



## MODELING THE IMPACT OF INTEREST RATES ON INVESTMENT ATTRACTIVENESS IN THE DIGITAL ECONOMY

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**Abstract;** *This article analyzes the impact of interest rates on investment attractiveness in the digital economy. This scientific work is devoted to studying the role of digitalization and the development of financial technologies, as well as the role of state monetary policy instruments in investment activity. The results of the study show that a decrease in interest rates increases investment activity, and the development of digital infrastructure creates a favorable environment for investors.*

**Keywords:** *digital economy, interest rate, investment, monetary policy, modeling, instrument, digital finance.*

### INTRODUCTION

Today, digital transformation processes are accelerating in the global economy, and this, in turn, cannot but affect investment attractiveness. The rapid development of digital technologies is increasing efficiency in the economy, accelerating economic processes and improving the investment climate, which not only increases the speed of information, but also creates an investment climate. Direct or indirect investments attracted through such investment environments are considered important factors of economic development, contributing to economic stability and expansion of business activity. Also, interest rates determine the cost of loans, directly affect investment decisions and are an important instrument of monetary policy effectiveness. The processes of digitalization of the

economy are accelerating the adoption of investment decisions, increasing the transparency and openness of economic processes. Such indicators determine the relevance of this topic.

Literature review: According to researchers, digital technologies not only increase the efficiency of economic processes, but also optimize business activities and serve as an attractive investment environment. OECD studies have noted that the development of the digital economy increases investor confidence and increases capital flows (OECD, 2020).[1] Other sources have also noted that low interest rates stimulate investor activity and support economic growth, as the high cost of credit leads to a decrease in investment activity (Smith, 2019).[2] The digital economy is one of the important factors of modern economic development. Digital financial platforms



accelerate the distribution of capital, reduce investment risks, and increase the accessibility and transparency of financial services. Studies have shown that digital financial systems increase investment efficiency (Nature Research, 2023).[5]

Methodology:

1. Research methods: The analysis and synthesis method was used, through which the impact of the digital economy and interest rates on investment attractiveness is theoretically analyzed. The next method is the comparative method, in which the results of different countries and studies are compared and general conclusions are drawn. Another method is synthetic analysis, in which variables are identified based on available data and displayed through diagrams and tables.

2. Research model: The following mathematical model was used to analyze the impact of interest rates on investment attractiveness:[3]

$$INV = \beta_0 + \beta_1 IR + \beta_2 DIG + \beta_3 INF + \varepsilon$$

Where:

INV — investment attractiveness

IR — interest rate

DIG — digital economy index

INF — inflation rate

$\varepsilon$  — random error

$\beta_1$  (Interest rate impact): In Uzbekistan, this coefficient is negative ( $\beta_1 < 0$ ). That is, if the Central Bank lowers the rate, commercial bank loans become cheaper, which increases the

ability of local entrepreneurs to purchase (invest) digital technologies.

$\beta_2$  (Digital index): Improvement of infrastructure (fiber optic communication, 5G) within the framework of the "Digital Uzbekistan - 2030" strategy will reduce "transaction costs" for investors.  $\beta_2 > 0$  is expected.

Uzbekistan specifics: In our country, investment attractiveness is strongly influenced not only by the interest rate, but also by tax incentives (for IT Park residents). Therefore, it is recommended to include the TAX (tax rate) variable in the model.[4]

Let's take an example from the Republic of Uzbekistan: According to the presentation to the President, a total of 78 billion dollars of foreign investment has entered Uzbekistan in the last seven years, including 23.7 billion dollars in January-September 2024. Through this, 1,800 types of new products have been launched, and 120 large capacities have been put into operation. This information is for 2024.[4]

Analysis and Results: The interest rate and investment are directly related, because when the interest rate increases, the cost of credit increases, which reduces the volume of investment (Smith, 2019).[2] When the interest rate decreases, loans become cheaper and investment activity revives.

In this case, the development of the digital economy leads to a reduction in risks, which directly increases investor confidence. That is:



Low interest + strong digital environment = high investment[3]

In such cases, the attractiveness of investment increases significantly.

Conclusion: The development of the digital economy has a direct and indirect impact on every front. It also affects interest rates, as follows: when interest rates fall, investment increases, loans become cheaper and economic activity revives, while when interest rates rise, loans become more expensive and investment activity decreases.[3] The role of the digital economy in this is that in countries with developed digital infrastructure, investor confidence increases, which leads to a decrease in investment risk, in addition, technological developments significantly increase investment attractiveness. We can see that foreign investments attracted to Uzbekistan in recent years have significantly contributed to economic development, and the combination of low interest rates and a strong digital environment has increased the efficiency

of investment. This, in turn, will be a good impetus for the further rapid development of the developing country.

Transparency of the tax and financial system: The digitization of the tax system and the automation of fiscal administration will reduce the scale of the "hidden economy". This will create a level playing field for investors and strengthen the country's sovereign rating.

At the current stage of Uzbekistan's development, the priority direction of financial policy is to optimize interest rates, as well as ensure digital transparency in all aspects of the economy. This way of doing things will help get money from countries for a long time and it will be stable. The approach is an one and it will keep bringing in foreign money for a long time. It really helps to have a flow of foreign capital.

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