

**REPUBLIC OF AZERBAIJAN**

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**ABSTRACT**

of the dissertation for the degree of Doctor of Philosophy

**IMPROVEMENT OF ACCOUNTING AND ANALYSIS  
OF LEASING IN CONSTRUCTION ORGANIZATIONS**

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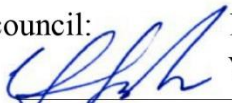
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## GENERAL CHARACTERISTICS OF THE WORK

**Relevance and Degree of Study of the Research.** The entry into global markets with high-quality and competitive products largely depends on the modernization of the economy. In countries with developed market economies, the competitiveness of production increases, which is generally considered one of the important directions of economic diversification. In essence, the application of new technologies, the use of modern equipment and resources, and the satisfaction of economic needs in conditions of insufficient investment capital and similar situations is quite a challenging task. Therefore, reducing the impact of financial crises on meeting the investment needs of the economy also has important strategic significance. One of the significant means of meeting the economy's resource needs in world practice is the leasing mechanism. As one of the relatively effective methods of meeting the demand for material and technical resources, leasing serves as an alternative source of financing for the renewal of fixed production assets.

Under modern conditions, leasing, being one of the most important mechanisms of a market economy, is characterized as a specific form of entrepreneurial activity. Leasing activity, first of all, ensures the process of physical and moral renewal of assets and the attraction of investments into this process. The peculiarities of leasing arise from the specific characteristics of the economy in sectoral and territorial aspects. Taking this into account, when conducting leasing activities, it is necessary to consider these specific features of the economy, and all this must be reflected in various operations carried out within leasing activities. Various forms of leasing, as one of the most effective mechanisms for attracting financial resources into separate sectors of the economy, including the application of financial leasing operations in general, make it possible to reduce the risk of shortage of financial resources in meeting the material and technical needs of enterprises. In this sense, the implementation of leasing operations in the construction sector, which is one of the most important and significant sectors of the economy and plays a major role in generating new value, is of great importance.

One of the factors that determines the strategic importance of leasing operations in the construction sector is that they prevent large-scale spending of financial resources by construction organizations, while at the same time ensuring the effective renewal of fixed assets and equipment used in the construction sector.

As is well known, the construction sector is one of the important sectors of the economy that generates new value. This sector, being a significant part of the economy, also performs an essential social function by meeting the housing needs of society. At the same time, the construction sector is not limited only to meeting the housing needs of the population, but also includes the construction of other industrial, household, and cultural facilities. In this sense, the use of leasing in meeting the needs of the construction sector in production resources is highly relevant. The relevance of leasing in this sector lies in obtaining resources through effective means and, at the same time, creating favorable conditions for the successful continuation of the reproduction process of enterprises without incurring large expenditures.

Despite the fact that leasing activity in our republic has existed since 1994, real development in this area began in the early 2000s. In particular, accounting and analysis of enterprises operating in the construction sector in accordance with modern requirements is considered one of the most important means of ensuring transparency in this process and, at the same time, has a significant impact on the economic efficiency of business entities. The complex nature of the regulatory and legal framework of leasing operations, in essence, further complicates the processes related to accounting in this field. The analysis of the efficiency of financial and economic activities of leasing organizations primarily depends on the formation of sufficient information support in this area. The study of accounting and analysis of leasing operations in the current economic situation is considered one of the most important problems facing the system of accounting and auditing. Proper accounting and analysis of leasing operations in this sector, in fact, also allow for the effective elimination of destructive tendencies affecting economic rationality.

Experience shows that the accounting and analysis system in a number of leasing companies operating in the construction sector of our republic does not meet modern requirements. This process, in particular, leads to the emergence of problems related to accounting and taxation and, in certain cases, also reveals elements of illegal economic relations in this field. Therefore, proper accounting and analysis of leasing activities in all sectors, and especially in the construction sector, can create favorable conditions for eliminating illegal economic relations, which overall contributes to an increase in tax revenues to the state budget.

Thus, based on all the above, it can be concluded that accounting and analysis of leasing operations in all sectors of the economy, including in the construction sector, which is the subject of the research, is important from both a micro- and macroeconomic perspective. The micro-aspects of the problem are related to the fact that the accounting of leasing activities in construction enterprises contributes to increasing the economic rationality of this sector and, at the same time, makes it possible to conduct accurate monitoring of expenses. The macro-aspects of the process, first of all, make it possible to effectively identify the destructive tendencies existing in this sector, limit the system of illegal economic relations, and increase revenues to the state budget. Thus, the aforementioned arguments characterize the relevance of the dissertation research. One of the most important factors that determined the relevance of the study is the alignment of leasing activities in the construction sector with modern financial reporting standards, which, in general, characterizes the improvement of leasing operations in the construction sector as well as the accounting and analysis system in the analyzed field.

In the field of implementing leasing operations under modern conditions, as well as in the application and further improvement of the accounting and analysis system in this sector, there are sufficient research works by economists from both Azerbaijan and foreign countries. English economists such as X. Anderson, Q. Wilman, L. Britstain, S. Smith, and R. Intoni; Russian economists V. Gazman, G.K. Demoeva, V.V. Kovaleva, M.I. Leshchenko, S.I. Panteley; and Azerbaijani economists A. Samedzade, I.M. Abbasov, E.A. Guliyev,

B.Kh. Atashov, R.M. Jabiev, V.K. Novruzov, M.J. Huseynov and others have carried out valuable research works devoted to leasing activities, the formation and development of the leasing market, as well as the accounting and analysis of leasing operations. However, unlike the economic works of the aforementioned scholars, in this dissertation some issues related to the accounting and analysis of leasing operations in the construction sector of the country's economy are considered in a comprehensive manner. Thus, the relevance and insufficient study of the given problem determined the choice of the dissertation topic.

**Subject and Object of the Research.** The subject of the research consists of theoretical, methodological, and other issues related to the accounting and analysis of leasing operations in construction organizations. The object of the research is the processes taking place in the Republic of Azerbaijan related to the accounting and analysis of leasing operations in the construction sector.

**Purpose and Objectives of the Research Work.** The purpose of the dissertation is to study the theoretical and methodological foundations of leasing, to analyze the current state of accounting and analysis of leasing activities in the construction sector, and finally, to develop scientifically grounded and practical proposals for modeling the accounting and analysis of financing leasing activities in the construction industry. To achieve the above-mentioned goals, the following objectives have been set:

- to study new classification features of leasing in construction organizations;
- to examine optimal methods for determining the economic efficiency of leasing operations;
- to study the legal regulation of accounting and analysis of leasing operations in the field of construction;
- to assess the econometric model of the impact of macroeconomic indicators on the dynamics of the construction sector;
- to modernize the information base of accounting and analysis of leasing activities in construction organizations;
- to evaluate international experience in connection with the accounting and implementation of leasing operations in Azerbaijan.

**Theoretical and Methodological Foundations of the Research.** The theoretical and methodological foundations of the research consist of legislative acts on the implementation of leasing activities, as well as research works of foreign and Azerbaijani economists in this field devoted to leasing activities, their accounting and analysis. The methodological foundations of the research are based on observation, grouping, comparative analysis, logical analysis, synthesis, and expert evaluations.

**Information Base of the Research.** The information base of the research consists of resolutions adopted by the Milli Majlis of the Republic of Azerbaijan related to leasing activities, decrees and orders of the President and Cabinet of Ministers of the Republic of Azerbaijan in this field, data from individual leasing companies, data from the State Statistical Committee of the Republic of Azerbaijan, and Internet resources.

**Main Provisions Submitted for Defense in the Dissertation Research:**

– development of recommendations for the legislation of the Republic of Azerbaijan on including leasing entities in the list of socially significant institutions and public legal entities with the purpose of publishing annual financial statements;

– development of recommendations for the legislation of the Republic of Azerbaijan on creating methodological guidelines that provide for the mandatory use of the annuity method in financial and operating leasing, with the introduction of clear requirements for the division of payments into interest and principal components, as well as for calculating their present value in accordance with IFRS 16 in the construction industry;

– development of recommendations for the IFRS for SMEs Standard No. 20 regarding the creation of instructions for the full application of IFRS 16 principles to IFRS for SMEs No. 20, with the introduction of requirements for recognizing leases on the balance sheet under operating leases and expanding disclosure requirements for liabilities in a similar manner;

– development of an econometric model that provides an assessment of the impact of investments and leasing on the growth of

the construction sector and enables accurate forecasting of the dynamics of construction work value;

- development of recommendations for improving the Tax Code of the Republic of Azerbaijan by introducing an addition to Article 140 of the Tax Code to clarify what is specifically meant by loan payments in the particular case of leasing transactions;

- study of the main problems of accounting for leasing operations, assessment of factors restraining the development of the leasing industry, and obstacles preventing the effective integration of international experience in accounting for leasing transactions in Azerbaijan.

**Scientific Novelty of the Research Work Consists of the Following:**

- recommendations were proposed for the legislation of the Republic of Azerbaijan on including leasing organizations in the list of socially significant institutions and public legal entities for the purpose of publishing annual financial statements;

- recommendations were provided in the form of creating methodological guidelines on accounting for leasing operations with mandatory application of the annuity method, with clear requirements for dividing payments into interest and principal parts, as well as for calculating their present value in accordance with IFRS 16 in the construction industry;

- proposals were developed for creating instructions on the full application of IFRS 16 principles to IFRS for SMEs No. 20, introducing requirements for recognizing leases on the balance sheet in operating leases, and expanding disclosure requirements for liabilities in a similar manner;

- a cointegration econometric model of the construction sector of Azerbaijan was developed, allowing a quantitative assessment of the impact of investments in fixed capital, gross domestic product, and the volume of leasing transactions on changes in the value of construction work;

- recommendations were made for improving the Tax Code of the Republic of Azerbaijan by adding clarifications to Article 140

regarding what exactly is meant by loan payments in specific cases of leasing transactions;

– factors restraining the development of the leasing industry, as well as those hindering the effective integration of international experience in accounting for leasing transactions in Azerbaijan, were evaluated.

**Practical Significance of the Research.** The issues reflected in the dissertation research, as well as the theoretical and practical proposals put forward as a result of the study, can be used in the modernization of processes related to the accounting and analysis of leasing operations in individual enterprises. The proposals can also be applied in solving issues related to the improvement of accounting and analysis processes in leasing companies, construction organizations, and institutions engaged in leasing activities.

**Approbation and Implementation of Research Results.** The main results of the research were discussed and approved at various national and international conferences. In connection with the research work, a cointegration model of the impact of macroeconomic and sectoral indicators on the construction sector was developed, and scientific articles by the author were published.

**Scope and Structure of the Research.** The dissertation consists of an introduction, three chapters, a conclusion, and 155 references. The dissertation includes 9 tables, 2 schemes, and 2 figures. The introduction of the dissertation contains 12,212 characters, Chapter I includes 61,467 characters, Chapter II — 68,958 characters, Chapter III — 71,587 characters, and the conclusion contains 5,498 characters. In total, the volume of the dissertation is 219,722 characters.

## MAIN CONTENT OF THE WORK

In the introduction of the dissertation abstract, the relevance and degree of study of the topic, justification, purpose and objectives, research methods, the main provisions submitted for defense, scientific novelty, theoretical and practical significance, and approbation of the research are presented.

In the first section of the dissertation, entitled “Theoretical and Methodological Foundations of Accounting and Analysis of Leasing”, new classification features of leasing in the economy, its essence, specific characteristics, and functions are studied. The theoretical and methodological foundations of the implementation of leasing operations, as well as the specific features of accounting and analysis of leasing relations in the field of construction, are examined.

In modern conditions, for more effective and rational management of leasing activities, it is important to pay attention to the understanding of the classification features of leasing and its economic essence, as well as to the historical features of the formation of leasing operations. According to the opinions of L.I. Gekht and V.G. Makeeva, the sole criterion for determining whether leasing is financial or operating should be the degree of asset repayment.

Referring to the arguments of such economists as M.I. Leshchenko and V.A. Goremykin, the main classification criterion is considered to be the duration of the leasing transaction. (Leshchenko M.I., Bochkov V.E., Demin Yu.N. Property Valuation and Leasing Business. Moscow: MGIU, 2003. – 228 p.) (Goremykin V.A. Leasing. Moscow: ITK “Dashkov & Co.”, 2003. – 944 p.) There is also a category of scholars who use two or more criteria as a basis for classification. An example of this is the view of L.N. Prilutsky, who combines the term of the contract and the degree of repayment as a classification criterion for determining leasing as financial or operating. (Prilutsky L.N. Leasing. Legal Foundations of Leasing Activities in the Russian Federation. Moscow: Os’-89, 1996. – 272 p.)

The analysis of approaches by various economists to the classification of leases into financial and operating revealed the need to clarify the classification criteria, since, in our opinion, none of the listed

options can fully serve as the basis for such differentiation in modern market relations. In the course of the analysis, we concluded that, in addition to the above-mentioned classification criteria, leasing also has such features as the form of the transaction, the object, the duration of the transaction, the scope of service, the market sphere, amortization conditions, type of lease payments, and relation to tax benefits.

Leasing operations have specific features, among which the following can be noted:

- the right to choose the leased asset and the seller of the leased property belongs to the lessee, unless otherwise provided by the contract;
- the leased property may be used by the lessee only for business purposes;
- the total amount of lease payments for the lease term must be included in the transaction price in the amount of the full or approximate cost of the leased property;
- the property transferred under lease remains the property of the lessor throughout the entire term of the lease agreement, except for property acquired at the expense of budgetary funds;
- the lease agreement may provide for the right of the lessee to return the leased property upon expiration of the contract or earlier.

In the second section of the dissertation, entitled “The Current State of Accounting and Analysis of Leasing Activities in the Construction Industry”, the current state of accounting and analysis of leasing in Azerbaijan is assessed, the legal regulation of leasing relations in the construction sector is analyzed, as well as the experience of foreign countries related to the implementation of leasing relations in Azerbaijan.

Leasing, as a financing tool, plays a key role in business development and economic modernization. Different countries apply different approaches to the legal regulation of leasing operations, which affects their efficiency and prevalence.

The importance of the research is determined by the need to improve Azerbaijan’s leasing legislation, since the existing legal norms contain uncertainties, especially in terms of taxation of lease payments. This creates additional financial and legal risks for both lessors and lessees, limiting access to this type of financing. Unlike Azerbaijan, the

legislation of Germany clearly differentiates between financial and operating leasing, ensuring stability and transparency of taxation. The analysis of legal regulation and tax accounting in both countries will make it possible to identify key differences, determine problematic areas, and propose ways to eliminate them.

To begin, let us study the legal regulation of leasing relations in Azerbaijan. At present, the legal framework for leasing relations is regulated by the Civil Code (Articles 747–751) and the Tax Code (Article 140). This was due to the fact that, as we previously noted, in 1994 the Law on Leasing was adopted, which six years later lost its force. It is also known that in the country only financial leasing received legislative support, i.e., today in practice only financial leasing operations are possible. The specifics of taxation of leasing operations in our country do not differ from the taxation of other financial operations. The main principles of taxation of these operations are based on two types of taxes:

- ✓ income tax;
- ✓ property tax.

The income received from leasing relations has its own peculiarity. These principles are mainly related to the fact that the lessor receives income not from the transfer of goods (services, works) or property rights, but from the leasing of property. Article 748.10 of the Civil Code [2] states that the total amount of payments under a lease agreement during its term is considered as rental payment. Article 140 of the Tax Code states that if the lessor leases property under a financial lease agreement, the lessee is the owner of the property, and the lease payments are considered as loan payments to the lessee. The Code also stipulates that the premium paid to the lessor for taxation purposes, payment for additional services provided by the lessor, and loan payments must be treated as its income.

According to the Code, real estate leasing is considered financial in the following cases:

- ✓ under the leasing agreement, the property is transferred to ownership upon the expiration of the lease term, or the lessee has the right to purchase the property at a fixed or predetermined price;
- ✓ the lease term of the property must be more than 75% of its useful life;

- ✓ according to the leasing contract, the residual value of the property at the end of the lease term must be less than 20% of the market price corresponding to the previous period of the contract;
- ✓ the amount of lease payments payable under the contract equals or exceeds 90% of the market value of the property at the beginning of the lease.

Having studied the above, let us conduct a comparative analysis of the legal regulation of lease relations in Azerbaijan and Germany.

**Table 1.**  
**Comparative Analysis of the Legal Regulation of Leasing Relations in Azerbaijan and Germany**

<b>Indicator</b>	<b>Azerbaijan</b>	<b>Germany</b>	<b>Degree of Compliance</b>
Main laws	Civil Code, Tax Code of Azerbaijan	Civil Code (BGB), Tax Code (AO)	Partial compliance
Types of leasing	Only financial leasing	Financial and operating leasing	Non-compliant
Tax obligations	Uncertainty in Article 140.1	Clear differentiation of tax regimes	Non-compliant
Taxation of lease payments	14% withholding tax	Personal income tax with progressive rates (14–42%)	Partial compliance
Taxation of loan payments	Not taxed	Tax on interest income 25–26%	Non-compliant

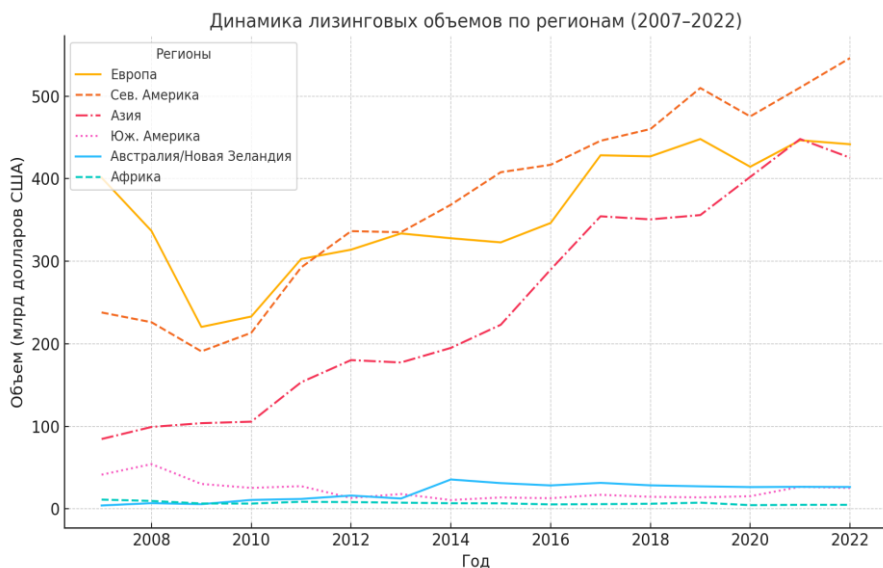
*Source: table compiled by the author*

Article 140.1, on the one hand, equates lease payments with rental payments, and on the other, with loan payments. This raises the question of which taxation should be applied to leasing transactions: rental payments subject to withholding tax at a rate of 14%, or loan interest, which does not fall under tax regulation.

The conclusions and recommendations from the above consist in the necessity of clearly distinguishing the status of leasing by introducing operating leasing and regulating it by the Tax Code of Azerbaijan, eliminating the legal uncertainty of taxation through clarification of Article 140.1 of the Tax Code of Azerbaijan, as well as applying Germany’s experience in separating the tax base into rental and loan payments, which will make it possible to create a transparent and effective system of leasing regulation.

Thus, having examined the features of the legal regulation of leasing relations and the tax system, it is advisable to analyze how these factors have affected the development of the global and national leasing markets.

When analyzing the last 15 years, it is easy to see how the global leasing market has developed intensively (Figure 2.3.1). In recent years, the leasing market has grown rapidly after the 2008–2009 crisis, increasing by 162.6% from 2009 to USD 1.463 trillion in 2021 [Solifi, 2024, p.4]. Thus, by 2022 this positive trend in the industry reached a record of USD 1.470 trillion [Solifi, 2024, p.4].



**Figure 1. Global Leasing Volume (2007–2022), in billion USD.**  
*Adapted from Global Leasing Report 2024*

The global leasing market is unbalanced, and the reason for this is the disproportionate distribution of leasing services volume among countries. The largest share of leasing services falls on the top 10 countries, such as the USA, China, Germany, Japan, France, Italy,

Australia, Canada, the United Kingdom, and Switzerland<sup>1</sup>. It is not surprising that the USA, with USD 502.77 billion or 35.2% of the global leasing volume, leads the market [Solifi, 2024]. From small startups to Fortune 500 companies, more than 80% of businesses lease part or all of their equipment through financial leasing. A table with information on the total leasing volume, growth rates, as well as market penetration shares of the top ten countries by leasing volume in 2022 is presented below:

**Table 2. Top 10 Countries by Leasing Volume in 2022**

Country	Annual Volume (USD billion)	Growth (2021–2022, %)	Penetration Rate (%)	GDP (USD billion)	Share of Leasing in GDP (%)
USA	502.77	6.3	22.0	26,726.0	1.88
China	318.42	1.38	9.6	17,734.0	1.79
UK	96.89	9.47	40.0	3,200.0	3.02
Germany	78.96	1.64	25.0	4,400.0	1.79
Japan	63.76	11.95	4.2	4,367.0	1.46
France	62.43	4.82	33.0	2,915.0	2.14
Italy	35.64	9.72	20.0	2,099.0	1.69
Canada	30.68	7.2	39.0	2,250.0	1.36
Australia	26.50	6.28	n/a	1,800.0	1.47
Sweden	23.94	-0.5	41.0	701.0	3.41
Azerbaijan	0.05	0.0	0.07	74.3	0.04

Although it was noted in the Strategic Roadmap for the Production of Consumer Goods at the SME Level in our country, approved by the decree of the President of the Republic of Azerbaijan Ilham Aliyev on December 6, 2016, that the development of the leasing market would allow the share of leasing operations in GDP to reach 2% by 2020 and 4% by 2025, the analyzed data show that achieving such an indicator by 2025 is still not possible. (Babayev E.R. Prospects for the Development of Leasing in Azerbaijan through Comparative Analysis of IFRS 16 and IFRS 20 for SMEs, 2025, p. 102–104, p. 84–88).

The third section of the dissertation is entitled “Ways of Modeling the Accounting and Analysis of Leasing Activities in the Construction Industry.” This section examines ways of improving the accounting and analysis of financing leasing operations in construction organizations,

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<sup>1</sup> Babayev, E.R. *Improvement of accounting and analysis of financial statements in leasing organizations // WayScience - 1<sup>st</sup> International Scientific and Practical Internet Conference.* – p. 35-46.

modernization of the information base and methodology of accounting for leasing operations, as well as the evaluation of an econometric model of the impact of major macroeconomic and sectoral indicators on the activities of construction organizations.

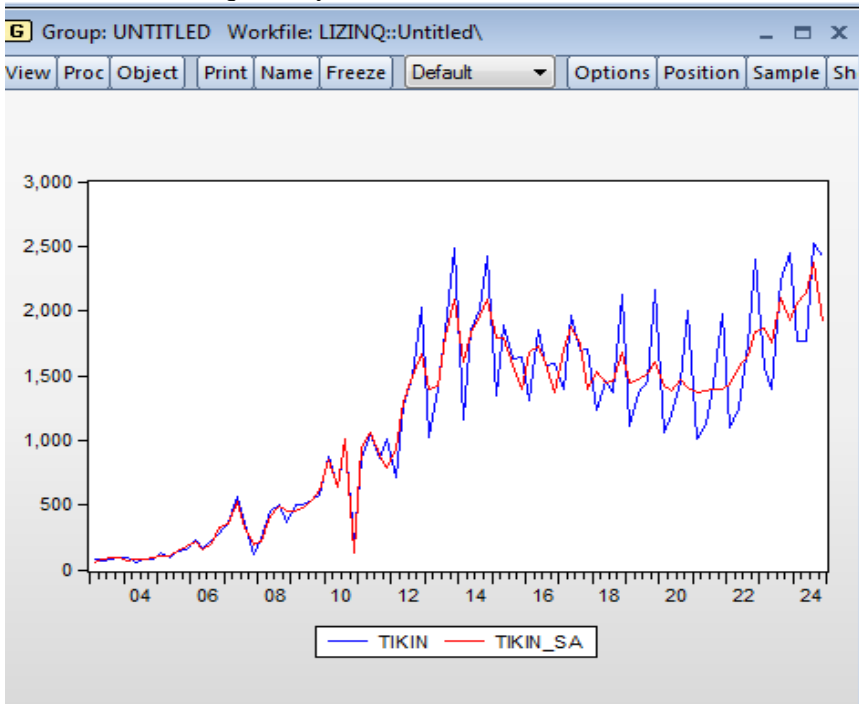
For methodological completeness and justification of the practical significance of the proposed measures for improving the accounting and financial reporting of leasing operations in construction, an econometric model is presented further. It allows for a quantitative assessment of the impact of key macroeconomic and sectoral factors — gross domestic product, investments in fixed capital, and the volume of leasing transactions — on the dynamics of construction work volume.



**Figure 2. Adapted from Global Leasing Report 2024**

Since we study the influence of Gross Domestic Product (mln AZN), investments in fixed capital (mln AZN), and the volume of leasing transactions (mln AZN) on the value of construction works (mln AZN), the first stage was an analysis of the seasonality of time series of construction work value for 2003–2024, which showed the statistical

significance of all seasonal coefficients ( $p < 0.001$ ) and confirmed the existence of stable quarterly fluctuations.



The seasonally adjusted time series of the value of construction works turned out to be smoother, which made it possible to clearly highlight the main trend — the growth of the value of construction works over time — as well as to identify anomalies, such as a sharp spike at the end of 2007 and a subsequent decline at the beginning of 2008. This indicates the influence of one-off factors and the necessity of taking them into account in further modeling through the use of dummy variables.

Based on the above analysis, a cointegration model was constructed to assess the impact of Gross Domestic Product (GDP) (mln AZN), investments in fixed capital (INV) (mln AZN), and the volume of leasing transactions (LIZINQ) (mln AZN) on the value of construction works (TIKIN) (mln AZN).

Dependent Variable: L\_TIKIN\_SA  
 Method: Least Squares  
 Date: 07/05/25 Time: 09:31  
 Sample (adjusted): 2004Q1 2024Q3  
 Included observations: 83 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-10.21794	2.048638	-4.987674	0.0000
L_INV_SA	2.703557	1.149680	2.351574	0.0213
L_WDM_SA	0.200876	0.085469	2.350273	0.0214
LIZINQ_SA	0.007710	0.001496	5.154905	0.0000
L_TIKIN_SA(-4)	0.356030	0.063758	5.584097	0.0000
L_INV_SA(-4)	3.335228	1.156658	2.883504	0.0051
D(2010Q4)	-1.145403	0.159932	-7.161826	0.0000
D(2008Q1)	-0.819795	0.206586	-3.968295	0.0002
R-squared	0.962828	Mean dependent var		6.739041
Adjusted R-squared	0.959358	S.D. dependent var		0.979378
S.E. of regression	0.197440	Akaike info criterion		-0.315344
Sum squared resid	2.923695	Schwarz criterion		-0.082203
Log likelihood	21.08678	Hannan-Quinn criter.		-0.221681
F-statistic	277.5198	Durbin-Watson stat		1.236138
Prob(F-statistic)	0.000000			

$$\text{Log}(\text{TIKIN}_{SA}) = -10.22 + 2.704 \log(\text{INV}_{SA}) + 0.201 \log(\text{GDP}_{SA}) + 0.008 \text{LIZINQ}_{SA} + 0.356 \text{Log}(\text{TIKIN}_{SA}(-4)) + 3.335 \log(\text{INV}_{SA}(-4)) - 1.14 D(2010Q4) - 0.82 D(2008Q1)$$

P (0.00) (0.02) (0.02) (0.00) (0.00) (0.01)(0.00)(0.00)  
 conclusion(= 0.05)(sig)(sig)(sig)(sig)(sig)(sig)(sig) (sig)  
 conclusion( $\alpha = 0.10$ )(sig)(sig)(sig)(sig)(sig) (sig)(sig)(sig)

The coefficient of determination for the model is  $R^2 = 0.96$ , which means that 96% of the variation in the construction sector is explained by the selected explanatory factors. Since  $\text{Prob}(F\text{-statistic}) = 0.00 < 0.05 = \alpha$ , the coefficient of determination is significant, therefore the quality of the model is high and the model is adequate.

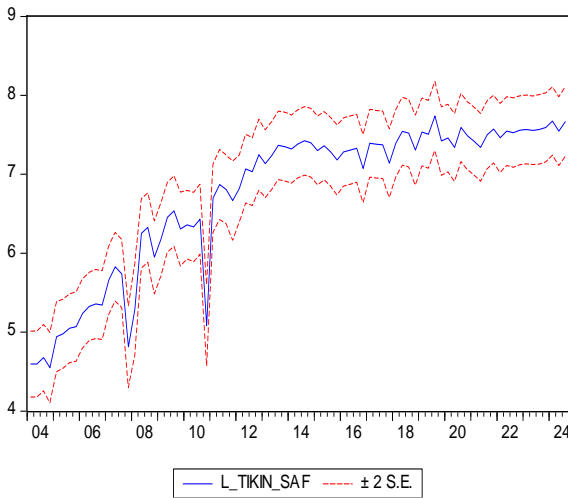
The economic interpretation of the obtained model shows that the key factor in the growth of the construction sector is investment: with a 1% increase in the level of investment, the value of construction works

increases by 2.704% in the current period and additionally by 3.335% after four quarters, as the model includes a 4-quarter lag of investments. In total, this exceeds 6% growth in construction works. The impact of macroeconomic indicators is moderate: a 1% increase in GDP leads to only a 0.2009% growth in construction works, which logically reflects the indirect dependence of the sector on the overall economy. Leasing also plays a significant role: an increase in leasing investments by 1 million AZN leads to a 0.77% increase in the value of construction works immediately, which confirms the importance of this financing instrument.

In addition, the construction sector demonstrates strong inertia - about 35.6% of changes persist in dynamics for a year, which is explained by the long implementation cycle of projects.

This practice confirmed the theoretical interconnections. The model satisfies all OLS assumptions and has good predictive properties. Thus, the model can be used to forecast the future level of construction work costs in order to stabilize the economic situation and develop leasing transactions.

The relationship between forecast accuracy and error shows that the model has high reliability: the mean absolute percentage error was only 0.205%, which corresponds to a forecast accuracy of 99.8%. This confirms the model's ability to adequately describe the dynamics of the construction sector and to be used for forecasts, provided that key factors and external shocks are controlled. Overall, the model revealed a close link between construction, investments, and leasing, confirming their role as drivers of sustainable economic growth.



Forecast:	L_TIKIN_SAF
Actual:	L_TIKIN_SA
Forecast sample:	2003Q1 2025Q2
Adjusted sample:	2004Q1 2024Q3
Included observations:	83
Root Mean Squared Error	0.205101
Mean Absolute Error	0.169699
Mean Abs. Percent Error	2.669525
Theil Inequality Coefficient	0.015063
Bias Proportion	0.000024
Variance Proportion	0.009284
Covariance Proportion	0.990691

Thus, leasing has manifested itself not only as an important driver of economic growth in construction but also as a tool whose effectiveness largely depends on the rules of its accounting. That is why we will next consider how this process is regulated in international practice.

In international practice, leasing is regulated by two main standards: IFRS 16 “Leases” and IFRS for SMEs 20 “Leases.” Both standards define the principles of lease accounting but differ in complexity, disclosure requirements, and approaches to lease recognition. In this analysis, the focus is placed on comparing evaluation approaches, the impact of standards on financial reporting, and conducting a detailed comparative analysis of these standards in order to identify their key differences and propose recommendations for the improvement of IFRS for SMEs 20.

Let us now compare these two standards in terms of the degree of compliance with the selected classification criteria: (Table 3)

Based on the table, it can be concluded that IFRS 16 and IFRS for SMEs 20 differ significantly in terms of lease recognition requirements, especially for lessees. IFRS 16 increases transparency but complicates accounting.

**Table 3. Comparative Analysis of IFRS 16 and IFRS for SMEs 20 in Terms of Degree of Compliance**

Criterion	IFRS 16	IFRS for SMEs 20	Degree of Compliance
Lease classification	Single model for lessees, all leases on the balance sheet	Separation into operating and finance leases	None
Lessee recognition	Right-of-use asset and lease liability	Operating leases not recognized on the balance sheet	None
Lessor recognition	Separation into operating and finance leases	Same as IFRS 16	Full compliance
Liability measurement	Discounting of future payments	Fixed payments without frequent revaluations	Partial compliance
Disclosure requirements	Extensive requirements	Simplified requirements	Partial compliance

*Source: table compiled by the author*

IFRS for SMEs 20 is simpler to apply but may reduce the reliability of reporting. Despite the simplified approach of IFRS for SMEs 20, its potential improvement through partial adoption of IFRS 16 principles could increase reporting transparency, reduce the risk of underestimating financial obligations, and improve data comparability. (Babayev E.R. Prospects for the Development of Leasing in Azerbaijan through Comparative Analysis of IFRS 16 and IFRS 20 for SMEs, 2025, p. 102–104, p. 84–88).

It should also be noted that the issues of improving IFRS standards are indirectly connected with identifying the objective reasons limiting the development of accounting for leasing operations and their adaptation to international practice. Among such reasons are: the absence of membership in the Ottawa Convention, which reduces investment guarantees; the fact that leasing companies are not yet included in the centralized credit registry, which increases the risk of lessees' non-payment; and the lack of reliable statistics, which hinders transparency of analysis and objective market assessment.

This section also considers the application of alternative methods of accounting for leasing operations in construction organizations. One of these methods is the method of financial rents or annuities. The annuity method is a key tool for accounting for leasing operations, ensuring an

even distribution of the financial burden and transparency in accounting. In international practice, the method has been widely applied, especially in countries with a high level of accounting automation, such as Germany. In Azerbaijan, however, this method has been implemented only partially, which creates the need to study its application and to develop recommendations. (Babayev E.R. Comparative Analysis of the Annuity Method in Accounting for Leasing Operations: The Experience of Germany and Prospects for Azerbaijan, 2025, p. 123–127).

Let us now compare the application of this method in the mentioned countries in terms of legislative framework and IFRS standards:

**Table 3. Application of the Annuity Method in Germany and Azerbaijan in Terms of the Legislative Framework**

Criterion	Germany	Azerbaijan
Regulatory framework	In Germany, the annuity method is normatively enshrined through HGB and IFRS 16, making it mandatory for accounting of financial leases. The method is obligatory. Leasing is strictly classified into operating and finance leases.	In Azerbaijan, the annuity method is not mandatory, and accounting is often limited to reflecting operating expenses. Partial harmonization with IFRS.
Recognition of lease liability	Mandatory, in accordance with IFRS 16. Lease liabilities and right-of-use assets are recognized on the balance sheet. The annuity method is applied to allocate payments between interest and principal.	Required only for financial leasing. Operating leasing is not strictly regulated.
Application of annuity method	The method is mandatory for all financial leasing operations.	The method is applied selectively, mainly for large transactions.
Accounting for the time value of money	The time value of money must be accounted for. This is an important aspect for calculating annuities and determining financial obligations.	The time value of money is less commonly applied but used in large transactions and with international partners.
Automation	ERP systems (SAP, Oracle) are used, with automated annuity calculations.	Mostly manual calculations or limited automation capabilities.
Tax advantages	The interest portion of annuity payments is recognized as an expense, reducing the taxable base.	Tax benefits exist, but their application is less transparent and requires detailed verification.

*Source: table compiled by the author*

The comparative analysis of Germany and Azerbaijan revealed significant differences in approaches to accounting for leasing operations. The annuity method in Germany is standardized and automated, which ensures high transparency of reporting. In Azerbaijan, there is a need for the development of the regulatory framework, automation of accounting, and training of specialists.

For this purpose, we propose the development of methodological guidelines for accounting of leasing operations, similar to the German HGB standard but adapted to the economy of our country. Along with the introduction of these guidelines, we recommend an important nuance — the mandatory application of the annuity method in accounting for leasing operations. It is also proposed to introduce clear instructions within the annuity method for the separation of payments into interest and principal components, as well as for the calculation of their present value in accordance with IFRS 16 in the construction industry. (Babayev E.R. *Comparative Analysis of the Annuity Method in Accounting for Leasing Operations: The Experience of Germany and Prospects for Azerbaijan*, 2025, p. 123–127).

## CONCLUSION

Based on the dissertation research, the following conclusions and recommendations for further application have been made:

1. At present, one of the most important sources of growth of the national economy and increasing its competitiveness at the international level is the development of digitalization. It has a significant impact on living conditions of society; the transformation of public administration; the use of new business methods; and the introduction of innovative digital technologies.

2. Regression analysis confirmed that the leading factors of growth in the construction sector are investments in fixed capital and leasing, while the influence of Gross Domestic Product as a macroeconomic indicator appears to be moderate. The constructed model demonstrated high explanatory power ( $R^2 = 0.96$ ) and can be used in forecasting the cost of construction works, as well as in forming economic policy measures in the construction industry.

3. Despite the adoption of the *Law on Leasing* in our country in 1994, actual leasing activity began only in the early 2000s. The organization of accounting and analysis of construction sector enterprises in accordance with modern IFRS requirements is one of the most important means of ensuring transparency of this process and, at the same time, has a significant impact on the efficiency of business entities.

4. Based on the comparative analysis of the tax codes of the two countries, it can be concluded that in Germany, along with lease payments, interest payments are also taxed as “tax on interest income” at a rate of 25–26%. However, considering Article 140.1 of the Tax Code of Azerbaijan, it appears that this article creates legal uncertainty, as it simultaneously equates lease payments to both rental and loan payments. This creates a legal conflict in terms of taxation: rental payments are taxed at 14%, whereas loan interest payments are not subject to taxation.

5. The analysis of published methodologies through the comparative analysis of Germany and Azerbaijan revealed significant differences in approaches to accounting for leasing operations. The annuity method in Germany is standardized and automated, ensuring high transparency of reporting. In Azerbaijan, there is a need for the

development of the regulatory framework, automation of accounting, and training of specialists. In this regard, there is a necessity to develop methodological guidelines for accounting of leasing operations with the use of the annuity method and clear separation of payments into interest and principal components.

6. Leasing, as one of the key instruments of asset financing, plays an important role in business development and stimulating economic growth. International experience shows that countries with a developed leasing system have a high penetration rate of leasing in the economy. In the context of Azerbaijan, the development of leasing requires a comprehensive approach, including the adaptation of international standards to local conditions. The main measures that can contribute to the growth of the leasing market include: the introduction of mandatory requirements for lease accounting in the financial reporting of small and medium-sized enterprises, the development of state support mechanisms aimed at subsidizing interest rates on leasing operations, simplification of the regulatory framework governing leasing companies, creation of transparent conditions for attracting investments into this sector, and improving financial literacy among entrepreneurs so that they can effectively use leasing tools to expand their businesses.

7. Despite the application of International Financial Reporting Standards (IFRS) in Azerbaijan, their requirements regarding the publication of annual financial statements by state institutions (publicly significant institutions) and public legal entities, which are covered by the International Public Sector Accounting Standards (IPSAS), have not yet been implemented in the leasing sector. That is, since leasing organizations are not considered publicly significant institutions or public legal entities, they are not required by the legislation of the Republic of Azerbaijan to publish their annual financial statements. It would be advisable to amend the law of the Republic of Azerbaijan to include leasing organizations in the list of publicly significant institutions and public legal entities in order to require them to publish annual financial statements.

8. Under current conditions, for more effective and rational management of leasing activities, it is important to pay attention to the understanding of classification features of leasing and its economic

essence. The analysis of approaches of various economists to the classification of leases into financial and operating revealed the necessity of clarifying classification features, since none of the listed options can fully serve as a basis for such a division in modern market relations.

9. The advantage of leasing over other investment methods is that an entrepreneur can start a business with only part of the funds needed to acquire buildings and construction equipment. Enterprises are not provided with cash, and control over production is not always possible, but the production means necessary for renewal and expansion of production capacity are transferred through leasing, thus allowing enterprises to save resources. At the same time, leasing stimulates the mobilization of funds from private investors, including the population.

10. The development of theoretical and methodological foundations of accounting for leasing activities under conditions of high market volatility is highly relevant. A more practical definition of the term “leasing” for the construction sector is proposed, reflecting the specifics of accounting, as a type of investment activity in which the lessor undertakes to purchase the leasing object determined by the lessee from a specific supplier under an agreement, and the lessee undertakes to accept the asset for temporary use with payment for utilization.

**The main findings of the thesis, the obtained conclusion and recommendations are reflected in the following published scientific works:**

1. Babayev, E.R. Совершенствование налогового законодательства арендных отношений в Азербайджане на основе опыта развитых стран, “İrək yolu” jurnalı, Azərbaycan Universiteti, – 2025., № 1, s 5-11, Bakı, <https://au.edu.az/userfiles/uploads/f84be4c23ca22714077e1ed45467b0da.pdf>
2. Babayev, E.R. Перспективы развития лизинга в Азербайджане посредством сравнительного анализа МСФО (IFRS) 16 и МСФО (IFRS) 20 для мсп // – Баку: Научно-практический журнал “Кооперация” – 2025, № 2, s
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4. Babayev, E.R. Совершенствование методики анализа бухгалтерского баланса в современных условиях // i.e.d., prof İ.H.İbrahimovun yubileyinə həsr olunmuş Milli iqtisadiyyatın perspektiv inkişafı üzrə Strateji Yol Xəritəsi: İnsan kapitalının formalaşmasının prioritet istiqamətləri” mövzusunda respublika elmi-praktiki Konfrans. – Bakı: BBU, Aİİ 2018.26.01
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