

THEORETICAL ASPECT ON REGIONAL INVESTMENT PROJECTS IN THE AGRICULTURAL SECTOR OF SUGHD REGION

Boturova Farzona Ilhomjonovna, Second-Year Doctoral PhD Student of the Faculty Economics, SEI «KhSU named after acad. B.Gafurov» (Tajikistan, Khujand)

ҶАНБАИ НАЗАРИЯВӢ ОИД БА ЛОИӢАӢОИ МИНТАҚАВИИ САРМОЯГУЗОРӢ ДАР ХОҶАГИИ ҚИШЛОҚИ ВИЛОЯТИ СУҒД

Ботурова Фарзона Илҳомҷоновна, докторанти курси дуюми факултети иқтисоди МДТ «ДДХ ба номи акад. Б.Ғафуров» (Тоҷикистон, Хуҷанд)

ТЕОРЕТИЧЕСКИЙ АСПЕКТ РЕГИОНАЛЬНЫХ ИНВЕСТИЦИОННЫХ ПРОЕКТОВ В СЕЛЬСКОМ ХОЗЯЙСТВЕ СОГДИЙСКОЙ ОБЛАСТИ

Ботурова Фарзона Илҳомдҷоновна, докторант второго года обучения экономического факультета ГОУ «ХГУ им. акад. Б.Ғафурова» (Таджикистан, Худжанд)

Keywords: regional investment, agricultural development, Sughd region, Tajikistan, economic theory, sustainable agriculture, investment appraisal.

The given article dwells on the theoretical underpinnings of regional agricultural investment projects in Sughd drawing upon established economic theories, including neoclassical growth theory, endogenous growth, regional disparities, and institutional economics. The author of the article analyzes the specific challenges and opportunities present in Sughd, including land degradation, water scarcity, limited access to finance, and underdeveloped infrastructure. The article proposes a theoretical framework for evaluating and prioritizing investment projects, emphasizing the importance of sustainability, inclusivity, and alignment with national development goals. The author of the article comes to the conclusion that the need for further empirical research to validate and refine these theoretical perspectives in the context of Sughd's unique socio-economic landscape.

Калидвожаҳо: сармоягузориҳои минтақавӣ, рушди кишоварзӣ, вилояти Суғд, Тоҷикистон, назарияи иқтисодӣ, кишоварзии устувор, арзёбии сармоягузори.

Дар ин мақола асосҳои назариявии лоиҳаҳои сармоягузори минтақавии кишоварзӣ дар вилояти Суғд бо таъки ба назарияҳои муқарраршудаи иқтисодӣ, аз ҷумла назарияи неоклассикии афзоиш, рушди эндогенӣ, нобаробарии минтақавӣ ва иқтисоди институтсионалӣ баррасӣ мешавад. Муаллифи мақола мушкилоту имкониятҳои мушаххас дар вилояти Суғд, аз ҷумла таназзули замин, нарасидани об, дастрасии маҳдуд ба молия ва инфрасохтори заифро таҳлил кардааст. Дар мақола ҷаҳорҷӯбаи назариявӣ барои арзёбӣ ва афзалият додани лоиҳаҳои сармоягузори пешниҳод шуда, аҳамияти устуворӣ, фарогирӣ ва мувофиқат бо ҳадафҳои рушди миллӣ таъкид шудааст. Муаллифи мақола ба хулосае омадааст, ки барои тасдиқ ва равшан кардани ин дурнамои назариявӣ дар заминаи манзараи нодири иҷтимоию иқтисодии Суғд таҳқиқоти минбаъдаи таҷрибавӣ зарур аст.

Ключевые слова: региональные инвестиции, развитие сельского хозяйства, Согдийская область, Таджикистан, экономическая теория, устойчивое сельское хозяйство, оценка инвестиций.

В данной статье рассматриваются теоретические основы региональных сельскохозяйственных инвестиционных проектов в Согде с опорой на устоявшиеся экономические теории, включая неоклассическую теорию роста, эндогенного роста, региональных различий и институциональную экономику. Автор статьи анализирует конкретные проблемы и возможности, имеющиеся в Согде, включая деградацию земель, нехватку воды, ограниченный доступ к финансам и неразвитую инфраструктуру. В статье предлагается теоретическая основа для оценки и приоритизации инвестиционных проектов, подчеркивая важность устойчивости, инклюзивности и соответствия национальным целям развития. Автор статьи приходит к выводу о необходимости дальнейших эмпирических исследований для подтверждения и уточнения этих теоретических перспектив в контексте уникального социально-экономического ландшафта Согда.

1. Introduction

Tajikistan's economy is heavily reliant on agriculture, which contributes significantly to employment and GDP (Statistical Yearbook of the Republic of Tajikistan, 2023). The Sughd region, located in the northern part of the country, is a key agricultural area, known for its production of cotton, fruits, vegetables, and livestock.

This paper aims to provide a theoretical framework for understanding and evaluating regional investment projects in Sughd. We will draw upon relevant economic theories to identify key factors influencing investment decisions, analyze the potential impacts of different types of projects, and propose criteria for prioritization. The ultimate goal is to contribute to a more informed and effective investment strategy that promotes sustainable and inclusive agricultural development in the region.

2. Materials and Methods

This study adopts a primarily theoretical approach, drawing upon a comprehensive review of existing literature and established economic models. The research methodology involves the following steps:

1. Literature Review: We conducted a thorough review of academic journals, books, reports from international organizations (e.g., World Bank, FAO, ADB, UNDP), government publications, and relevant statistical data from the Tajik Statistical Agency. The focus was on publications from 2010 to 2023 to ensure relevance to the current context. Based on the literature review, we identified key economic theories relevant to understanding regional agricultural investment.

3. Conceptual Model Development: We developed a conceptual model to illustrate the relationships between different types of investment projects, their potential impacts, and the relevant theoretical frameworks. This model serves as a guide for analyzing and prioritizing investment opportunities.

4. Theoretical Analysis: We used the identified theories and the conceptual model to analyze the potential impacts of different types of investment projects in Sughd's agricultural sector. This analysis considers both short-term and long-term effects, as well as potential trade-offs and synergies.

5. Limitations: This study is primarily theoretical. Empirical data collection and analysis are needed to validate and refine the proposed framework. The availability of reliable data on investment projects and their impacts in Sughd is a potential limitation.

3. Main results

The application of the theoretical frameworks identified in the Methods section to the context of Sughd's agricultural sector yields the following results:

3.1 Neoclassical Growth Theory and Agricultural Investment

Neoclassical growth theory suggests that investment in physical capital (e.g., irrigation infrastructure, farm machinery, storage facilities) is crucial for increasing agricultural productivity and output. In Sughd, where capital scarcity is a significant constraint, such investments can have a substantial impact. However, the theory also highlights the importance of technological progress. Simply increasing the quantity of capital without improving its quality or efficiency will lead to diminishing returns.

Therefore, investments should be coupled with efforts to adopt new technologies, such as drought-resistant crop varieties, improved irrigation techniques, and modern farming practices.

– **Example:** Investing in drip irrigation systems (capital accumulation) combined with training farmers on their efficient use (technological progress) is likely to be more effective than simply expanding traditional flood irrigation.

3.2 Endogenous Growth Theory and Human Capital Development

Endogenous growth theory emphasizes the role of human capital and innovation in driving long-term growth. In Sughd, this implies that investments in agricultural education, research, and extension services are essential.

– *Education:* to improving the skills and knowledge of farmers through training programs and vocational education can enhance their ability to adopt new technologies and manage their farms more efficiently.

– *Research:* to investing in agricultural research to develop locally adapted crop varieties, improve soil fertility, and address pest and disease problems is crucial for increasing productivity.

– *Extension Services:* to strengthen extension services to disseminate research findings and provide technical assistance to farmers is essential for ensuring that new knowledge is translated into practice.

3.3 Theory of Regional Disparities and Sughd's Specific Challenges

The theory of regional disparities helps to explain why Sughd, despite its agricultural potential, lags behind other regions in Tajikistan. Factors such as its relatively remote location, limited access to markets, and underdeveloped infrastructure contribute to its lower level of development. Investment projects should address these specific constraints.

– *Infrastructure*: to improve rural roads, transportation networks, and storage facilities can reduce transportation costs, minimize post-harvest losses, and improve access to markets.

– *Market Access*: to support the development of value chains, promoting agricultural exports, and facilitating access to market information can increase farmers' incomes.

– *Institutional Strengthening*: to improve governance, reducing corruption, and strengthening property rights can create a more favorable investment climate [1; 2; 3].

3.4 Sustainable Development Principles and Long-Term Viability

Investments in Sughd's agricultural sector should be guided by the principles of sustainable development. This means considering not only economic benefits but also environmental and social impacts.

– *Environmental Sustainability*: to promote sustainable agricultural practices, such as conservation agriculture, integrated pest management, and efficient water use, is essential for protecting natural resources and ensuring long-term productivity [2].

– *Social Inclusivity*: to invest the projects should benefit all segments of the population, including smallholder farmers, women, and vulnerable groups. This requires targeted interventions and participatory approaches [4, p. 8].

– *Climate Change Resilience*: investments should be designed to enhance the resilience of the agricultural sector to climate change impacts, such as droughts and floods [9].

3.5 Conceptual Model

A conceptual model illustrating the relationships between investment types, theoretical frameworks, and expected outcomes is presented below:

Input: Investment Types:

Physical Capital (Irrigation, Machinery, Storage);

Human Capital (Education, Research, Extension);

Infrastructure (Roads, Transport, Markets);

Institutional Strengthening (Property Rights, Finance, Governance).

Mediating Factors: Theoretical Frameworks:

Neoclassical Growth Theory;

Endogenous Growth Theory;

Theory of Regional Disparities;

Institutional Economics;

Sustainable Development Principles.

Output: Expected Outcomes:

Increased Agricultural Productivity;

Higher Farm Incomes;

Improved Food Security;

Reduced Poverty;

Enhanced Environmental Sustainability;

Greater Social Inclusivity;

Improved Climate Resilience [5; 6; 9].

4. Discussion

The theoretical analysis suggests that a multi-faceted approach to investment is needed to unlock the agricultural potential of Sughd region. Simply focusing on one type of investment (e.g., irrigation infrastructure) without addressing other constraints (e.g., access to finance, market access, institutional weaknesses) is unlikely to yield sustainable results.

4.1 Prioritizing Investment Projects

Given limited resources, it is crucial to prioritize investment projects based on their potential impact and cost-effectiveness. A framework for project appraisal should consider the following criteria:

– *Economic Viability*: Projects should have a positive net present value (NPV) and a high internal rate of return (IRR), indicating that they are economically feasible.

- *Social Impact*: Projects should contribute to poverty reduction, improved food security, and enhanced social inclusion.
- *Environmental Sustainability*: Projects should minimize negative environmental impacts and promote sustainable resource management
- *Institutional Feasibility*: Projects should be aligned with existing institutional frameworks and have a high likelihood of successful implementation
- *Alignment with National Development Goals*: Projects should contribute to the achievement of Tajikistan's national development priorities, such as those outlined in the National Development Strategy [7].
- *Climate Change Adaptation and Mitigation*: Prioritize projects that enhance the resilience of agriculture to climate change and/or reduce greenhouse gas emissions from the sector [8].

4.2 Potential Investment Areas

Based on the theoretical framework and the specific challenges facing Sughd, the following areas are identified as potential priorities for investment:

- *Sustainable Irrigation Infrastructure*: to modernize irrigation systems promoting water-efficient technologies (e.g., drip irrigation, sprinkler irrigation), and improving water management practices;
- *Agricultural Research and Development*: to develop and disseminate climate-resilient crop varieties, improving soil fertility management, and addressing pest and disease problems;
- *Rural Infrastructure Development*: to improve the rural roads, transportation networks, storage facilities, and processing plants to reduce post-harvest losses and improve market access;
- *Access to Finance*: to expand the access to credit, microfinance, and other financial services for smallholder farmers, particularly women;
- *Capacity Building*: to provide training and technical assistance to farmers, extension workers, and other stakeholders in the agricultural sector;
- *Value Chain Development*: to support the development of value chains for key agricultural products, linking farmers to markets, and promoting value addition;
- *Institutional Strengthening*: to improve land tenure security, strengthening contract enforcement, and promoting good governance in the agricultural sector;
- *Renewable energy*: to invest in renewable energy such as solar power for pumping.

4.3 The Role of Public and Private Investment

Both public and private investment are needed to achieve sustainable agricultural development in Sughd. Public investment is crucial for providing public goods, such as infrastructure, research, and extension services. Private investment is essential for driving innovation, increasing efficiency, and expanding market access. Public-private partnerships (PPPs) can be an effective mechanism for leveraging both public and private resources.

4.4 The Importance of Monitoring and Evaluation

Regular monitoring and evaluation of investment projects are essential for ensuring accountability, learning from experience, and making adjustments as needed. A robust monitoring and evaluation framework should track project inputs, outputs, outcomes, and impacts, using both quantitative and qualitative indicators.

5. Conclusion

The given article provides a theoretical framework for understanding and evaluating regional investment projects in the agricultural sector of Sughd region. The analysis highlights the importance of a holistic approach that considers economic, social, and environmental factors. Key theoretical perspectives, including neoclassical growth theory, endogenous growth theory, the theory of regional disparities, and institutional economics, provide valuable insights into the drivers of agricultural development and the constraints that need to be addressed.

The proposed framework emphasizes the need for prioritizing investment projects based on their potential impact, cost-effectiveness, and alignment with national development goals. Potential investment areas include sustainable irrigation infrastructure, agricultural research and development, rural infrastructure development, access to finance, capacity building, value chain development, and institutional strengthening.

Further empirical research is needed to validate and refine these theoretical perspectives in the context of Sughd's unique socio-economic landscape. This includes collecting data on the performance of existing investment projects, conducting impact evaluations, and analyzing the effectiveness of

different policy interventions. A rigorous and evidence-based approach to investment planning and implementation is essential for achieving sustainable and inclusive agricultural development in the region.

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