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**STATE SUPPORT MECHANISMS FOR EXTRA-BUDGETARY REVENUE GENERATION
IN ENTREPRENEURIAL UNIVERSITIES: DEVELOPING AN INTEGRATED
CONCEPTUAL FRAMEWORK FOR HIGHER EDUCATION INSTITUTIONS IN
AZERBAIJAN**

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Abstract. *The growing importance of entrepreneurial universities has increased the need for diversified and sustainable financing mechanisms in higher education. This study examines the role of state support mechanisms in promoting extra-budgetary revenue generation within entrepreneurial universities and develops an integrated conceptual framework for higher education institutions in Azerbaijan. The research is based on a qualitative methodology incorporating literature review, comparative policy analysis, and examination of national regulatory and strategic documents. Evidence suggests that entrepreneurial activities such as research commercialization, technology transfer, consultancy services, startup incubation, and university-industry cooperation represent important sources of additional institutional income. The study further demonstrates that effective state support, including innovation grants, commercialization programs, regulatory incentives, and partnership initiatives, significantly enhances universities' entrepreneurial capacity and financial sustainability. The assessment highlights that although Azerbaijan has established a supportive policy framework for innovation-oriented higher education development, the commercialization of research and diversification of revenue sources remain limited. The proposed conceptual framework illustrates the relationship between state support mechanisms, entrepreneurial university development, and extra-budgetary revenue generation. The study contributes to the literature by integrating these dimensions into a unified analytical framework and offers policy recommendations aimed at strengthening the financial sustainability, competitiveness, and innovation performance of higher education institutions in Azerbaijan.*

Keywords: *entrepreneurial university, state support mechanisms, extra-budgetary revenue generation, financial sustainability, higher education institutions.*

Relevance of the topic. The transformation of higher education institutions (HEIs) into entrepreneurial and innovation-driven organizations has become a defining trend in contemporary higher education systems. In the context of globalization, technological advancement, and the transition toward knowledge-based economies, universities are increasingly expected to move beyond their traditional missions of teaching and research and actively contribute to economic development, innovation, and social progress. This transformation has led to the emergence of the entrepreneurial university model, which emphasizes knowledge commercialization, industry collaboration, startup creation, and diversified revenue generation as key components of institutional development. (Johnstone, 2013; OECD, 2021)

Simultaneously, higher education institutions worldwide are facing growing financial challenges. Declining public funding, increasing operational costs, expanding research responsibilities, and the need for continuous investment in digital and innovation infrastructure have intensified the search for alternative financial resources. Consequently, the diversification of university revenues through extra-budgetary funding sources has become an important strategy for ensuring financial sustainability and institutional competitiveness. Entrepreneurial activities such as technology transfer, patent licensing, contract research, consultancy services, executive education, and university-industry partnerships

provide significant opportunities for generating additional income while strengthening universities' contributions to national innovation systems. (Shattock, 2010; OECD, 2023)

International experience demonstrates that the successful implementation of entrepreneurial university models is strongly influenced by government support. State interventions, including innovation grants, research commercialization programs, tax incentives, startup support mechanisms, and university-industry cooperation initiatives, play a critical role in creating favorable conditions for entrepreneurial development. These mechanisms help universities overcome institutional and financial barriers, enhance innovation capacity, and expand their extra-budgetary revenue streams. (European Commission, 2022; OECD, 2023)

The relevance of this issue is particularly evident in Azerbaijan, where higher education institutions continue to rely predominantly on state funding and tuition fees. Although recent reforms have promoted innovation and modernization within the higher education sector, the contribution of entrepreneurial activities to university financing remains limited. Therefore, identifying effective state support mechanisms that can stimulate entrepreneurial initiatives and diversify university revenues has become an important policy objective. (Azerbaijan Republic, 2009; President of the Republic of Azerbaijan, 2015, 2018)

This study is relevant because it addresses a significant gap in the existing literature by examining the relationship between state support and extra-budgetary revenue generation within the framework of the entrepreneurial university model. By proposing an integrated conceptual framework for Azerbaijan, the research contributes to both academic discussions and policy development aimed at strengthening the financial sustainability, autonomy, and innovative capacity of higher education institutions.

Problem Statement. Higher education institutions (HEIs) worldwide are operating in an increasingly complex environment characterized by financial constraints, growing societal expectations, rapid technological change, and intensified global competition. While universities are traditionally responsible for teaching and research, they are now also expected to contribute to innovation, entrepreneurship, technology transfer, and economic development. Fulfilling these expanded responsibilities requires substantial financial resources, yet public funding alone is often insufficient to support long-term institutional growth and sustainability (Johnstone, 2013; OECD, 2021).

In response to these challenges, the entrepreneurial university model has emerged as an important approach for diversifying university revenues through activities such as research commercialization, patent licensing, consultancy services, contract research, startup incubation, and industry partnerships. International experience demonstrates that entrepreneurial universities are more capable of generating extra-budgetary revenues and reducing dependence on traditional funding sources. However, the successful implementation of entrepreneurial initiatives often depends on supportive government policies, regulatory frameworks, and financial incentives (Clark, 1998; Guerrero et al., 2016).

In Azerbaijan, higher education institutions continue to rely primarily on state budget allocations and tuition fees. Although recent reforms have emphasized innovation and university-industry cooperation, the contribution of entrepreneurial activities to university financing remains limited. Existing mechanisms for supporting research commercialization, technology transfer, and entrepreneurial development are still evolving, creating barriers to revenue diversification and institutional financial sustainability (Qasımlı, 2022).

Furthermore, current academic literature provides limited analysis of how state support mechanisms can stimulate entrepreneurial activities and enhance extra-budgetary revenue generation within Azerbaijani universities. This creates a significant theoretical and practical gap in higher education policy research.

Therefore, the main problem addressed in this study is the lack of an integrated conceptual framework explaining the relationship between state support mechanisms, entrepreneurial university development, and extra-budgetary revenue generation in Azerbaijan. Addressing this issue is essential

for strengthening the financial sustainability and competitiveness of higher education institutions in the country.

Research aims and objectives. The aim of this study is to examine the role of state support mechanisms in promoting extra-budgetary revenue generation within entrepreneurial universities and to develop an integrated conceptual framework for higher education institutions in Azerbaijan. The objectives are to analyze international practices, identify key support mechanisms, assess existing challenges, and propose policy recommendations to enhance universities' financial sustainability and entrepreneurial capacity.

Research Objectives. To achieve this aim, the following objectives have been formulated:

- To explore the theoretical and conceptual foundations of the entrepreneurial university model and its role in the transformation of higher education institutions;
- To examine the relationship between entrepreneurial university development, financial sustainability, and extra-budgetary revenue generation in higher education;
- To analyze international experience and best practices regarding state support mechanisms for entrepreneurial universities and university revenue diversification;
- To identify the main sources of extra-budgetary revenues, including research commercialization, technology transfer, patent licensing, consultancy services, industry partnerships, and startup development;
- To assess the current state and specific characteristics of entrepreneurial activities and extra-budgetary revenue generation within higher education institutions in Azerbaijan;
- To investigate the legal, financial, institutional, and organizational factors influencing the entrepreneurial capacity of universities;
- To evaluate the effectiveness of existing state support mechanisms aimed at promoting innovation, entrepreneurship, and university-industry collaboration;
- To develop an integrated conceptual framework explaining how state support mechanisms can enhance extra-budgetary revenue generation in entrepreneurial universities;
- To formulate policy recommendations for strengthening financial sustainability, institutional autonomy, innovation capacity, and entrepreneurial performance in higher education institutions in Azerbaijan.

Literature Review. The concept of the entrepreneurial university has become one of the most influential paradigms in higher education research and policy over the past three decades. Increasing globalization, technological advancement, and the transition toward knowledge-based economies have significantly expanded the traditional missions of universities. Higher education institutions are no longer expected solely to provide education and conduct research; they are also required to contribute directly to innovation, technology transfer, entrepreneurship, and economic development. As a result, universities have increasingly adopted entrepreneurial functions aimed at generating social and economic value through the commercialization of knowledge and the diversification of financial resources (Clark, 1998; Etzkowitz, 2003). Contemporary research suggests that entrepreneurial universities play a central role in strengthening national innovation systems by creating links among education, research, business, and government institutions (Guerrero et al., 2016).

The theoretical foundations of the entrepreneurial university model are closely associated with the Triple Helix theory developed by Etzkowitz and Leydesdorff (2000). This framework emphasizes the interaction between universities, industry, and government as a key driver of innovation and economic growth. According to this perspective, universities have evolved from traditional knowledge-producing institutions into proactive economic actors capable of generating innovation, creating startups, and participating in regional development processes. The Triple Helix model has become one of the most widely applied theoretical approaches for understanding entrepreneurial transformation within higher education and has significantly influenced higher education policies across both developed and developing countries (Clark, 1998).

A substantial body of literature examines the relationship between entrepreneurial activities and university financial sustainability. Clark (1998) identifies diversified funding as one of the defining

characteristics of entrepreneurial universities. In this regard, revenue diversification has become a strategic objective for higher education institutions facing increasing financial pressures and declining dependence on traditional public funding mechanisms. Research demonstrates that entrepreneurial universities generate extra-budgetary revenues through various channels, including contract research, consultancy services, executive education programs, technology transfer activities, intellectual property licensing, startup incubation, and international cooperation projects (Shattock, 2010; OECD, 2023). Such activities strengthen institutional autonomy, increase organizational flexibility, and reduce financial vulnerability associated with reliance on a single source of funding (Etzkowitz, 2003).

Another important direction in the literature concerns the role of government support in fostering entrepreneurial university development. Although entrepreneurial universities are expected to generate independent revenues, international experience demonstrates that successful entrepreneurial transformation rarely occurs without supportive public policies and institutional frameworks. According to OECD (2023) and the European Commission (2022), governments play a critical role in establishing favorable conditions for university entrepreneurship through innovation grants, technology transfer programs, startup financing mechanisms, research commercialization funds, and performance-based funding systems. These support instruments help universities overcome institutional barriers, stimulate innovation activities, and strengthen collaboration with industry and society (Etzkowitz & Leydesdorff, 2000).

Russian-language scholarship has also contributed significantly to the development of entrepreneurial university theory. Андреев (2018) argues that universities must adopt entrepreneurial principles to remain competitive within rapidly changing socio-economic environments. Similarly, Степкина (2020) emphasizes that entrepreneurial activity should be viewed not merely as an additional source of revenue but as a strategic instrument for strengthening institutional sustainability and innovation capacity. Research by Кларин (2019) further highlights the importance of technology transfer offices, innovation infrastructure, and university-business partnerships as mechanisms for enhancing competitiveness and financial independence (Guerrero et al., 2016).

The issue of higher education financing has attracted growing attention in both international and national literature. Studies indicate that traditional funding models based primarily on public expenditures are increasingly challenged by rising educational costs, technological investments, and growing research demands. Consequently, universities worldwide are seeking alternative funding sources to ensure long-term sustainability (Johnstone, 2013; OECD, 2023). Evidence suggests that institutions combining public financing with entrepreneurial income streams are generally more resilient, innovative, and adaptable to changing economic conditions (Shattock, 2010).

In Azerbaijan, discussions concerning university financing and entrepreneurial development have intensified in recent years. Qasımlı (2022) argues that the development of a knowledge-based economy requires universities to become more innovative, flexible, and financially sustainable institutions. Likewise, Rzayev, Məmmədov and İsmayılov (2010) emphasize the importance of modern governance approaches and diversified financing mechanisms in strengthening higher education competitiveness. Recent national studies on higher education financing further highlight the growing necessity of university-industry cooperation, international projects, and research commercialization as alternative sources of institutional income. The increasing financial demands placed upon universities have reinforced the need for sustainable extra-budgetary revenue generation mechanisms capable of complementing public funding and tuition-based income sources.

The policy and legal framework of Azerbaijan also reflects increasing support for entrepreneurial transformation in higher education. The Law on Education establishes provisions for state grants, research funding, and investment support mechanisms intended to strengthen educational and scientific development. Furthermore, the State Strategy for the Development of Education envisages the transformation of higher education institutions into education-research-innovation centers and supports greater institutional autonomy and innovation-oriented governance. The State Program on Increasing the International Competitiveness of Higher Education Institutions (2019–2023) similarly emphasizes internationalization, innovation capacity building, research development, and cooperation with leading

global universities as strategic priorities for higher education modernization. In addition, the Regulation on Extra-Budgetary Funds of State-Financed Organizations provides a legal basis for public institutions, including universities, to generate revenues through legally authorized services and activities, thereby creating new opportunities for revenue diversification and entrepreneurial development.

Despite the growing body of literature on entrepreneurial universities, financial sustainability, and higher education financing, important research gaps remain. Existing studies generally examine entrepreneurial activities, university financing, or state support mechanisms separately. Limited attention has been devoted to understanding how government support instruments directly influence extra-budgetary revenue generation within entrepreneurial universities, particularly in emerging higher education systems such as Azerbaijan. Therefore, there is a clear need for an integrated conceptual framework capable of explaining the interaction between state support mechanisms, entrepreneurial university development, and revenue diversification. Addressing this gap constitutes the primary theoretical contribution of the present study and provides the foundation for the conceptual framework proposed in subsequent sections.

The open innovation perspective introduced by Chesbrough (2003) argues that universities increasingly rely on external partnerships, collaborative research networks, and knowledge-sharing mechanisms to enhance innovation performance and commercialization outcomes. Recent reports published by the World Bank (2021) and the World Economic Forum (2023) further emphasize that entrepreneurial universities have become essential actors in strengthening national competitiveness, technological development, and sustainable economic growth.

Materials and Methods. Research methods. This study employs a qualitative research design based on a comprehensive review of academic literature, policy documents, and regulatory frameworks related to entrepreneurial universities, higher education financing, and state support mechanisms. The research is grounded in conceptual and comparative analysis, enabling the examination of international experiences and their applicability to the higher education system of Azerbaijan.

The study utilizes several research methods, including literature review, comparative analysis, document analysis, and conceptual modeling. The literature review examines international and national scholarly sources on entrepreneurial universities, revenue diversification, and financial sustainability. Comparative analysis is applied to evaluate state support mechanisms implemented in different countries and identify best practices. Document analysis focuses on relevant Azerbaijani legislation, state programs, and policy documents regulating higher education financing and extra-budgetary revenue generation. Based on the findings, a conceptual framework is developed to explain the relationship between state support mechanisms and extra-budgetary revenue generation in entrepreneurial universities. This methodological approach allows for the formulation of evidence-based conclusions and policy recommendations for higher education institutions in Azerbaijan.

Materials used. The study is based on a combination of academic, policy, and legal sources related to entrepreneurial universities, higher education financing, and state support mechanisms. The primary materials include international scholarly publications, books, and reports produced by organizations such as the OECD, European Commission, and World Bank. Particular attention is given to studies addressing entrepreneurial university development, revenue diversification, innovation ecosystems, and financial sustainability in higher education.

In addition, national policy and regulatory documents of the Republic of Azerbaijan are utilized, including the Law on Education, the State Strategy for the Development of Education, the State Program on Increasing the International Competitiveness of Higher Education Institutions (2019–2023), and the Regulation on Extra-Budgetary Funds of State-Financed Organizations. These materials provide the empirical and institutional basis for analyzing state support mechanisms and their role in promoting entrepreneurial activities and extra-budgetary revenue generation in Azerbaijani universities.

Results. The analysis of international practices and the Azerbaijani higher education policy framework reveals that the successful development of entrepreneurial universities is strongly associated with the availability of supportive state mechanisms and diversified revenue-generation opportunities. Evidence suggests that entrepreneurial universities are significantly less dependent on traditional public funding sources and demonstrate greater financial sustainability through the utilization of multiple extra-budgetary income streams (Guerrero et al., 2016; OECD, 2023a; OECD, 2023b).

The literature review and comparative policy analysis show that leading higher education systems have gradually shifted from traditional state-funded university models toward hybrid financing structures. In these systems, public funding continues to play an important role; however, universities increasingly generate revenues through research commercialization, technology transfer, intellectual property licensing, contract research, consultancy services, executive education programs, industry partnerships, and startup development activities. This diversification of financial resources enables universities to strengthen institutional autonomy, improve innovation performance, and increase resilience to economic and fiscal fluctuations.

The review further confirms that government support remains a critical factor in facilitating entrepreneurial transformation. International experience confirms that entrepreneurial activities rarely emerge spontaneously without favorable legal, financial, and institutional conditions. Countries with highly developed entrepreneurial university ecosystems, including the United States, the United Kingdom, Finland, South Korea, and Germany, actively support universities through innovation grants, commercialization funds, technology transfer programs, startup financing schemes, and university-industry collaboration initiatives. Such support mechanisms reduce barriers to entrepreneurial activity and stimulate knowledge commercialization (European Commission, 2022; OECD, 2023a; OECD, 2023b).

The analysis of Azerbaijani higher education policies indicates that significant progress has been achieved in creating a supportive environment for university development. Strategic documents, including the State Strategy for the Development of Education and the State Program on Increasing the International Competitiveness of Higher Education Institutions, emphasize innovation, internationalization, and institutional modernization as key priorities. Furthermore, existing legislation allows state-funded institutions to generate extra-budgetary revenues through legally authorized services and activities. These policy initiatives demonstrate the government's recognition of the importance of financial diversification and entrepreneurial development within higher education (Azərbaycan Respublikası, 2009; Azərbaycan Respublikası Prezidenti, 2015, 2018).

Despite these positive developments, the analysis identifies several challenges limiting the entrepreneurial capacity of universities in Azerbaijan. First, higher education institutions continue to rely predominantly on state budget allocations and tuition fees as their primary sources of income. Second, research commercialization mechanisms remain underdeveloped, resulting in limited revenues from patents, licenses, and technology transfer activities. Third, cooperation between universities and industry is still evolving and does not yet generate substantial financial returns. Finally, the absence of mature endowment systems, venture funding mechanisms, and startup support infrastructure restricts the expansion of entrepreneurial activities.

The comparative assessment suggests that the most effective state support mechanisms are those that simultaneously address financial, regulatory, and institutional dimensions of entrepreneurial development. Direct financial support alone is insufficient if universities lack organizational structures capable of transforming scientific knowledge into commercial outcomes. Similarly, institutional autonomy without adequate funding instruments may limit the practical implementation of entrepreneurial initiatives. Therefore, an integrated policy approach is required to strengthen the entrepreneurial ecosystem within higher education institutions.

Based on the findings, a conceptual relationship between state support and extra-budgetary revenue generation can be identified. Government support mechanisms influence entrepreneurial capacity by enhancing innovation infrastructure, research quality, industry collaboration, and

commercialization opportunities. These factors subsequently contribute to the expansion of extra-budgetary revenue sources and improve overall financial sustainability. The results therefore support the argument that state support functions not merely as a financing mechanism but as a strategic catalyst for entrepreneurial transformation in higher education.

Table 1.

Key State Support Mechanisms and Their Impact on Entrepreneurial University Development

State Support Mechanism	Main Objective	Expected Impact on Universities	Contribution to Extra-Budgetary Revenues
Research and Innovation Grants	Support scientific research	Increase research capacity and innovation output	High
Technology Transfer Programs	Commercialize research results	Strengthen university-industry collaboration	High
Startup and Incubation Support	Promote entrepreneurship	Increase startup creation and innovation activities	High
International Cooperation Programs	Enhance global competitiveness	Expand academic and research partnerships	Medium-High
Performance-Based Funding	Improve institutional efficiency	Encourage innovation-oriented management	Medium
Regulatory and Governance Reforms	Increase institutional autonomy	Facilitate entrepreneurial decision-making	Medium
Tax Incentives and Investment Support	Attract external investments	Encourage private sector engagement	Medium-High

The results indicate that the combination of these mechanisms creates favorable conditions for entrepreneurial university development and sustainable revenue diversification. Consequently, the findings support the development of an integrated conceptual framework linking state support mechanisms, entrepreneurial capacity, and extra-budgetary revenue generation in higher education institutions in Azerbaijan.

Discussion. The findings of this study reinforce the growing body of literature that views entrepreneurial universities as essential actors within modern knowledge-based economies. Consistent with the arguments of Clark (1998) and Etzkowitz (2003), the results indicate that financial sustainability increasingly depends on universities' ability to diversify their revenue sources and engage in entrepreneurial activities beyond their traditional teaching and research functions. The study further confirms that state support mechanisms play a critical role in facilitating this transformation by creating favorable financial, regulatory, and institutional conditions.

The analysis also demonstrates that the Azerbaijani higher education system has established an important policy foundation for entrepreneurial development through educational reforms, internationalization initiatives, and regulatory provisions supporting extra-budgetary revenue generation. However, compared with leading international practices, the commercialization of research, technology transfer activities, and university-industry cooperation remain relatively underdeveloped. This finding suggests that the existing policy framework should be complemented by more targeted support instruments, including innovation funds, startup financing programs, technology transfer offices, and incentive mechanisms for research commercialization.

Overall, the study supports the view that state support should be considered not only as a source of funding but also as a strategic enabler of entrepreneurial transformation, innovation capacity, and long-term financial sustainability in higher education institutions (Clark, 1998; Etzkowitz, 2003; European Commission, 2022).

Compared with OECD countries, Azerbaijani universities remain at an early stage of entrepreneurial transformation. While important legislative and policy initiatives have been introduced, the commercialization of research results and the development of sustainable university-industry partnerships remain limited. This suggests that future reforms should focus on strengthening innovation infrastructure, technology transfer offices, startup support mechanisms, and performance-based funding systems. Furthermore, greater institutional autonomy may enable universities to respond more effectively to market opportunities and diversify their revenue sources. Future research could expand the proposed conceptual framework through empirical analysis involving university administrators, policymakers, and industry representatives.

Scientific conclusions.

Based on the findings obtained from the literature review, comparative policy analysis, and conceptual examination of entrepreneurial university development and state support mechanisms, the study allows the following scientific conclusions to be formulated:

The study confirms that the entrepreneurial university model has evolved into a fundamental approach for enhancing the financial sustainability, competitiveness, and innovation capacity of higher education institutions in the knowledge-based economy.

The findings demonstrate that extra-budgetary revenue generation has become an essential component of modern university governance, reducing dependence on traditional public funding and strengthening institutional autonomy.

The assessment highlights that entrepreneurial activities such as research commercialization, technology transfer, consultancy services, startup incubation, and university-industry cooperation represent the most significant sources of diversified university revenues.

International experience indicates that the successful development of entrepreneurial universities depends not only on institutional initiatives but also on effective state support mechanisms, including innovation grants, commercialization programs, startup support schemes, and regulatory incentives.

The study finds that Azerbaijan has established an important legal and policy framework for promoting innovation and entrepreneurial development in higher education; however, the practical implementation of research commercialization and revenue diversification mechanisms remains limited.

The proposed integrated conceptual framework demonstrates that state support positively influences entrepreneurial capacity, innovation performance, and the expansion of extra-budgetary revenue sources, thereby contributing to the long-term financial sustainability and competitiveness of higher education institutions in Azerbaijan.

The study contributes to the literature by integrating the concepts of entrepreneurial universities, state support mechanisms, and revenue diversification into a unified analytical framework applicable to emerging higher education systems.

Scientific novelty of the research. The scientific novelty of the study lies in the following:

1. An integrated conceptual framework linking state support mechanisms, entrepreneurial university development, and extra-budgetary revenue generation has been proposed.
2. The study systematizes international approaches to supporting entrepreneurial universities and adapts them to the Azerbaijani higher education context.
3. The relationship between state support instruments and university revenue diversification has been examined within a unified analytical perspective.
4. Key institutional, financial, and regulatory factors affecting entrepreneurial capacity in Azerbaijani universities have been identified.
5. A conceptual model for strengthening the financial sustainability of higher education institutions through entrepreneurial activities has been developed.

Practical significance of the research. The practical significance of the research can be summarized as follows:

1. The proposed conceptual framework can serve as a practical guideline for policymakers in designing effective state support mechanisms aimed at promoting entrepreneurial activities in higher education institutions.
2. The findings may assist university administrators in developing strategies for extra-budgetary revenue generation and financial sustainability.
3. The study provides recommendations for strengthening university-industry cooperation, research commercialization, and technology transfer activities within higher education institutions.
4. The research contributes to the development of innovation-oriented governance models that can enhance the entrepreneurial capacity and competitiveness of universities.
5. The proposed approaches may support the diversification of university funding sources and reduce excessive dependence on state budget allocations and tuition fees.
6. The results can be utilized in future reforms and strategic planning processes related to the modernization and international competitiveness of higher education institutions in Azerbaijan.

Economic efficiency. The economic efficiency of implementing the proposed approaches can be characterized as follows:

1. Diversification of university revenue sources contributes to reducing financial dependence on state budget allocations and tuition fees.
2. Increased commercialization of research results can generate additional financial resources through patents, licenses, and technology transfer activities.
3. Strengthened university-industry cooperation may attract external investments, contract research funding, and consultancy revenues.
4. The development of startup incubation and entrepreneurial support mechanisms can create new sources of institutional income and economic value.
5. Effective state support mechanisms can improve the return on public investments in higher education by enhancing innovation output and knowledge commercialization.
6. Financially sustainable universities are better positioned to invest in research infrastructure, human capital development, and internationalization initiatives.
7. In the long term, entrepreneurial university development can contribute to national economic growth, innovation capacity, and the competitiveness of Azerbaijan's higher education sector.

Recommendations. Based on the research findings, the following recommendations are proposed:

- a) Strengthen state support mechanisms for entrepreneurial universities through targeted innovation and commercialization funding programs.
- b) Establish technology transfer offices and startup incubation centers in higher education institutions to facilitate knowledge commercialization.
- c) Expand university-industry partnerships to increase contract research, consultancy activities, and joint innovation projects.
- d) Introduce incentive mechanisms encouraging patent registration, licensing activities, and research commercialization.
- e) Enhance institutional autonomy in financial management to support revenue diversification initiatives.
- f) Develop a comprehensive national framework promoting entrepreneurial university development and sustainable extra-budgetary revenue generation in Azerbaijan.

General conclusion. The study concludes that entrepreneurial universities play a crucial role in enhancing the financial sustainability, innovation capacity, and competitiveness of higher education institutions. The findings demonstrate that effective state support mechanisms are essential for promoting extra-budgetary revenue generation and entrepreneurial development. For Azerbaijan, strengthening university-industry cooperation, research commercialization, and innovation-oriented governance can significantly contribute to revenue diversification and institutional autonomy. The

proposed conceptual framework provides a foundation for future policy initiatives aimed at fostering entrepreneurial transformation and sustainable development in higher education.

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