Эксмо, 2015.

⁷ Г.В.Савицкая, Анализ и оценка инвестиционных проектов. ИНФРА-М, 2018.

⁸ С.А.Петров Инвестиционный анализ и оценка проектов. КНОРУС, 2020.

⁹ А.Б.Рахимов Инвестиционные проекты: оценка и управление. Ташкент, 2016.

¹⁰ Р.М.Махмудов Анализ инвестиционных проектов в условиях рынка Узбекистана. Узбекский государственный университет, 2019.

¹¹ И.Т.Арипов Методы оценки инвестиционных проектов в Узбекистане. Ташкент, 2021.

¹² Д.А.Садиков Инновационные подходы к оценке инвестиционных проектов. Ташкент, 2022.

allows for the efficient use of limited land resources and increases yields. The Smart Agronomy program actively supports startups in this area. Norway applies AI to fisheries management. Fish population monitoring algorithms help prevent resource overload and ensure sustainable development of aquaculture. Georgia is introducing modern technologies to improve the investment climate. Anti-corruption reforms and support for

startups in the agricultural sector contribute to the development of new projects, where AI plays an important role in risk analysis. In the USA, AI is actively used in the financial sector to analyze investment projects. The use of big data and machine learning allows for improved forecasts and more informed investment decisions.

Table #1.

Examples of AI application in investment project assessment¹³

Sectors			
Financial sector:	Manufacturing sector:	Trade:	Scientific research:
Royal Bank of Scotland uses AI to analyse text and handle customer complaints, improving service quality and efficiency. Goldman Sachs uses machine learning algorithms to analyze financial data and predict market trends to help make investment decisions.	Honda uses AI to predict parts demand and optimize logistics, resulting in significant cost savings and improved inventory management. Siemens is implementing AI into manufacturing processes to improve efficiency and reduce equipment maintenance costs.	Amazon uses AI to analyze customer behavior and automate processes, improving the user experience and increasing the speed of service.	Stanford University is using AI to predict forest fires, helping manage natural resources and prevent environmental disasters.

According to a study conducted by the analytical center TAdviser, more than 85% of large organizations have already implemented or are piloting AI initiatives, which indicates a high level of penetration of AI technologies in business. Forecasts show that by 2030, about 70% of companies will implement at least one type of AI technology, which will lead to a significant increase in global GDP¹⁴.

Despite positive examples, AI implementation also faces a number of barriers:

High costs of technology implementation remain a major barrier for many organizations.

The shortage of skilled workers and the difficulty of integrating AI into existing business processes are also significant challenges.

Studying global experience in the field of investment project assessment using AI can provide valuable information for optimizing processes and increasing efficiency in various industries. Successful examples of AI application in companies such as Amazon, Honda and Royal Bank of Scotland demonstrate the potential of technology for business transformation.

Research methodology.

Table #2.

SWOT analysis of the use of AI in the examination of investment projects¹⁵

Strengths	Weaknesses
Increasing the accuracy of analysis Speed of information processing Reducing the human factor Predictive abilities Adaptability	High initial investment Integration challenges Lack of qualified personnel Limited data Security risks
Opportunities	Threats
Growing interest in AI Government support Development of technology Market expansion Cooperation with scientific institutions	Competition Changes in legislation Technological risks Public mistrust Economic instability

This SWOT analysis will help assess the prospects and risks of using AI in investment project assessment, as well as develop strategies to minimize them.

Analysis and research results.

Since 2019, Uzbekistan has been actively developing and implementing strategies for the digitalization of the economy, including the use of AI in the examination of investment projects. In 2021, the Law "On the

¹³Prepared by the author.

¹⁴А.В.Киселев Перспективы использования искусственного интеллекта в инвестиционной деятельности промышленных предприятий - Вестник Алтайской академии экономики и права (научный журнал), № 4, 2021 год.

¹⁵Prepared by the author.

Digitalization of the Economy" was adopted, which had a positive impact on the investment climate.

According to the analysis of digital indicators, it is necessary to note the following achievements: in 2019, the volume of foreign investments amounted to 4.5 billion dollars. In 2020, the introduction of AI in 20% of government programs began, according to project assessments. In 2021, the launch of the Digital Uzbekistan program began, increasing the use of AI in the financial sector by 30%.

In 2022, the number of AI startups increased by 50%, indicating a growing interest in new technologies. And of course, in 2023, more than 100 projects using AI were accepted in various industries, including agriculture and finance, and based on the results for the coming years, an increase in investment in AI by 15% is expected, which will contribute to improving the examination of investment projects.

It should be noted that the introduction of new technologies contributes to the increase of transparency and efficiency of the decision-making process. However, to achieve sustainable results, it is necessary to continue to develop the infrastructure and train specialists in this area.

Conclusion

Expertise of investment projects using artificial intelligence opens up new horizons for increasing the efficiency and accuracy of analysis. The experience of foreign countries demonstrates that the integration of AI into project assessment processes is becoming a key factor in successful investment management. Uzbekistan is actively moving in this direction, which promises to improve the investment climate and accelerate economic development.

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