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PROBLEMS IN SOCIO-ECONOMIC ANALYSIS OF DIGITAL INFRASTRUCTURE PROJECTS

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Annotation

This article analyzes the main problems that arise in the process of assessing the socio-economic effectiveness of digital infrastructure projects. In the context of the rapid development of digital technologies, the assessment of infrastructure projects using traditional economic analysis methods has a number of limitations. The article highlights these limitations, including data gaps, difficulties in measuring intangible benefits, and the influence of institutional factors. It also puts forward scientific and practical proposals to overcome the problems.

Keywords

digital infrastructure, socio-economic analysis, efficiency, investment projects, digital economy.

In recent years, the rapid development of the digital economy has sharply increased the attention of the public and private sectors to digital infrastructure projects. Telecommunications networks, data centers, e-government platforms, digital service infrastructure are becoming an important factor in economic growth. However, analyzing the socio-economic effectiveness of such projects is more complex than traditional infrastructure projects. Therefore, identifying and solving problems that arise in the evaluation of digital infrastructure projects is one of the urgent issues.

Digital infrastructure projects are emerging as important drivers of economic development. These projects differ from traditional infrastructure initiatives in a number of ways. First of all, the creation of digital infrastructure requires high levels of investment, and the rapid obsolescence of the technologies used significantly affects the effectiveness of the project.

Moreover, such projects are not short-term, but long-term in nature, and their social impact is often indirect. Intangible assets, in particular data, software and intellectual resources, play an important role in digital infrastructure. There are also strong network effects, and the value of the project increases with the number of users. These aspects complicate the accurate assessment of the socio-economic effectiveness of digital infrastructure projects..

Challenges in Socio-Economic Analysis of Digital Infrastructure Projects

Difficulties in Identifying Intangible Social Benefits

Digital infrastructure projects often generate broader social benefits for society, rather than generating direct financial returns. For example, the electronic transfer of public services reduces the time spent by the population, reduces bureaucratic barriers, and increases the transparency of governance processes. However, such results are difficult to assess in monetary terms and cannot be fully reflected within the framework of traditional economic calculations.

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Insufficient statistical information

In many developing countries, statistical indicators on the digital economy and infrastructure are not sufficiently developed. As a result, the ability to determine the effectiveness of projects both at the planning stage and during their implementation is limited.

Incompatibility of traditional valuation methods

Methods such as NPV, IRR and cost-benefit analysis, which are widely used in the evaluation of investment projects, do not fully capture the complex and multifaceted impact of digital infrastructure projects. These methods are mainly based on material and short-term results and are insufficient for assessing long-term social and institutional impact.

High level of technological risks

As a result of the rapid development of digital technologies, technical solutions implemented today may become obsolete in a short time. This is a significant factor reducing the effectiveness of the project and is difficult to accurately take into account in the process of socio-economic analysis.

The impact of the institutional environment

The lack of a legal framework, governance mechanisms, and qualified personnel can cause digital infrastructure projects to fail to achieve the expected results. Therefore, ignoring institutional factors leads to errors in project evaluation.

Areas for solving problems

To effectively assess the socio-economic aspects of digital infrastructure projects, it is necessary to implement a number of improvement measures. In particular, it is important to develop a system of indicators that will allow identifying intangible and indirect social benefits. It is also necessary to develop and update the statistical information base on the digital economy.

In general, the socio-economic analysis of digital infrastructure projects is a complex and multi-factorial process. Taking into account the existing problems in this area, improving assessment mechanisms and applying an integrated approach will help increase the effectiveness of digital infrastructure projects. This is of great importance in accelerating the digital transformation of the country's economy.

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