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Artificial Intelligence in Credit Risk Assessment in the BRICS Countries

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Abstract

This paper examines the influence on Artificial Intelligence (AI) in credit risk assessment in the countries of BRICS, which are Brazil, Russia, India, China, and South Africa. In order to analyze the rate of non-performing loans, the data range was taken over the period of 2009-2023. The research focuses on macroeconomic and bank-specific variables, such as, GDP growth, Inflation, Bank Size, and Research and Development investment. The data was retrieved from the available public sources, such as World Bank and Google Scholar. The analysis was conducted using the Feasible Generalized Least Squares (FGLS) model on STATA software. The findings state that the increase in GDP and exchange rate lead to the positive correlation with the number of non-performing loans. While the investment in Research and Development sector, which represent investments in AI, has a negative impact on credit risk. This means that increase in R&D leads to decrease in Credit Risk.

Keywords: credit risk, Artificial Intelligence, FGLS, BRICS

Introduction

An essential part of decision-making in finance is the credit risk assessment. Traditional approaches to evaluate credit risk, such as simple statistical techniques, frequently have difficulties in handling massive volumes of data in rapidly developing world. This paper focuses on whether AI influences credit risk assessment in the BRICS countries, which include Brazil, Russia, India, China, and South Africa. In other words, the findings aim to contribute to a better understanding of how Artificial Intelligence can transform procedures of credit risk assessment and enhance the global financial stability. Moreover, to make the research more reliable other variables, such as GDP Growth, Inflation, Exchange Rate, Bank Size, Bank Performance, will be included. It will help to analyze the current situation in financial institutions with different angles.

Literature Review

For my empirical research I focused on gathering reliable and relevant information. In order to do that I reviewed many credible sources, such as Google Scholar and Consensus. My main goal was to ensure that the data I used was accurate, since the selection of the reliable sources is one of the crucial parts to make sure that the data is valid. In fact, the number of publications on AI in credit risk assessment increases. However, there is still limited number of studies that are focused on BRICS countries.

2.1 Credit Risk Theory

Credit risk theory is useful to estimate the probability of default and how to regulate this risk. Usually, traditional models depend on the historical data, which creates some limitations. Artificial Intelligence helps to improve the accuracy of these models, since it can take different sources to analyze the data, such as social media (Wang & Ku, 2021).

2.2 Dependent Variable

2.2.1 Credit Risk. In this study, Bank Non-Performing Loans (NPL) to Gross Loans (%) is the main measure of credit risk in banking sector. This ratio is the product of division of total value of non-performing loans, which are overdue 90 days or those unlikely to be returned, by the total gross loans, and multiplication of the result by 100. The result is given as a percentage. This ration shows high percentage, when a significant amount of bank's loans is at danger of default, which could be an indicator of either bad credit risk management or unfavorable economic conditions (Fernández-Miguel & Valcarce, 2023).

2.3 Independent Variables

2.3.1 Investment in Research and Development. In order to improve internal processes and let AI play the beneficial role for the good of the banking system, the essential cash inflows to the research and development are needed. International Monetary Fund research (2023) states that intense rivalry and tech innovations pushing players in financial markets to speed up the adoption of the AI by increasing R&D expenditures as a vital part of it. However, there are some obstacles to overcome by the cautious supervision. For example, legal uncertainty and transparency of the system processes. (European Central Bank, 2024).

H1: Research and Development has a significant impact on AI-based credit risk assessment.

2.4 Bank Size

Bank size serves as an essential indicator of the bank's resources, market dominance, and risk-diversification. There is a huge amount of literature addressing the relationship between bank size and AI- based credit risk assessment. On one side, larger banks tend to have access to more financial and human resources in order to invest in AI technologies (Königstorfer & Thalmann, 2020). Conversely, the "too big to fail" hypothesis suggests that larger banks tend to practice riskier lending. These banks rely on implicit government support in the case of failure (Kaufman, 2014).

H2: Bank size has a significant impact on AI-based credit risk assessment.

2.5 Bank Performance

Banks with good profits can finance the design and implementation of AI technologies in their credit risk system, which will allow them to improve efficiency and reduce the loan default rate (Buehler et al., 2024). As Sohail et al. (2021) emphasizes, the successful implementation of AI technologies in existing processes within banks requires careful preparation and optimization.

H3: Bank performance positively impacts the effectiveness of AI-based credit risk assessment.

2.6 Exchange Rate

Exchange rate is a rate that shows how one currency is related to another. An exchange rate is very significant to the banking industry as it has an influence on the loan repayments and receipts amount denominated in a foreign currency, the costs of currency exchange services and international bank operations. Banks have to carefully monitor and manage currency risks associated with exchange rate fluctuations as it can have a crucial impact on the results of operations.

H4: Exchange rate negatively impacts the accuracy of AI-based credit risk assessment.

2.7 GDP Growth

The GDP is one of the most important macroeconomic variables. It affects how well AI performs in estimations of credit risk. Indeed, AI systems are able to detect high-risk borrowers even while the economy is expanding as a whole (MDPI, 2023). But it's crucial to note that, according Reuters (2024), AI has an increased chance of failing to adjust to certain conditions. For example, the global effect of the COVID-19 epidemic on the global GDP.

H5: GDP growth positively impacts the accuracy of AI-based credit risk systems.

2.8 Inflation

The assessment of credit risk becomes more difficult due to the added difficulties caused by inflation. Increased interest rates may result from higher inflation, which may raise the likelihood that debtors may default (The Australian, 2024). In this sense, banks may be better equipped to analyse inflation trends thanks to AI technologies (SAS, n.d.). This will allow banks to be more adaptive to constantly changing conditions and take appropriate actions in advance, thanks to real-time adjustments to risk models.

H6: Inflation negatively impacts the accuracy of AI-based credit risk systems.

Methodology

The sample used in this research consists of BRICS countries before recent additions. These are Brazil, the Russian Federation, India, China, and South Africa. The focus on BRICS countries is justified by the fact that these countries have growing economic significance and unique financial challenges. It could be represented as a set of diverse economies which are in different stages of development. The time period covers from 2009 to 2023. The data will be obtained from major sources, like the World Bank.

Findings and Discussion

Before conducting regression analysis, it is crucial to test it for multicollinearity, heteroskedasticity and autocorrelation tests. There is a strong positive correlation of 0.83 is between GDP and research and development expense. The relatively low or negative correlation with other variables demonstrated the absence of multicollinearity.

Figure 1*Correlation Matrix*

	NPL	EXR	GDP	RND	SIZE	ROE	INF
NPL	1.0000						
EXR	0.5904	1.0000					
GDP	-0.2457	-0.1891	1.0000				
RND	-0.4421	-0.4367	0.8364	1.0000			
SIZE	-0.4845	-0.2485	0.1848	0.3885	1.0000		
ROE	-0.5207	-0.1598	-0.1435	0.0495	0.4158	1.0000	
INF	0.3086	0.1465	-0.2526	-0.3143	-0.3714	-0.0323	1.0000

Figure 2*Variance Inflation Factors (VIF) for Multicollinearity Diagnostics*

```
. estat vif
```

Variable	VIF	1/VIF
RND	5.41	0.184955
GDP	4.32	0.231560
SIZE	1.64	0.610088
EXR	1.42	0.704641
ROE	1.33	0.750324
INF	1.23	0.814725
Mean VIF	2.56	

In addition to the correlation matrix the variance inflation factor (VIF) test was run. It is clearly seen that Mean VIF is 2.56 which is greater than >1 , and less than <5 , and <10 , which is a suitable degree of multicollinearity. This suggests that there is no multicollinearity.

Figure 3*Wooldridge Test for Autocorrelation in Panel Data*

```
. xtserial NPL EXR GDP RND SIZE ROE INF
Wooldridge test for autocorrelation in panel data
H0: no first order autocorrelation
F( 1, 4) = 67.567
Prob > F = 0.0012
```

In order to check autocorrelation, the Wooldridge test was used. From the table below the probability value is 0.0012 which is less than 1%, meaning that there is autocorrelation.

Figure 4*Heteroskedasticity test*

```
Likelihood-ratio test
Assumption: homo nested within hetero

LR chi2(63) = 18.54
Prob > chi2 = 1.0000
```

This test showed that there is no heteroskedasticity, since the probability value is bigger than all significance levels.

Figure 5*FGLS Regression Results for Determinants of Credit Risk (NPL)*

Coefficients: generalized least squares
 Panels: heteroskedastic
 Correlation: common AR(1) coefficient for all panels (0.4820)

Estimated covariances	=	5	Number of obs	=	64
Estimated autocorrelations	=	1	Number of groups	=	5
Estimated coefficients	=	7	Obs per group:		
			min	=	12
			avg	=	12.8
			max	=	14
			Wald chi2(6)	=	24.30
			Prob > chi2	=	0.0005

NPL	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
EXR	.67452	.2268935	2.97	0.003	.2298168	1.119223
GDP	.7926034	.3688452	2.15	0.032	.06968	1.515527
RND	-2.200582	.7368193	-2.99	0.003	-3.644722	-.7564431
SIZE	-.2400718	.1812801	-1.32	0.185	-.5953743	.1152307
ROE	-.009659	.0158408	-0.61	0.542	-.0407065	.0213884
INF	-.0097407	.0510674	-0.19	0.849	-.1098309	.0903495
_cons	-11.56165	11.35351	-1.02	0.309	-33.81412	10.69081

According to the findings of the regression analysis table shown below, variables, such as Exchange Rate, GDP growth, Research and Development Expense, and Bank Size have a statistically significant influence on Credit risk. This is due to the fact, that they have P-values that are less than <1, <5, <10%. Particularly, the exchange rate between local currency and the USD has a statistically significance and positive impact on Credit Risk of 0.674, which means that 1% increase in exchange rate will increase the credit risk by 0.674%. In reversal, R&D Expense has a negative coefficient, meaning that increase in Research and Development Expense for 1% leads to decrease Credit Risk for 2.2. The rest bank specific variables such as, Bank Performance (SIZE), Bank Performance (ROE), Inflation (INF) are not statistically significant, and does not exert any influence on credit risk, since their profitability values are more than all levels of significance. Thus, the hypothesis, such as hypothesis 2,3, and 6 are rejected.

Conclusion

The study investigates the impact of Artificial Intelligence on credit risk assessment in the BRICS countries. In the research the dependent variable was non-performing loans, which represented the percentage of defaulted loans. While the independent variables were split into two groups, bank-specific variables (research and development investment, bank size, and bank performance) and macroeconomic variables (exchange rate, inflation, GDP growth). The analysis included three main steps. First, there was conducted a descriptive analysis. It showed that GDP had the highest mean among all variables, while research and development presented the smallest standard deviation. Also, the regression model, the multicollinearity, autocorrelation, and heteroscedasticity tests were included. The final step was conducting analysis using FGLS model. According to the results of the study they state that investments in AI, GDP growth, and exchange rate statistically significant regarding credit risk.

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The Impact of Auditor Rotation on the Cost of Debt of Banks in Kazakhstan

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Abstract

This study is the first to examine the impact of auditor rotation on the cost of debt in the context of Kazakhstan's banking system. The purpose of the study is to assess how the change of an audit firm affects banks' interest expenses. A quantitative regression analysis with fixed effects was carried out based on secondary data on 22 banks for 2010-2024. In the model, the cost of debt was a dependent variable, and the rotation of auditors was the main independent variable, with control over profitability (ROA), size, liquidity, leverage, capital adequacy, and macro indicators (GDP, inflation). Robust estimates (Driscoll-Kraai, FGLS) were used to correct heteroscedasticity and autocorrelation. The results revealed a statistically significant positive relationship between the change of auditor and an increase in the cost of debt, which is interpreted as a signal of increased risk for creditors. Also, the size of the bank and inflation have a positive effect on the cost of debt, while profitability has a negative effect. The findings of the study have practical value for the top management of banks and regulatory authorities.

Keywords: auditor rotation, cost of debt, banks of Kazakhstan, regression analysis

Introduction

The corporate governance system uses auditor rotation as its main tool to improve audit independence. The market views auditor rotation as evidence of reporting risks which leads to higher debt financing expenses for companies (Liu et al., 2021). The banking sector of Kazakhstan needs special monitoring because it serves as a fundamental part of the national financial system which depends on reliable affordable funding for economic growth (Sommer, 2024).

The research aims to perform empirical testing about how auditor changes affect banking debt expenses in Kazakhstan's commercial banking sector. The study maintains its importance because there exists no extensive research about this matter within the developing Kazakh economy which affects financial stability and investor trust.

The study contributes to the theory by providing new evidence for an international discussion based on emerging market data. The practical significance lies in the development of recommendations for the management of banks making decisions on changing the auditor, and for regulatory authorities, such as the National Bank of the Republic of Kazakhstan, regarding risk assessment.

The overall approach is quantitative and based on the analysis of data from 22 Kazakhstani banks for the period from 2010 to 2024. Regression analysis with fixed effects and control over key financial and macroeconomic indicators is used to test the hypothesis of a link between a change of auditor and an increase in the cost of debt.

Literature Review

In the international literature, the impact of the mandatory rotation of auditors (MAFR) policy on audit quality and financial implications for companies remains the subject of lively debate, and empirical evidence is contradictory. This review aims to systematize the key findings and identify existing gaps in order to substantiate the hypothesis of this study.

The contradictory impact of MAFR: from improved management to costs and risks. Theoretically, the MAFR is designed to strengthen the auditor's independence and the quality of reporting, which can reduce information risks and the cost of debt. This is confirmed in the context of emerging markets. For clients of small and non-specialized audit firms, long-term cooperation is associated with an increase in the cost of debt, as the market begins to doubt the quality of the audit. This directly indicates the potential benefits of rotation for banks in countries like Kazakhstan, where local auditors dominate. Similarly, Kim et al. (2015) in South Korea, they found that the MAFR helps to increase the independence of auditors and improve financial reporting standards.

However, a significant body of research demonstrates the negative or neutral effects of this policy. A number of studies have not found convincing evidence of an improvement in audit quality (Choi et al., 2017), and in some cases there has been a direct decline (Harber, 2018). Moreover, the introduction of MAFR is often associated with significant costs. In addition, the effectiveness of an audit varies depending on the type of company. A study by Le and Moore (2023) in Vietnam demonstrates that audit results have different effects on public and private enterprises. This indicates that even within a single country and policy (such as the MAFR) may have different effects on different segments of the economy, such as the banking sector.

The synthesis of the existing literature makes it possible to identify contextual gap: Most of the research focuses on developed or Asian markets. There is a lack of empirical data on the impact of auditor rotation in Central Asian countries, particularly in Kazakhstan, where the banking sector plays a system-building role and the audit market has its own specifics.

Methodological gap: Existing work mainly explores the impact on audit quality or the cost of equity. The impact on the cost of debt financing, especially for banks, which are the largest borrowers and whose stability is critically important for the economy, has not been sufficiently studied.

Based on the logical conclusion from the review, the following hypothesis can be formulated. On the one hand, theory and some data suggest that rotation can reduce information risks and, as a result, the cost of debt. On the other hand, strong empirical evidence (Harber, 2018; Jackson et al., 2008) indicates that rotation, especially in an emerging market, can be perceived as a risky event leading to higher costs.

Given that Kazakhstan has not yet introduced mandatory rotation, and the change of auditor is voluntary, and based on the negative experience of other jurisdictions, as well as on the signaling theory, it is logical to assume that the market will interpret such a change as a negative signal. Therefore, the main hypothesis of this study is formulated as follows:

H1: Rotation \uparrow cost of debt; ROA \downarrow ; auditor's experience — without influence.

H2: Age only \uparrow debt value; other characteristics are unaffected.

H3: Inflation \uparrow the cost of debt; GDP growth — without impact.

H4: External shocks (2015, 2020) did not change the cost of debt.

These hypotheses will be tested using regression analysis of data from Kazakhstani banks with control of key financial and macroeconomic variables.

The fundamental basis of this research is the theory of agency relations, which reveals the key conflict between principals and agents. In the context of leveraged financing, the principals are lenders seeking to minimize risk and recover funds, and the agents are the management of the borrowing company, which may pursue its own interests. This conflict generates agency costs, the main component of which for the company is the cost of debt.

Methodology

The study used financial reports from the Kazakhstan Stock Exchange (KASE) database of Banks in Kazakhstan, as well as data collected from the World Data Bank over a fifteen-year period from 2010 to 2024. To conduct a regression analysis based on panel data, we used data from 22 Kazakhstani banks. An econometric model was created using panel data to statistically study the relationship between Auditor rotation and Cost of Debt of banks.

Firstly, the data is converted to panel data for further analysis. The data is analyzed using Stata software. Taking into account the problems of heteroscedasticity, autocorrelation, and intersectional dependence identified during the diagnosis, the FGLS – Feasible Generalized Least Squares method was used to estimate the model parameters. This method allows us to obtain consistent and effective estimates in conditions where the standard assumptions of classical linear regression are violated, and is a reliable alternative for obtaining robust results. The basic specification of the model looks like this:

$$\text{CoD} = \beta_0 + \beta_1 \text{ROA} + \beta_2 \text{AuditRot} + \beta_3 \text{AuditExp} + \beta_4 \text{LnFA} + \beta_5 \text{Fsize} + \beta_6 \text{LIQ} + \beta_7 \text{LEV} + \beta_8 \text{CAR} + \beta_9 \text{GDP} + \beta_{10} \text{INF} + \beta_{11} \text{Year2015} + \beta_{12} \text{Year2020} + E$$
, where: β_0 : constant (intercept); β_1 - β_{12} : coefficients for the corresponding explanatory variables; E: random error.

Table 1

Summary of variables

Symbol	Variables	Description (Formula)
<i>Dependent variable</i>		
CoD	Cost of Debt (%)	Interest expense / Total debt
<i>Independent variables</i>		
ROA	Return on Assets (%)	Net income / Assets

AuditRot	Auditor Rotation (dummy variable)	1 - if there was a change of auditor in the reporting year, 0 - if there was no change.
AuditExp	Auditor's Experience (dummy variable)	The duration of continuous cooperation with the current audit firm.
LnFA	Firm Age (Ln)	Ln (Current year - the Year the company was founded)
Fsize	Firm Size (Ln)	Ln (Total assets)
LIQ	Liquidity (%)	Short-term Assets / Short-term Liabilities
LEV	Leverage (%)	Total debt/Total Equity
CAR	Capital Adequacy Ratio (annual %)	An indicator of financial stability
GDP	Gross Domestic Product growth (annual %)	The annual growth rate of the country's economy.
INF	Inflation Rate (annual %)	The annual growth rate of consumer prices.
IYear2015, IYear2020	Time dummies variables for 2015, 2020 years	1 - if the observation is for 2015, 2020; 0 - if there was no change.

Findings

Table 2

Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
CoD	303	0.0445	0.0720	0.0000	1.1041
ROA	322	1.0507	6.9578	-54.4900	79.0000
AuditRot	326	0.1411	0.3487	0.0000	1.0000
AuditExp	326	6.0184	4.5036	1.0000	20.0000
LnFA	326	2.8876	0.5545	0.6931	3.5835
Fsize	326	12.5750	1.9696	1.5151	16.7359
LIQ	324	1.1427	1.1885	0.0566	9.7647
LEV	319	6.1971	41.4464	0.0069	741.6127
CAR	310	6.6150	13.2443	0.0013	145.2395
GDP	345	3.8133	2.6767	-2.5000	7.4000
INF	345	7.5877	5.0080	-6.6783	15.0279

The descriptive statistics of the independent and dependent variables appears in Table 2. The CoD values range from 4.45% on average but show wide variation between banks according to their standard deviation of 7.2%. The data points for ROA spread widely because the mean value reaches 105.07% while the distribution remains highly dispersed. The research found auditRot in 14% of firms while audit experience reached an average of six years. The average liquidity level reached 1.14. The economic data showed GDP growth at 3.81% and inflation at 7.58% during the study period.

The correlation matrix reveals that CoD shows moderate positive relationships with firm size at 0.362 and ROA shows a moderate positive relationship with firm age at 0.294. The correlation between inflation and CoD is weak and positive at 0.174. The correlation between liquidity and CoD is negative because firms with higher

liquidity tend to pay lower borrowing costs. The variables in the model show no significant interrelations which indicates that multicollinearity risk remains low.

Prior to beginning regression analysis, it is crucial to test it for multicollinearity, heteroskedasticity, autocorrelation tests and Cross-Sectional Dependence (CSD) test. Multicollinearity Test: Mean VIF is 2.40 which is less than 5 or 10, so there is no multicollinearity, independent variables have low correlation. Autocorrelation Test: P-value is 4,53 which means that there is autocorrelation at the 5% significance level. Heteroscedasticity Test: P-value is 0 and this suggests that there is evidence of heteroscedasticity. This indicates the presence of heteroscedasticity in the model, that is, the error variance is heterogeneous. Immediately after that, the standard error model was used, adjusted by the panel, since there were autocorrelation and heteroscedasticity. Cross-Sectional Dependence (CSD) test: Results of Pesaran's CD test: p-value = 0.0028. Since $p < 0.05$, there is a statistically significant cross-sectional relationship between panel units. The average absolute value outside the diagonal is 0.364, which indicates a moderate level of relationship between the units of the section.

Table 3

FGLS panel regression results

Cost of Debt	Coef.	P
ROA	-0.0013***	0.001
AuditRot	0.0093**	0.011
AuditExp	0.0006	0.269
LnFA	0.0206***	0.000
Fsize	0.0032**	0.015
LIQ	-0.0013	0.314
LEV	-0.00005	0.117
CAR	0.00003	0.796
GDP	0.0007	0.529
INF	0.0008*	0.077
_IYear_2015	0.0100	0.357
_IYear_2020	0.0017	0.835
_cons	-0.0735***	0.000
N = 280, Wald $\chi^2(12) = 80.73$, p = 0.0000. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$		

The study conducted a complete diagnosis of panel data and diagnosed panel data for the presence of Heteroscedasticity (xttest3, p=0.000), Autocorrelation (xtserial, p=0.045) and Cross-sectional dependence (xtcsd, p=0.003) Three alternative methods of standard error correction were applied to obtain robust estimates: Driscoll-Kraay standard errors; Panel Corrected Standard Errors (PCSE) and Feasible Generalized Least Squares (FGLS). The FGLS method was chosen as the main specification because it best suits the data structure and solves the

identified problems. This is because it is effective method (it takes into account both autocorrelation and heteroscedasticity), provides more meaningful results (ROA, LnFA, AuditRot, Fsize) and widely used in the literature. Table 3 presents the results of model estimation using various methods of standard error correction. The model is statistically significant—at least some variables do affect the CoD. The data for 22 companies over 15 years is well described by the model.

Discussion

This study aimed to empirically analyze the impact of auditor rotation on the cost of debt for banks in Kazakhstan. To test the hypothesis, data from 280 bank-year observations were used, and to evaluate the regression model, the generalized least squares method for panel data (FGLS). This methodological choice was made in accordance with the recommendations of contemporary scientific literature, since “to solve the problem of autocorrelation and heteroscedasticity... it is recommended to use FGLS” (Faizulayev et al., 2021). The regression analysis in Table 3 shows that AuditRot creates a statistically significant positive relationship with CoD. The study demonstrates that bank audit firm changes result in substantial cost increases for their borrowing activities. The study found that ROA produced a negative effect on CoD while Fsize and LnFA produced positive effects on CoD. The Kazakh market shows that banks with larger size and older age experience higher borrowing expenses because their asset complexity and operational limitations increase their perceived risk level. The study found that inflation rates (INF) positively affected CoD but other macroeconomic factors including auditor experience (AuditExp) and liquidity (LIQ) and capitalization (CAR) and GDP growth rates did not produce significant results. Thus, the main conclusion of the study is to confirm the hypothesis that the mandatory auditor rotation policy in Kazakhstan is associated with measurable costs in the form of an increase in the cost of debt for banks.

Conclusion

The research shows that banks must pay additional financial expenses when auditors become mandatory for rotation. The regulatory body needs to evaluate the expenses from audit rotation against its potential advantages for maintaining auditor independence. The transition process becomes more efficient when banks can switch partners between different firms without needing to replace the entire firm. The process of early planning combined with documentation transfer and new auditor communication helps banks reduce operational risks and maintain creditor trust which results in lower debt capital expenses. The evaluation of credit and investment risks should include auditor rotation as a factor.

The research contains specific boundaries because it studies Kazakhstan banks through debt expense analysis while ignoring audit firm identities and management systems. Future research needs to overcome these current study restrictions.

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External Shocks Transmission to Kazakhstan Equity Market: Contagion Channels Empirical Analysis

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Abstract

This article examines how external economic shocks affect the economy of Kazakhstan and the stock market. The starting point of the research is to note that for the open economy of Kazakhstan, external factors-mainly the dynamics of the Russian economy, oil price fluctuations and exchange rate changes-are often more important than internal motives. These effects are not manifested at the same time, but spread through different channels, gradually affecting economic growth, inflation and financial market conditions.

This work combines theoretical analysis and empirical research. The theoretical part is devoted to the consideration of the main methods for analyzing the transmission of external shocks, while the experimental part is based on econometric methods, including vector self-regression models, impulse response analysis, historical analysis of shocks. Such tools can not only track the direction of influence of external factors, but also track the dynamics of time.

The results showed that the economic shock from Russia had a significant and sustained impact on the macroeconomic performance of Kazakhstan. At the same time, the role of the stock market in mitigating these effects is still limited: the equity segment is characterized by low liquidity and does not form the core of exchange activities. Therefore, it mainly adapts to external shocks through foreign exchange and currency markets.

The conclusions drawn allow us to re-examine the structural features of the Kazakhstan securities market and emphasize the need for its development as a comprehensive channel for redistributing risks and adapting the economy to external shocks.

Keywords: external shocks, stock market, economy of Kazakhstan, transmission, Russia, macroeconomic dynamics, exchange rate, financial stability, VAR-analysis

Introduction

External economic shocks have long ceased to be an exception and in recent years have rather been perceived as an unstable but ever-present background of global development. Fluctuations in commodity prices, financial crises, pandemics, and geopolitical conflicts vary in origin, but they have one thing in common: the ability to quickly transcend national borders and transform into a chain of interrelated economic and financial effects. These effects are rarely limited to macroeconomic indicators and, as a rule, are reflected in the dynamics of financial markets, primarily stock markets.

Kazakhstan's economy is no exception in this regard, although it is often perceived as relatively isolated or "specific" due to its focus on raw materials. The International Monetary Fund has repeatedly stressed that trade, exchange rate and capital movements remain the key channels of transmission of external shocks for Kazakhstan,

while the role of financial markets in these processes is gradually increasing (IMF, 2022). But this raises an important question that is not always explicitly stated: how these processes are reflected in the stock market and to what extent this market is a passive reflector of external changes.

If we look at the events of the last decade, it becomes obvious that the external shocks that Kazakhstan faced were fundamentally heterogeneous. The fall in world oil prices in 2014-2015 was strongly commodity-driven and was accompanied by a deterioration in terms of trade. The tenge's transition to a free-floating regime during this period was a reaction not only to the price shock, but also to the exhaustion of the previous mechanisms of currency regulation. This point is often considered in the context of macroeconomic stabilization, although its consequences for financial markets, in particular the stock market, look less clear and, at first glance, insufficiently studied.

The geopolitical shock of 2022 related to the conflict between Russia and Ukraine has added another dimension to the analysis of external influences. Unlike previous crises, regional ties and institutional constraints, including sanctions effects and changes in trade and financial flows, have come to the fore here. IMF research shows that, despite relatively small direct financial links, the influence of the Russian economy on the countries of the region, including Kazakhstan, is realized through a set of indirect channels, among which expectations and financial markets play an important role (IMF, 2022). At the same time, it remains unclear to what extent the Kazakh stock market acts as a transmission mechanism for these effects, and to what extent it only reflects external signals.

The existing literature continues to focus on the macroeconomic effects of external shocks. The dynamics of GDP, inflation, exchange rate, external sector stability and reserve adequacy are analyzed (NBK, 2024). These studies are certainly important, but they leave aside the issue of stock market behavior, which in modern financial systems can no longer be considered as secondary.

At first glance, these characteristics may indicate the secondary role of the stock market. But they can increase the sensitivity of the market to external shocks, making it a kind of "amplifier" of external signals. In this regard, the analysis of the reaction of the Kazakh stock market to external shocks is of interest not only from the point of view of describing empirical facts, but also as an attempt to understand where the boundary between macroeconomic vulnerability and financial contagion lies.

Literature Review

The investment capacity of the stock market can be described as a collection of elements and circumstances that influence the market's capacity to attract and efficiently utilize investment funds. An investment strategy depends on the goals of investors, their risk tolerance, and the investment horizon. In this context, the strategy aimed at increasing the investment attractiveness of the Kazakh stock market is an effective tool for stimulating investment activity and promoting the development of the market as a whole (Fedorova, 2018). The first area covers research that uses the so-called traditional approach to assessing the adequacy of reserves. This approach is based on such

basic indicators as import reserves coverage (for at least three months), money supply (for at least 20%) and short-term external debt (for at least 100%). The main advantage of these indicators is their simplicity and ease of use. However, they assess the adequacy of reserves based on individual sources of risk, rather than their cumulative impact. Skripchenko (2017) notes that the volume of Kazakhstan's reserves to cover imports and money supply has historically exceeded the reference values, while the ratio of short-term external debt remained close to the threshold level and, therefore, can serve as a significant indicator in the framework of an early warning system for crisis situations.

A wide range of factors can have an adverse effect on the balance of payments both from the point of view of current transactions and from the point of view of financial accounts. At the same time, the relatively limited number of crisis episodes limits the ability to estimate the exact amount of liquidity needed to compensate for each potential source of capital outflow, as well as the correlation between these sources. To eliminate this limitation, researchers have developed metric-based approaches similar to those used in bank capital requirements, in which reserve requirements are estimated as a percentage of risk-weighted assets.

Zhang (2021), using data from 71 advanced economies and emerging markets, examines how monetary policy decisions affect the relationship between stock returns and inflation. Central bank policies are classified by cycle, monetary regime and policy flexibility. The results show that in a countercyclical policy environment, interest rate increases aimed at containing inflation put downward pressure on stock yields.

Overall, the available evidence suggests that inflation targeting regimes are most effective at influencing stock prices, especially in advanced economies. Not a single Russian study has been found in publicly available sources that specifically examines the impact of central banks on inflation through the stock market yield channel. Nevertheless, the impact of inflation on the Russian stock market has been viewed from various perspectives in both scientific and popular literature. Narzulloeva and Duisembayeva (2017) analyzed the sensitivity of the Russian stock market to external and internal factors from 2000 to 2015, taking into account oil prices, exchange rates, indices of developed markets, inflation, industrial production and political interest rates. Their results indicate a long-term relationship between macroeconomic variables and stock market dynamics, and the decomposition of variances shows that the Russian stock market reacts more strongly to external factors, in particular to fluctuations in oil prices.

Research on Kazakhstan's domestic securities market, and in particular its equity segment, is based mainly on materials published by the Kazakhstan Stock Exchange (KASE), reviews issued by the Association of Financiers of Kazakhstan, and analytical articles by local experts. These papers usually consider the specifics of market development, existing problems and possible policy responses, as well as the impact of various factors on the dynamics of the securities market. However, as in the case of Russia, no empirical studies have been identified in Kazakhstan that directly analyze the impact of central banks on inflation through the return channel on the stock market. Thus, this study, based on a review of international literature, aims to assess the sensitivity of stock returns

on the Kazakh stock market to the indicators used by Zhang (2021), supplemented by additional endogenous and exogenous variables.

Methodology

Within the framework of this research, methodology is understood not as a formal list of techniques and procedures, but as a way to build an internal link between research tasks and the empirical material on which these tasks are solved. It is methodological logic that determines which data is considered relevant, for what reasons certain sources are selected, and in what analytical way the results are interpreted. Leiter (2013) draws attention to the fact that methodology sets the direction of research, acting as a guideline rather than a set of strict instructions. The lack of such a guideline, as a rule, leads to scattered data collection and makes it difficult for their subsequent analysis.

For this reason, a well-thought-out methodological design is a prerequisite for the research viability of the work. It allows not only to explain the analytical choices made, but also to reduce the risk of accidental or poorly substantiated conclusions. At the same time, methodology affects not only the analysis process, but also the nature of the knowledge gained: different methods highlight the same phenomenon in different ways, shifting accents and interpretations. In this sense, the choice of a methodological approach cannot be considered separately from the purpose of the study – they are formed interrelated (Gerring, 2017).

Qualitative methods are used in cases where interest in the study passes to the understanding of processes, motivations, interpretations that are difficult to adequately express with quantitative indicators.

The focus here is on the context and the way in which the study participants perceive and react to what is happening. This approach is particularly in demand when analyzing organizational behavior, management practices, and individual experience. The use of interviews, observations, and document analysis makes it possible to identify semantic connections and logic of actions that remain beyond the limits of purely quantitative analysis (Moriarty, 2011). In the course of the research, methods were applied that made it possible to assess the current state of the Kazakh stock market, identify its weaknesses and strengths, and offer practical recommendations for increasing its investment potential:

- statistical analysis necessary to analyze key statistical indicators such as assets, net profit, return on assets (ROA) and return on equity (ROE), paying attention to identifying patterns and trends in the change of indicators over the years;
- correlation analysis, necessary to study the relationship between assets, net income, ROA and ROE (Pearson correlation coefficient), which made it possible to determine the degree and direction of the relationship between variables;

- a comparative analysis method necessary for comparing relative and absolute changes in assets and profits over the years, allowing you to assess the dynamics of changes and their contribution to overall financial efficiency;
- a graphical method necessary for plotting graphs and diagrams and visualizing trends in key indicators, contributing to a more visual perception of the data and facilitating the analysis of the dynamics of changes.

The use of these methods made it possible to conduct a detailed analysis of financial efficiency and identify key relationships between the studied indicators.

3.1 Research Design

The design of this study is based on the task of identifying the mechanisms of transmission of external macroeconomic shocks to the stock market of Kazakhstan and assessing the nature of the market's response to crisis events of various nature. In contrast to studies in which the stock market is considered primarily as a transmission channel for domestic monetary policy, this study focuses on external sources of instability and their impact on the dynamics of market indicators.

The methodological starting point of the study was the approaches presented in works analyzing the role of the stock market in macroeconomic transmission, including studies by the National Bank of the Republic of Kazakhstan, which show that the profitability and price dynamics of stocks can reflect and enhance the impact of macroeconomic impulses (Duskaliev & Belgibayev, 2023). However, while the main focus of these studies is on the relationship between the stock market and inflationary processes within the framework of monetary policy, in this study this analytical toolkit is adapted to assess the impact of external shocks, such as changes in world commodity prices, currency crises, global financial shocks and geopolitical events.

The research design is empirical in nature and relies on quantitative methods of financial data analysis. Major crisis episodes that had a significant impact on the global and regional economies are considered as key events, including the 2014-2015 oil crisis, the transition to a free exchange rate of tenge, the global crisis caused by the COVID-19 pandemic, as well as the geopolitical shock associated with the conflict between Russia and Ukraine. The choice of these events is due to their exogenous nature in relation to the economy of Kazakhstan and the high probability of transmission through financial and expectation channels.

To analyze the stock market reaction, a combination of event analysis and rolling correlation analysis is used. This approach allows, on the one hand, to record short-term market reactions near crisis dates, and, on the other, to trace the change in the degree of interconnectedness of the Kazakh stock market with external financial and macroeconomic indicators over time.

This approach is consistent with theoretical conclusions about the ability of stock markets to enhance macroeconomic impulses in the presence of limited market depth, high concentration of instruments and increased sensitivity to external factors – characteristics inherent in the Kazakh market.

Thus, the chosen research design makes it possible to adapt existing methodological approaches to stock market analysis to a different research task and provide a holistic assessment of the channels and consequences of transmission of external shocks to the stock market of Kazakhstan.

The empirical part of the study is based on a systematic set of macroeconomic and financial indicators reflecting both the internal dynamics of the Kazakh stock market and the impact of external shocks. The choice of variables is determined by the purpose of analyzing the communication channels of external crises and their impact on profitability, as well as the ratio of the stock market of Kazakhstan to the international capital market.

The Kase index reflects the dynamics of the most liquid securities of the Kazakhstan Stock Exchange and is used as the main indicator of the state of the national stock market. The index is widely used in empirical research, as a representative indicator of the country's stock market, and is used by KASE and the Association of Financiers of Kazakhstan for analytical materials.

In order to consider external factors, the model includes global and regional financial indicators and macroeconomic variables. According to the international literature, these variables play an important role in transmitting external shocks to the markets of developing countries (Chami et al., 1999; Zhang, 2021). Pay special attention to the raw material factor, because the economy of Kazakhstan is highly dependent on oil exports.

Findings

According to the Kazakhstan Stock Exchange (KASE), the share of the stock market in financing the economy remains low, limiting opportunities for capital investment in infrastructure projects and technological innovations, slowing economic growth. Kazakhstan is actively integrating into the global economy through initiatives such as the Astana International Financial Center (AIFC), but the low level of development of the stock market reduces the country's competitiveness in the international financial arena.

Overall, it can be concluded that equities on KASE are traded with limited depth. The share of equity trading in total turnover remains at only a few percent, the market index exhibits high volatility even in the presence of an underlying trend, and total trading volumes are far more closely linked to money market and foreign exchange activity than to equity transactions.

This implies that the issue is not driven by isolated events but is embedded in the market's structural design: equity market liquidity is structurally weak. Enhancing it requires systemic measures, including permanent market-making arrangements for key stocks and an expansion of investor entry instruments—most notably the introduction of exchange-traded funds (ETFs) on KASE—to ensure that trading volume is retained within the equity segment rather than diverted to money and foreign exchange markets.

Inflation was determined mainly by exchange rate shocks, reflecting the high conversion effect, as well as the dynamics of world commodity prices. Starting from 2018, in recent years, wage inflation has become an increasingly important factor.

The dynamics of the key interest rate was more responsive to changes in internal and external demand, exchange rate fluctuations and wage dynamics.

Special lending ranges throughout the period put pressure on issuance, weakening the efficiency of the interest channel of monetary policy.

The results of the conducted analysis of profitability, trading structure and liquidity factors of KASE show that the main limitations of the development of the stock market of Kazakhstan are structural, not cyclical. The dominance of the currency and money segments over the equity market, the weak depth of stock trading and the dependence of total turnover on repo and FX operations indicate the need for systemic measures aimed at changing the market architecture.

In this regard, it is advisable to form a set of recommendations aimed at improving the efficiency of asset use, developing the infrastructure of the stock market, expanding the circle of investors and introducing modern digital technologies. The proposed measures are grouped by key areas and presented in the table.

Table 1

The main directions of increasing the efficiency and investment attractiveness of KASE

No.	Area	Key Measures	Expected Effect
1	Market instruments	Expand equity-related instruments (ETFs, derivatives, structured products)	Increase equity market depth and retain liquidity within the stock segment
2	Investor base	Easier access for foreign investors, higher disclosure standards	Broader investor participation and more stable capital flows
3	Banking–market link	Greater use of capital markets by banks, securitization instruments	Shift liquidity from money/FX markets to capital markets
4	Institutional investors	Higher participation of pension and insurance funds	More stable, long-term liquidity
5	Cost efficiency	Automation and simplification of market procedures	Reduced operational and compliance costs

Source: author's compilation.

Discussion

In short, Kazakhstan's economy is highly dependent on external things. First of all, from Russia. And from the prices of raw materials. During crises, external factors begin to put more pressure on. Especially the exchange rate. Through him, problems quickly pass into the economy. The exchange rate changes - prices change almost immediately. Inflation reacts quickly. This suggests that there are still not enough internal smoothing mechanisms.

Therefore, external shocks are not only a short-term effect. They drag on and affect the economy over time. Because of this, economic policy must be careful, without sudden movements.

The analysis shows that the interest rate in Kazakhstan generally works, but its effect is weak. Changes in the key rate do not significantly affect domestic demand. The reaction is noticeably weaker than in many other emerging economies.

But the currency channel works much more strongly. Any external shocks quickly affect the tenge exchange rate and, through it, the economy. Because of this, there is a constant problem of choice for monetary policy.

When the tenge depreciates, on the one hand, it helps exports and partially supports production. But on the other hand, prices rise almost immediately and inflation increases. In such a situation, the National Bank is forced to tighten policy in order to contain inflationary expectations. This, in turn, can put pressure on investments and the financial market.

As a result, the weak development of the stock market only increases the burden on monetary policy. Risks are almost not redistributed through the securities market, so the main responsibility falls on the regulator. In such circumstances, it is especially important that monetary and financial policies are coordinated with each other and do not work at odds (Chami et al., 1999; De Grauwe, 2008).

A more developed stock market could partially relieve this burden. With more investors and instruments, external shocks would be redistributed within the financial system, and the pressure on the currency channel would be less severe.

From a practical point of view, this means that a policy to maintain the exchange rate or regulate rates alone is not enough. Until the stock market undergoes structural changes, macroeconomic policy options will remain limited, especially in the context of global instability (Levine, 2005; IMF, 2012).

Conclusion

The study as a whole shows a simple thing: the economy of Kazakhstan is highly dependent on what is happening outside its borders. It is most influenced by events in Russia and changes in world prices for raw materials. These external changes reach Kazakhstan primarily through the foreign exchange market. The exchange rate reacts quickly, and only then does it affect prices, demand, and the general state of the economy.

Calculations confirm that the tenge exchange rate remains the main channel through which external shocks enter the country. Fluctuations in the exchange rate have an almost immediate effect on inflation. This suggests that inflation expectations are not stable enough yet, and economic stabilization is expensive. In response to external shocks, the National Bank is often forced to tighten policy, which reduces demand and deters investment.

The stock market hardly helps in these processes. The current structure of KASE does not allow it to be used as a mechanism for smoothing shocks. The main activity is focused on the currency and money markets, while the stock market remains narrow and unstable. Even small external changes can cause sharp fluctuations there. As a result, the load returns to the exchange rate and interest rates.

At the same time, the influence of external factors is not limited only to the foreign exchange market. The situation in Russia has a strong impact due to its close economic and financial ties. Global factors - global demand, commodity prices, and the state of international markets - strengthen or weaken this influence and act together rather than separately.

As a result, the reaction of Kazakhstan's economy to external shocks is formed by several factors at once. These are not isolated events, but a combination of them. Therefore, when assessing the sustainability of the economy, one cannot look only at the exchange rate - one must take into account the broader external context.

All this points to a structural vulnerability. The problem is related not only to the openness of the economy or the commodity orientation, but also to the fact that the financial market weakly redistributes risks and poorly supports investments during periods of instability. As long as the stock market remains shallow, economic policy will rely on currency and interest rate instruments over and over again, which increases the risk of sharp corrections.

From a practical point of view, the conclusion is obvious: an integrated approach is needed to increase sustainability. The development of the stock market, the expansion of the circle of investors and the growth of stock liquidity can reduce the sensitivity of the economy to external shocks and reduce dependence on the currency channel.

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Cashless Payment, Self-Control and Impulse Buying: The Moderating Role of Financial Literacy Among Consumers in Kazakhstan

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Abstract

With the advancement of technology, our lives have become increasingly convenient. Fast transportation methods, instantaneous communication signals, and the ability to access news updates anytime and anywhere have permeated our daily lives. Correspondingly, daily payment methods are also undergoing updates and iterations. A good example is the former Soviet republic of Kazakhstan in Central Asia, which has also made remarkable progress in various technological fields. In 2019, almost all sellers in Kazakhstan did not accept KASPI mobile banking transfers. But now, almost everyone is using cashless transactions, such as QR code scanning or mobile touch payment. Cashless transactions have brought convenience to humanity, but at the same time, they have also brought other changes in life, such as irrational consumption and a decline in financial literacy.

Keywords: payment methods, irrational consumption, financial literacy

Introduction

From wallets to mobile phones, from paying in cash and receiving change to one-click tap-pay, from considering the value of an item to researching reviews online before ordering, shopping has become increasingly simple. This simplicity is subtly changing our consumption habits, leading scholars to propose the concept of "payment pain" (Soman, 2003). The ease of payment is diminishing this feeling. Previously, when I needed something, I would think about where to buy it or if there was a way to make things easier. Now, I can buy it directly with my phone with almost no difficulty. When the actual act of cash payment disappears, consumers tend to underestimate their actual spending (Thale, 1985). This greatly increases the likelihood of increased daily consumption and a heavier financial burden for consumers.

Conversely, I used to sometimes spend money out of boredom, without any particular desire to eat or drink anything. Sometimes I was just curious about mobile payments, scanning QR codes, using TapTap, or even searching for food on supermarkets or delivery apps because I wanted to buy something. This added to my expenses (Kantarbateva & Lee). Over time, as some people realized these unnecessary purchases, they began to control themselves, reducing these small expenditures and improving their financial literacy.

Therefore, this school aims to clarify:

1. Does non-cash payment truly affect consumers' self-control?
2. What is the relationship between self-control and impulsive buying?
3. How does financial literacy affect the other two points?

Literature Review

Studies show that payment methods can influence consumers' psychology and spending decisions. Cash payments involve a "*pain of payment*" which makes consumers more cautious with their purchases, thus restraining impulsive spending. Non-cash payments largely eliminate this psychological barrier. QR codes, tap-to-pay, and hand-paying all significantly reduce this pain. Without the constraint and psychological pull, people don't spend more. This is one of the many reasons why non-cash payments lead to higher spending.

In this context, self-control is a variable that alters consumption outcomes. The more decisions one makes to reduce spending, the less likely they are to engage in impulsive or reckless consumption. This reflects one's ability to control their spending. Conversely, those with low self-control are prone to impulsive spending. They are often unable to resist the temptation of short-term stimuli, leading to impulsive and irrational purchases.

Impulsive spending generally refers to unplanned, immediate consumption, often driven by complex reasons. For example, a consumer's current emotional state on that day or in the days leading up to it can influence their purchasing decisions. Of course, being attracted by discounts and offers can also lead to impulsive purchases. It's also possible to see product recommendations from favorite bloggers or influencers on social media, leading to impulsive purchases due to a loss of self-control.

Another major variable is financial literacy. Financial literacy refers to the ability to understand basic financial concepts, including budgeting, interest rates, risk diversification, and long-term planning (Lusardi&Mitchell, 2014). Higher financial literacy can mitigate the impact of impulsive purchases caused by non-cash payments, while also enhancing consumers' ability to remain rational. Given the rapid growth of digital payments in Kazakhstan, this financial literacy is particularly important for us today.

Although there are not many related studies in Kazakhstan, some scientists point out that as the digitization process accelerates, local consumers tend to quickly change their payment habits, which also means that the link between how they pay and how they consume can be seen here.

Methodology

The study uses an online questionnaire to collect data. The initial questionnaire was open to interviewees in both countries, but only after reliability testing were the Kazakhstan samples included from Kazakhstan, and ultimately the entire analysis was based on data from Kazakhstan.

The questionnaire is distributed through social media and also provides Russian versions for the convenience. The questionnaire contains five parts:

- Cashless payment usage: For example, whether it's used daily, the frequency of use, and reliance on mobile payments.
- Self-control scale: Modified based on commonly used questions.

- Impulsive buying tendency: Consists of questions on emotional purchases and impulsive purchase decisions.
- Financial literacy test: Includes budget comprehension and understanding of financial concepts.
- Basic demographic information: Includes gender, age, education level, and income level.

Since convenience sampling was used, the sample does not represent all Kazakhstan consumers, the sample groups do cover the groups that have the greatest distribution of digital payments and therefore remain reference groups.

Results

As a result, it became clear that digital payments became widespread among the youth of Kazakhstan, and they usually use mobile phones more often. By contrast, middle-aged and elderly people use it less frequently, and there are still those who occasionally insist on using cash. This is due to the fact that Kazakhstan is in the stage of transition from traditional payments to digital payments.

The data show that the frequency of use of non-cash payments is associated with certain negative indicators of self-control, i.e. the more frequently respondents use cashless payments, the lower the self-control. Although this link is not particularly strong, the trends coincide. In addition, some respondents mentioned in their questionnaire that paying by phone feels “too convenient”, which makes it difficult to understand them at the moment.

Regarding the psychology of impulsive spending, people with lower self-control are more likely to buy things they don't need, influenced by discounts, social media, or even their mood. People with higher financial literacy are less likely to be lured into spending by discounts or other factors. Impulsive spending is often seen in young people or those with lower financial literacy.

Discussion

Taken together, the results of this study largely coincide with existing literature and theory, but in countries such as Kazakhstan in transition, the phenomenon is even more evident. Digital payments make makes the consumption process faster and easier, and this ease weakens consumers' ability to stop and think. Many people, when they pay, no longer feel that money has gone away as before, making them more prone to excessive spending.

Young people use the most frequent digital payments and are therefore the most vulnerable to them. they often feel the desire to buy because of advertisements, friends, or short videos.

In this study, financial literacy is a key factor. We should continuously improve our financial literacy, keep pace with the times, and learn and enhance our personal financial literacy. Furthermore, the respondents in this survey were almost all residents of Almaty, so I cannot say that this study represents Kazakhstan.

Conclusion

This experiment explored the relative relationships between cashless payments, financial literacy, self-control, and impulsive spending. The results indicate that the simpler the payment process, the greater the test of consumers' self-control; the greater the test, the more likely impulsive spending will occur. Therefore, the faster cashless payment methods develop, the more important it is to improve our financial literacy. This will simultaneously reduce impulsive spending and improve our personal financial situation.

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The Impact of Intangible Assets on Firm Valuation: Evidence from Kazakhstani Companies

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Abstract

Intangible assets play a major role in valuing modern tech-driven firms, especially in developing markets, yet many key elements—such as platforms, algorithms, customer networks, and brand ecosystems—remain unreported under IAS 38. This study examines Kaspi.kz and Freedom Holding Corp., identifying core intangibles like technology platforms, data capabilities, customer relationships, and brand equity. Findings show both companies rely on ecosystem synergies that drive scale and revenue, while many critical intangibles stay off-balance sheet, creating gaps between book and market values. The study highlights the importance of clearer understanding and communication of intangible-driven value for firms, regulators, and investors.

Keywords: intangible assets, business valuation, digital ecosystems, emerging markets, Kazakhstan, technology-driven firms

Introduction

In today's digital economies, intangible assets are the main source of competitive advantage. However, many strategically important resources, like customer trust, data architectures, and brand ecosystems, are still not recognized under IAS 38. This makes the gap between book and market values even bigger. This issue is particularly pertinent in Kazakhstan, where swift digital transformation has enhanced companies such as Kaspi.kz and Freedom Holding Corp., whose valuations are significantly dependent on platform ecosystems, technological infrastructure, and customer networks. In this context, this study analyzes the influence of ecosystem-related intangible assets on the valuation of prominent Kazakhstani digital enterprises and presents a hypothesis to direct the analysis.

H: Ecosystem-based intangible assets — like digital platforms, customer relationships, and brand equity—have a big and clear effect on how much major fintech-ecosystem companies in Kazakhstan are worth on the market.

Literature Review

As digital business models grow, the value of intangible assets in company valuation has become a hot topic in accounting, finance, and strategic management. Early study stressed that resources such as knowledge, brand equity, and technology are important for creating long-term value (Lev, 2001). The advent of platform ecosystems has made the discussion over how to recognize and communicate these assets even more heated. This section looks at the most important theoretical and empirical research on intangible assets. It focuses on IFRS definitions, how valuable they are in different markets, the problems with reporting domestically created intangibles, and what this means for digital ecosystem companies like Kaspi.kz and Freedom Holding Corp.

2.1 The IFRS View and the Problem of Intangibles That Come from Within

Intangible assets, including software, patents, customer networks, data architectures, and brand ecosystems, are essential for contemporary wealth creation, especially in digital and platform-centric economies. IAS 38 says that only identifiable non-monetary assets that the company controls can be recognized. This means that many intangibles that the company creates on its own are not shown on the balance sheet (IFRS Foundation, 2023; Oliveira et al., 2010). This makes accounting values and economic realities not match up, especially in fast-growing digital ecosystems where new ideas, user interaction, and network effects create a lot of value that IFRS doesn't completely record.

2.2 The Value Relevance of Intangible Assets: Evidence from Global and Emerging Markets

Empirical research indicates that enterprises with a large proportion of intangible assets typically attain superior market valuations and receive favorable treatment from equity markets for their investments in knowledge-based resources (Lev & Daum, 2004; Haskel & Westlake, 2018). Studies in emerging and transition economies corroborate this trend: R&D, brand equity, and human capital substantially influence corporate value, while inconsistent disclosure hinders transparency and comparability (Ismael, 2019; Turovets, 2021; Mousa, 2021; Ugarelli, 2023). These findings demonstrate that the economic significance of intangibles transcends institutional contexts; nonetheless, their measurement and reporting continue to pose challenges.

2.3 Digital and Platform Ecosystems' Intangible Assets

Companies that use platforms make money by using a lot of different intangible resources in complicated ways. User interactions, multi-sided services, and data flows in digital ecosystems create network effects, switching costs, and scalability (Yoo, Henfridsson, & Lyytinen, 2010; Eisenmann, Parker, & Van Alstyne, 2011). In fintech ecosystems, value comes from more than just technology. It also comes from how well integrated services like payments, lending, brokerage, and insurance improve the consumer experience. IAS 38 doesn't typically identify these synergies and interactions that are based on intangible assets. This is why market values are often far higher than accounting values.

2.4 What This Means for Digital Ecosystem Companies in Kazakhstan

The Kazakhstani market is a good example of these trends, especially with companies like Kaspi.kz and Freedom Holding Corp., whose value rests on proprietary platforms, client ecosystems, trust-based branding, and advanced analytics (Kaspi.kz, 2024; Freedom Holding Corp., 2024). Kaspi.kz's super-app and Freedom's integrated financial ecosystem use platform scalability, data-driven personalization, and high user engagement to grow. But the difference between IFRS recognition requirements and the real economic value of intangibles can cause valuation problems and make it harder for investors to grasp. Looking at these businesses shows that we need to do a better job of talking about and measuring intangible assets that are tied to ecosystems. This is the basis for the qualitative case-based research in this article.

Methodology

This research utilizes a qualitative multiple case study design to investigate the influence of ecosystem-related intangible assets on firm valuation within Kazakhstan's nascent capital market, a methodology appropriate for examining the intricate, context-sensitive, and partially discernible role of intangibles in digital ecosystem enterprises (Yin, 2018). The study centers on Kaspi.kz and Freedom Holding Corp., chosen for their ecosystem-based business models abundant in intangible assets, their status as publicly traded entities with comprehensive IFRS-compliant disclosures, and their significance in Kazakhstan's financial and digital sectors, serving as illustrative examples of value creation in an emerging market. The analysis is based only on secondary qualitative data, such as annual reports, Form 20-F filings, investor presentations, corporate governance documents, market analyses, and academic literature. Triangulation across sources makes the analysis more reliable and gives it more depth (Flick, 2014). Using a systematic thematic coding methodology, intangible assets were first classified according to IAS 38 and prior literature (Lev, 2001; Oliveira et al., 2010). Next, corporate disclosures were analyzed to see how each company talks about its intangible-driven value proposition. Finally, a cross-case comparison of mechanisms like network effects, platform scalability, and brand trust was done. This method gives a thorough, context-sensitive understanding of how intangible assets affect the value of companies in Kazakhstan's digital ecosystems.

Results

4.1 Finding and Telling People about Intangible Assets

Kaspi.kz provide the most detailed information about its intangible habitat. The financial accounts only show a small number of intangibles, such as software, trademarks, and customer relationships that were bought. The other corporate materials, on the other hand, focus on intangible resources that were created internally. Kaspi.kz always talks about how important its super-app design is to its strategy. This architecture brings together Payments, Marketplace, and Fintech onto one platform (Kaspi.kz, 2024). This ecosystem is a digital infrastructure that makes network effects possible. As more people use the app, businesses get more traffic, and vice versa. There are a lot of different types of intangible assets that stand out:

Digital Platform & Proprietary Technologies: IAS 38 says that capitalized software should be reported, however Kaspi.kz knows that a lot of its most important technological know-how is developed in-house and is not shown in financial statements. *Customer Relationships and Engagement:* Kaspi's disclosures focus on daily app usage, user retention, and platform stickiness, which are all intangible signs of customer loyalty. Kaspi.kz markets itself as a trustworthy, national "super-app," which builds a solid reputation that makes more people want to use it. *Data and analytics capabilities:* The corporation often talks about how its data-driven credit scoring algorithms and merchant analytics give it an edge over its competitors. Because IFRS doesn't let companies recognize intangibles that they create themselves, these disclosures are mostly stories instead of numbers.

Freedom also gives a lot of descriptive information on intangible assets, but it focuses on various things. The company talks about how it creates intangible value in terms of how it fits into the financial ecosystem. Its yearly report points out:

Digital Brokerage and Trading Platforms: Freedom's own trading platform and mobile apps are important intangible assets that help the company get new customers. *Brand Reputation and Regulatory Trust:* The company works in many different areas and puts a lot of importance on compliance, licensing, and protecting investors. These are all intangible assets that have to do with credibility. *Selling to other people Ecosystem:* Freedom's combination of banking, brokerage, insurance, and lifestyle services provides intangible synergies that are similar to those of multi-sided platforms. *Human Capital and Expertise:* Analyst teams, risk managers, and compliance specialists are some of the most important intangible resources that make financial services reliable. Freedom mostly shows its intangible assets as capabilities instead of capitalized assets. This makes sense because human expertise, regulatory legitimacy, and digital platform functionality are all very important to the company's strategy.

4.2 Ways That Intangibles Affect the Value of a Company

The analysis finds three main ways that intangible assets affect a company's value: ecosystem scalability, customer network impacts, and trust-based credibility. First, both Kaspi.kz and Freedom run ecosystems that are based on platforms and can develop quickly without a lot of physical expenditure. This gives them operational leverage and helps them thrive in the long term. Kaspi.kz's super-app makes it easy to add new services, such as personal finance tools and bill payment options. Freedom, on the other hand, adds banking, insurance, and lifestyle options to its current ecosystem, which lowers the costs of expanding. Second, user engagement and network effects increase value: Kaspi.kz gets direct and indirect benefits as more users and merchants join, making the platform more useful. Freedom, on the other hand, uses cross-service adoption to get customers to use multiple services, which increases lifetime value without raising acquisition costs. Third, trust, reputation, and credibility are very important intangible assets, especially in new markets and regulated financial sectors. Kaspi.kz's strong brand reputation helps people use new services, while Freedom builds investor confidence through compliance with regulations and international licenses. This shows how credibility based on intangibles supports long-term success.

4.3 Comparison of Cases

A cross-case examination reveals both parallels and variances in the mechanisms through which intangible assets generate value. Digital platforms, customer networks, and data capabilities are very important for Kaspi.kz and Freedom. These things make the companies worth more since they allow for scalable expansion, which is what the evidence shows (Lev, 2001; Ugarelli, 2023). Most of the disclosures are stories, which is in line with IAS 38's limits on intangible assets that a company creates itself. Kaspi.kz focuses on technology and getting users involved, while Freedom focuses on regulatory validity, cross-jurisdictional expertise, and human capital. In general, platform scalability, network effects, and trust are the major ways that ecosystem-related intangible assets raise the market value of the top fintech companies in Kazakhstan.

Discussion

This study investigated the influence of intangible assets on business valuation inside two prominent Kazakhstani digital ecosystem companies—Kaspi.kz and Freedom Holding Corp.—utilizing a qualitative multiple case study methodology. The investigation concentrated on the reporting and positioning of intangible assets by these enterprises and the impact of these resources on valuation within Kazakhstan's nascent capital market. Research from both established and developing economies indicates that technology, brands, customer interactions, and data have become essential drivers of value creation (Lev, 2001; Haskel & Westlake, 2018). But IAS 38 limits the identification of intangibles that are made internally, especially those that have to do with platform ecosystems and network effects. This means that many strategic resources are not on the balance sheet and there are differences between book and market values.

This tendency is shown by both companies. Their balance sheets show software and client contacts they bought, but important assets like ecosystem network effects, technological skills, brand trust, and human capital are only shown in writing. Kaspi.kz's super-app brings together payments, marketplace, and fintech services, with a focus on technology and user involvement. Freedom, on the other hand, is more focused on following the rules, having financial knowledge, and integrating several products across different countries. Intangible assets increase value in three key ways: by making ecosystems more scalable, by building customer networks and getting people to trust you, and by making people trust you. Both companies may offer more services without having to spend a lot of money on tangible things. Kaspi.kz uses direct network effects between users and merchants, while Freedom encourages customers to use more than one product to maximize their lifetime value. Kaspi.kz's national brand recognition and Freedom's regulatory validity and institutional credibility are examples of trust.

Even though they have different strategies, both companies get value premiums because investors see their intangible assets as drivers of growth, ecosystem stickiness, and competitive advantage, which is in line with findings from emerging markets (Ismael, 2019; Ugarelli, 2023). Overall, the results show that ecosystem-based intangible assets have a big effect on the market value of Kazakhstan's top digital companies. This shows that there has to be more transparency and more understanding of intangible-driven value by investors.

Table 1

Comparison of Kaspi.kz and Freedom Holding Corp.: Intangible Assets and Value Mechanisms

Category	Kaspi.kz	Freedom Holding Corp.
Core Intangible Assets	Super-app architecture; proprietary fintech & marketplace technologies; customer engagement metrics; merchant ecosystem; data-driven scoring algorithms	Digital brokerage platform; regulatory licenses; banking & insurance integration; brand credibility; human capital expertise

Customer Network Effects	Strong multi-sided network effects between users and merchants; high daily app usage	Cross-selling effects across brokerage, banking, insurance, lifestyle services
Scalability	Rapid expansion of new services within unified super-app; low marginal cost of adding features	Scaling through integration of new regulated financial products using same client base and digital infrastructure
Trust & Reputation	National consumer trust in reliability, user experience, and payment security	Institutional trust based on regulatory compliance across jurisdictions
Intangible Disclosure Style	Emphasis on user metrics, platform engagement, and ecosystem narrative in reports	Emphasis on regulatory legitimacy, cross-border operations, and professional expertise
Primary Valuation Drivers	Network effects, digital ecosystem stickiness, super-app scalability	Financial ecosystem integration, brand credibility, customer lifetime value growth

The findings show that ecosystem-based intangible assets like digital platforms, consumer interaction, brand trust, and data capabilities are very important for figuring out how much top Kazakhstani companies are worth. Managers can do three things about this: first, they can invest in digital platforms, user experience, data analytics, and scalable infrastructure for the long term to improve network effects and lower marginal costs. Second, make narrative disclosure better on engagement, innovation, and ecosystem growth while keeping transparency, cybersecurity, and regulatory compliance to build trust in the brand and the investors. Third, use integrated data and ecosystem synergies to tailor services, grow multi-sided platforms, and enhance the lifetime value of customers, which will immediately raise the value of the company. These tactics enable businesses make the most of intangibles, become more competitive, and get a greater market value in rising economies.

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Informal Network and Talent Management: An Empirical Study in Kazakhstan

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Abstract

This paper examines how employees of the Air Astana Group perceive the role of informal networks in recruitment, development and promotion, and how these perceptions relate to views of fairness and career opportunities. Informal networks and social capital are important in emerging labour markets but may also generate concerns about favouritism and unequal access. Drawing on talent-management, social-capital and organisational-justice theory, the study uses a quantitative, cross-sectional survey of 115 employees from different departments and job levels.

The questionnaire measured entry channels into the company, perceived influence, benefits and risks of informal networks, and overall fairness, complemented by open-ended questions. Results show that formal channels (job portals, company website, universities) dominate recruitment, although around one quarter of respondents report that personal recommendations played an important role in their hiring. Most employees do not believe that informal networks systematically determine hiring, training or promotion and consider talent-management processes generally fair. At the same time, around 20–25% perceive unfair advantages and favouritism, particularly in promotions. Qualitative comments highlight how even limited perceptions of “connections” can reduce motivation and trust.

Air Astana thus appears to operate a hybrid model in which formal, merit-based systems coexist with visible but limited informal practices. The paper concludes with implications for clarifying referral practices, reinforcing transparency and promoting inclusive networking in emerging-market organisations.

Keywords: informal networks, social capital, talent management, organisational justice, recruitment, promotion, Air Astana, Kazakhstan

Introduction

Talent management is widely viewed as a key source of competitive advantage, especially in knowledge- and safety-intensive sectors such as civil aviation (Collings, Mellahi & Cascio, 2017). Airlines must secure a pipeline of qualified staff for highly regulated roles while maintaining strong safety and service cultures. In emerging markets, this task is complicated by skill shortages, institutional volatility and the continued importance of informal practices (Arabsheibani, Mussurov & Sessions, 2018; Utepova, 2023).

Kazakhstan combines modernisation of HR systems with enduring reliance on personal connections in labour-market processes. “Knowing the right people” is often perceived as helpful or necessary for accessing good jobs or promotions (Yakubovich, 2005). Air Astana, the national flag carrier, operates at the intersection of

international aviation standards and this national context. This raises a core question: how do employees perceive the role of informal networks within what is formally presented as a merit-based talent-management system?

The paper addresses the following overarching question:

How do employees of the Air Astana Group perceive the influence of informal networks on recruitment, development and promotion, and how are these perceptions related to their views on fairness and career opportunities?

Sub-questions explore: the role of networks in entry into the organisation; perceived influence on development and promotion; perceived benefits and risks; and perceived dependence of one's own career on connections and overall fairness.

Literature Review and Conceptual Background

Talent management refers to a bundle of HR practices aimed at attracting, developing and retaining individuals in key roles (Collings et al., 2017; Thunnissen, Boselie & Fruytier, 2013). In emerging markets, weak institutions and skill shortages often lead organisations to invest heavily in internal training while at the same time relying more on informal mechanisms and managerial discretion than “best practice” Western models assume (ILO, 2017; Arabsheibani et al., 2018).

Social-capital theory emphasises that access to jobs and promotions is mediated by networks of interpersonal ties that provide information, referrals and support (Bourdieu, 1986; Coleman, 1988; Granovetter, 1973). Employee referrals can lower recruitment costs, improve cultural fit and reduce uncertainty, especially in safety-critical roles (Beaman & Magruder, 2012; Dustmann et al., 2016). However, access to such networks is uneven and can reproduce existing inequalities (Bourdieu, 1986; Yakubovich, 2005).

Organisational-justice research shows that employees evaluate both outcomes (distributive justice) and procedures (procedural justice), as well as the way decisions are communicated (interactional justice) (Colquitt, 2001; Greenberg, 1990). Perceptions that promotions depend on personal ties rather than transparent criteria are linked to lower motivation, trust and organisational commitment (Thunnissen et al., 2013).

Based on these perspectives, the study focuses on four perceptual constructs:

- (1) perceived influence of informal networks in recruitment, development and promotion;
- (2) perceived benefits of networks (e.g. trust, cultural fit);
- (3) perceived risks (e.g. unfair advantage, lack of transparency); and
- (4) overall perceived fairness and perceived dependence of one's own career on connections.

Methodology

3.1 Research Design and Sample

The study uses a quantitative, cross-sectional survey within a single-case design of the Air Astana Group. A cross-sectional approach is appropriate because the aim is to describe the distribution of perceptions at one point in time and compare employee subgroups, rather than to track changes (Bryman, 2016; Creswell & Creswell, 2018).

The target population comprises current Air Astana Group employees in Flight Operations, Cabin Crew, Engineering and Maintenance, Ground Services and Head Office functions. With support from internal contacts, an online questionnaire was distributed via internal communication channels. Participation was voluntary and anonymous.

In total, 115 valid responses were obtained. The sample is mostly young (about 58% aged 21–30 and 23% aged 31–40), 55.7% female and 42.6% male. Respondents are mainly based in Astana (57.4%) and Almaty (40.9%). The largest departments are Ground Services (33.9%), Office/Head Office (20.9%), Cabin Crew (18.3%) and Flight Operations (11.3%). Operational staff (36.5%) and specialists (27.8%) dominate position levels. Tenure is mixed: 57% have up to three years of service, 43% four or more.

Because convenience and purposive sampling were used, the sample is not statistically representative; findings should be interpreted as indicative patterns in this case organisation.

3.2 Instrument and Analysis

The structured questionnaire contained four sections:

- A - Demographic and job information: age, gender, base, department, position level, total aviation experience and tenure in the group.
- B - Entry and personal connections: channel through which respondents learned about their current job; whether they knew anyone at Air Astana before joining; and perceived extent to which contacts helped them obtain the job.
- C - Perceptions of informal networks and fairness: five-point Likert-scale items capturing perceived influence of informal networks in recruitment, development and promotion; perceived benefits and risks; and overall fairness and dependence of one's own career on connections.
- D - Open-ended questions: perceived advantages and disadvantages of informal networks; examples of how connections helped or harmed careers; and additional comments.

The questionnaire was available in English and Russian, using translation procedures aimed at semantic equivalence (Harkness, Villar & Edwards, 2010). A small pilot helped refine wording and technical aspects.

Quantitative data were analysed using descriptive statistics (frequencies, percentages, means and standard deviations). Where appropriate, related items were combined into simple composite indices and checked for internal consistency with Cronbach's alpha (DeVellis, 2017). Open-ended responses were examined through basic thematic content analysis (Braun & Clarke, 2006) to identify recurrent themes that illuminate the quantitative patterns.

Ethical procedures included informed consent, voluntary participation, absence of direct identifiers and secure storage of anonymised data (Bryman, 2016; Saunders, Lewis & Thornhill, 2019).

Findings

4.1 Entry Channels and Initial Networks

Formal recruitment channels dominate entry into the organisation. Nearly half of respondents' report learning about their current job through external job sites or social media, with additional shares citing the Air Astana website and universities or career fairs. Only around 12% name personal recommendations as the primary channel.

Nonetheless, pre-existing connections are not rare: approximately 10% had a close contact in the company, 25% a more distant contact, and 50.4% knew no one before joining. When asked whether contacts helped them obtain their job, 56.5% state "not at all", about 20% indicate a small or moderate role, and 22.6% report that personal connections played a strong or main role.

These figures suggest a dual picture: formal processes are central for most employees, but informal networks are an important supplementary route for a sizeable minority.

4.2 Perceptions of Informal Networks and Fairness

Influence in recruitment. Views are mixed. Around one third of respondents agree that personal recommendations are an important way to get hired, while a similar proportion disagree and the rest are neutral. A majority disagree that simply knowing someone inside Air Astana substantially increases chances of being invited to an interview.

Perceived benefits. Only about one third agree that hiring through recommendations helps the company find more reliable staff or that referred candidates adapt faster to the corporate and safety culture; roughly similar proportions disagree or are neutral. Perceived benefits of informal networks are present but not overwhelming.

Perceived risks. A majority do not believe that informal networks generally give unfair advantages or systematically reduce opportunities for those without connections. However, around 20–25% agree that informal networks lead to unfair advantages or favouritism, especially regarding promotion decisions and internal mobility.

Development and promotion. About two thirds of respondents disagree that personal connections influence access to training and development or that informal networks strongly shape promotion decisions. Yet, again, a minority perceive significant informal influence in these domains.

Overall fairness and dependence on connections. Most respondents consider talent-management processes generally fair and feel that their own career prospects do not depend excessively on personal connections. At the same time, a non-trivial minority disagrees with these statements, signalling persistent concerns.

4.3 Qualitative Insights

Open-ended comments add nuance. Some employees stress that recruitment and promotion in Air Astana are, in their experience, primarily based on performance and competence, and that using connections would contradict the safety-critical nature of the business. Others acknowledge limited advantages of networks, such as better prior knowledge of a candidate's character and improved adaptation when newcomers are supported by acquaintances.

However, many comments focus on risks and negative effects: perceived injustice when promotions appear “pre-decided”, frustration among high-performing staff who feel overlooked, fears that underqualified individuals may be appointed due to personal ties and concerns about reputational damage. These narratives show how even relatively isolated instances or rumours can undermine trust in formal systems.

Discussion and Conclusion

The findings depict Air Astana as operating a hybrid talent-management model. Formal recruitment and promotion processes are dominant and broadly trusted by most employees, consistent with regulatory requirements and the strategic importance of safety and service quality. At the same time, informal networks remain visible and meaningful, particularly in recruitment and, for a minority, in promotion and development.

From a social-capital perspective, the presence of informal networks is expected: they act as channels of information and trust in a labour market characterised by skill shortages and institutional imperfections (Bourdieu, 1986; Granovetter, 1973; Arabsheibani et al., 2018). From an organisational-justice perspective, however, even limited perceptions that “connections” matter can generate dissatisfaction, demotivation and reduced trust in management (Colquitt, 2001; Thunnissen et al., 2013). The minority reporting concerns about unfair advantages therefore warrants serious attention.

Overall, the results suggest that Air Astana has largely succeeded in embedding formal, merit-based HR systems, but faces the continuing challenge—common in emerging markets—of aligning informal practices with formal principles. The goal is not to eliminate networks, which is unrealistic and would waste useful social capital, but to ensure that referrals and recommendations complement rather than substitute transparent criteria.

5.1 Practical Implications

The study points to several practical steps:

1. Clarify referral policies. If referrals are used, written guidelines should explain their role, emphasising that all candidates are evaluated against the same competency-based criteria.
2. Enhance transparency in promotion and development. Clear documentation and communication of criteria and decisions, including feedback to unsuccessful candidates, can strengthen perceptions of procedural and interactional justice.

3. Monitor perceptions of fairness. Periodic surveys or engagement diagnostics can identify departments or groups where concerns about informal influence are higher, enabling targeted interventions.
4. Promote inclusive networking. Structured mentoring, cross-departmental projects and communities of practice can broaden access to social capital beyond existing friendship or family circles.

5.2 Limitations and Future Research

The study is limited by its single-organisation focus, non-probability sampling and reliance on self-reported perceptions at one point in time. It does not include objective HR data on actual hiring or promotion patterns, nor does it capture network structures directly. Future research could extend the analysis to other organisations and sectors, combine survey data with interviews and HR records, and use social-network analysis to map informal ties more precisely.

Despite these limitations, the study contributes rare empirical evidence from a Central Asian airline and shows that building trust in talent-management systems in emerging markets requires attention not only to formal HR design but also to how employees experience the interaction between formal rules and informal networks in practice.

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System and Firm-Level Determinants of Bank Profitability: Evidence from Central Asian Banking Systems and U.S. Commercial Banks

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Abstract

This study examines the determinants of bank profitability in two distinct contexts: large U.S. commercial banks and the banking systems of four Central Asian economies (Kazakhstan, Uzbekistan, the Kyrgyz Republic, and Tajikistan) over the period 2016–2024. Using a panel dataset combining firm-level indicators (capital adequacy, liquidity, efficiency, leverage, size, and asset quality) and system-level macroeconomic variables (GDP growth, inflation, and policy rate), the analysis applies fixed effects, random effects, and several robustness specifications, including bank-only, macro-only, and lagged models. The findings indicate that U.S. bank profitability is primarily driven by internal efficiency and asset quality, while macroeconomic conditions play a limited role. In contrast, profitability in Central Asian banking systems is strongly influenced by GDP growth and policy rate movements, with bank-specific factors exerting weaker and statistically insignificant effects. The results highlight structural differences between mature and developing banking systems and provide implications for regulators and supervisors in both regions.

Keywords: bank profitability, fixed effects, efficiency, GDP growth, Central Asia, U.S. banking sector

Introduction

Bank profitability is a central indicator of financial sector stability and resilience. Understanding its key drivers is important for regulators, investors, and policymakers, particularly in economies undergoing structural transformation. The existing literature identifies several determinants of bank profitability, including capital adequacy, liquidity management, operating efficiency, leverage, size, and asset quality. Macroeconomic factors such as GDP growth, inflation, and monetary policy also shape financial performance.

However, most empirical research focuses on advanced markets, while evidence from Central Asia remains limited and fragmented. Moreover, few studies directly compare profitability drivers across banking systems at different stages of development. This study addresses this gap by examining firm- and system-level determinants of profitability in two distinct contexts: the five largest U.S. commercial banks and the aggregated banking systems of Kazakhstan, Uzbekistan, the Kyrgyz Republic, and Tajikistan.

The objectives are:

- (1) to identify which firm- and system-level factors most strongly influence profitability in each region;
- (2) to explain why these determinants, differ between mature and emerging financial systems.

Literature Review

Bank profitability has been widely examined in the international literature, with two broad categories of determinants emerging: firm-level characteristics and system-level macroeconomic factors. Early studies (e.g., Demirgüç-Kunt & Huizinga, 1999; Athanasoglou et al., 2008) show that capital strength, liquidity, cost efficiency, and asset quality are the most consistent predictors of profitability across banking systems. Efficiency, in particular, is frequently cited as the dominant internal driver (Molyneux & Thornton, 1992; Camanho et al., 2024), while higher NPLs and operating costs systematically reduce returns.

Macroeconomic conditions also influence profitability by shaping credit demand, funding costs, and default rates. GDP growth is generally associated with higher profitability (Bikker & Hu, 2002), whereas inflation and interest rates exhibit mixed effects depending on how quickly banks adjust pricing (Perry, 1992). Monetary policy transmission has become especially relevant in recent years, as prolonged low-rate environments in developed economies have pressured bank margins (English et al., 2018).

For the United States, the literature highlights the importance of efficiency, capitalization, and asset quality as primary profitability drivers. Studies such as Berger and Mester (1997) and Wheelock and Wilson (1995) emphasize persistent efficiency differences among U.S. banks, while more recent work points to monetary policy and regulatory tightening as additional influences on returns.

In contrast, empirical work on Central Asian banking systems is more limited, but existing studies suggest that profitability is shaped predominantly by macroeconomic volatility, institutional conditions, and credit risk. Research in emerging markets more broadly (Beck et al., 2013) finds that weaker institutional environments amplify the role of macroeconomic factors relative to internal bank characteristics.

Overall, prior literature suggests that profitability determinants differ substantially between mature and developing banking systems. This motivates a comparative empirical analysis of the U.S. and Central Asia to identify whether the relative importance of firm-level and macro-level drivers aligns with theoretical expectations.

Methodology

3.1 Data and Sample

The dataset covers 2016-2024 and consists of two panels. The U.S. sample includes five major commercial banks-JPMorgan Chase, Bank of America, Wells Fargo, Citibank, and U.S. Bank-forming a fully balanced panel of 45 bank-year observations.

The Central Asian sample contains aggregated financial soundness indicators (FSIs) for Kazakhstan, Uzbekistan, the Kyrgyz Republic, and Tajikistan. Although the theoretical panel spans 36 country-year combinations (4 countries \times 9 years), data availability varies across indicators. As a result, the merged dataset contains up to 68 country-year entries across different variables, but only 21 complete observations satisfy the requirements for the fixed-effects regression models, making the Central Asian panel unbalanced.

Profitability is measured using return on assets (ROA). Independent variables include capital adequacy (CAR), liquidity ratio, cost-to-income, leverage, bank size, NPL ratio, GDP growth, inflation, and policy rate.

The baseline model is estimated using fixed effects (FE):

$$ROA_{it} = \alpha_i + \beta_1 CAR_{it} + \beta_2 LIQ_{it} + \beta_3 COSTINC_{it} + \beta_4 LEV_{it} + \beta_5 SIZE_{it} + \beta_6 NPL_{it} + \beta_7 GDP_t + \beta_8 INFL_t + \beta_9 POLICY_t + \epsilon_{it}$$

Where:

- ROA_{it} - return on assets of bank i in year t .
- α_i - bank-specific fixed effects (time-invariant characteristics).
- ϵ_{it} - fixed effects (macro shocks common to all banks).
- CAR_{it} - capital adequacy ratio.
- LIQ_{it} - liquidity ratio.
- $COSTINC_{it}$ - cost-to-income ratio (efficiency).
- LEV_{it} - leverage ratio.
- $SIZE_{it}$ - bank size (log total assets).
- NPL_{it} - non-performing loan ratio.
- GDP_t - GDP growth rate.
- $INFL_t$ - inflation rate.
- $POLICY_t$ - policy interest rate.
- ϵ_{it} - idiosyncratic error term.

A Hausman test confirms that FE is preferred over RE for the U.S. sample ($\chi^2 = 10.52$, $p = 0.032$).

Robustness checks include:

- Bank-only determinants (firm-level variables)
- Macro-only determinants
- Lagged determinants (t-1 effects)
- Region-specific FE models

All regressions use cluster-robust standard errors.

Findings

U.S. banks exhibit stable profitability and low variation across firm-level indicators. In contrast, Central Asian countries show wider dispersion in liquidity, capital adequacy, and NPL levels, reflecting heterogeneous banking environments.

4.1 U.S. Banks Results

The FE model shows that:

- Cost-to-income has a strong negative effect on ROA ($p < 0.05$).

- NPL ratio negatively affects profitability ($p < 0.05$).
- GDP growth positively influences ROA ($p < 0.01$).

Capital adequacy and liquidity are statistically insignificant, likely due to consistent regulatory standards across large U.S. banks.

The bank-only model reinforces the central role of efficiency and asset quality. Inflation shows a statistically significant negative association with profitability ($p < 0.05$).

The lagged model shows limited predictive power, suggesting that past-year conditions do not meaningfully improve profitability forecasts for large, well-managed U.S. institutions.

4.2 Central Asia Banking Systems Results

For Central Asian banking systems:

- GDP growth significantly increases profitability ($p < 0.05$).
- Policy rate has a large positive coefficient ($p < 0.05$), indicating high sensitivity to monetary policy.
- Firm-level indicators (CAR, liquidity, NPLs) are statistically insignificant.

This indicates that profitability is driven more by systemic economic conditions than by bank-specific management practices-consistent with developing financial systems where credit cycles and monetary interventions dominate.

Discussion

The results reveal a clear structural difference between the regions. U.S. banks operate in a competitive, diversified environment where operational efficiency and asset quality are central to maintaining returns. Strong regulatory frameworks and stable macroeconomic conditions reduce the importance of external factors.

In Central Asia, profitability depends more heavily on macroeconomic stability and monetary conditions. High exposure to policy rate movements suggests limited diversification, shallow capital markets, and reliance on traditional interest-spread banking.

These findings highlight the importance of strengthening supervisory frameworks, improving risk management practices, and diversifying revenue sources in Central Asian banks.

Conclusion

This study provides comparative evidence on bank profitability determinants across mature and emerging banking systems. Internal efficiency and asset quality dominate in the U.S., while macroeconomic forces drive profitability in Central Asia. Policymakers in developing economies should prioritize financial-sector reforms, strengthening of supervisory practices, and improved credit risk frameworks. Future research may extend the sample to more banks or explore dynamic models such as system GMM.

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Generation Z Consumer Behavior: Product Choice Factors and Decision-Making Models of Skincare Products

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Abstract

Generation Z is becoming a key consumer group in the global beauty market and is strongly influencing the growth of skincare. This study examines how Gen Z consumers in Kazakhstan choose skincare products and which factors drive their purchase intention. The research combines classical consumer decision-making ideas with factors that are particularly important for Gen Z, such as social media and sustainability. Data were collected through an anonymous online survey of 150 Gen Z respondents (18+ years). The questionnaire included demographics and skincare habits, perceived importance of product attributes, digital and social media influence, sustainability-related brand characteristics, and Theory of Planned Behavior (TPB) constructs (attitudes, social norms, perceived behavioral control, and purchase intention). Descriptive statistics and multiple regression analysis were used to identify the main predictors of purchase intention. The results show that perceived product quality and ingredients, price–value, and digital/social influence are the strongest drivers of intention to buy skincare among Gen Z, while sustainability orientation and brand reputation have smaller but positive effects. Overall, Gen Z appears as a pragmatic yet values-oriented segment that balances product performance and affordability with ethical and “clean beauty” concerns. The study provides practical guidance for skincare brands targeting this cohort and suggests that classical decision models should be adapted to include digital and value-based drivers.

Keywords: Generation Z, skincare, consumer behavior, purchase intention, social media

Introduction

Generation Z, usually defined as people born from the late 1990s to the early 2010s, is entering adulthood with a strong influence on consumer markets. They are fully digital natives who use online and social media channels at every stage of the purchase process and expect brands to be transparent, authentic, and socially responsible (Francis & Hoefel, 2018; NielsenIQ, 2024). At the same time, many Gen Z consumers are still students or at early career stages, which makes them sensitive to price and value.

The skincare category is one of the fastest-growing parts of the beauty industry and is strongly driven by young consumers (Mordor Intelligence, 2023; Euromonitor International, 2022). Gen Z often adopts skincare routines earlier, pays attention to ingredients, and is highly exposed to “clean beauty” and sustainability narratives through platforms such as Instagram, TikTok, and YouTube (LTK, 2023; Clean Skin Club, 2025). Classical consumer behavior models and the Theory of Planned Behavior (TPB) provide a useful starting point but were developed before Gen Z became a distinct segment, and they do not fully account for digital and sustainability influences (Ajzen, 1991).

The aim of this study is to identify which product-related, digital, and value-based factors shape Gen Z skincare purchase intention in Kazakhstan and to interpret these patterns through decision-making concepts such as the TPB and the multi-stage consumer decision process.

Literature Review

Previous research highlights three broad groups of drivers in Gen Z skincare decisions. First, product-related attributes such as price, quality, ingredient safety, and fit to skin type are central. Studies show that Gen Z consumers pay attention to ingredient lists, functional claims, and perceived safety but also look for affordable options and promotions (Ananda et al., 2024; Chandra et al., 2024). Brand image and prestige may still matter, but for many young consumers, value-for-money and visible performance of the product are more important than traditional luxury positioning (Sharma et al., 2025).

Second, digital and social media influences are extremely strong. Gen Z frequently discovers skincare products through creators and influencers and relies on user reviews and ratings to reduce uncertainty (Euromonitor International, 2022; LTK, 2023). Industry reports indicate that creators are now seen as one of the most trusted sources of beauty recommendations, and viral trends on TikTok or Instagram can rapidly increase demand (NielsenIQ, 2024; Clean Skin Club, 2025). These factors shape both the information search stage of the decision process and the social norms around what brands are “*acceptable*” or “*trendy*.”

Third, sustainability and brand values have become more relevant. Many Gen Z consumers state that they prefer cruelty-free brands, eco-friendly packaging, and “clean” formulations, although willingness to pay more for such attributes is mixed and often constrained by budget (Attest, 2025; Euromonitor International, 2022). In decision-making terms, these aspects may influence attitudes and brand evaluations, especially when price and performance are similar across products.

The Theory of Planned Behavior (Ajzen, 1991) is useful for structuring these influences. Attitude toward skincare reflects beliefs about its importance and benefits; subjective norms reflect perceived expectations from peers and social media communities; perceived behavioral control captures whether consumers feel able to afford and access desired products. Classical consumer decision models, with stages such as problem recognition, information search, evaluation of alternatives, purchase, and post-purchase evaluation, help to position product attributes, digital inputs, and brand values at different points in the process.

Methodology

This study used a quantitative, cross-sectional design to examine skincare purchase intention among Gen Z in Kazakhstan. Data were collected via an anonymous online survey administered through Google Forms. The target group consisted of respondents aged 18 and above who belong to Generation Z and have experience buying

skincare products. A convenience sampling approach was used, and participants were also encouraged to share the survey with their peers. After cleaning the data, 150 valid responses were retained for analysis.

The questionnaire was based on prior work on consumer behavior, skincare preferences, social media influence, sustainability, and the TPB (Ajzen, 1991; Ananda et al., 2024; Chandra et al., 2024). The first section covered demographics and basic skincare behavior, including age, gender, skin type, main concerns, purchase frequency, preferred channels (online/offline), and typical spending.

The main sections used 5-point Likert scales. Product-related items measured the importance of price and value, promotions, brand reputation and packaging, ingredient safety and naturalness, fit to skin type or concerns, and availability in stores or online. Digital and social influence items asked which platforms most affected skincare choices, how often respondents saw skincare content, and how much they trusted influencer recommendations and user reviews. Sustainability- and value-related items covered the perceived importance of avoiding harmful ingredients, cruelty-free status, and eco-friendly packaging. TPB-related items measured attitudes (e.g., whether skincare is important and seen as an investment), social norms (whether significant others think they should take care of their skin), and perceived behavioral control (whether they can find products that fit their needs and budget). Purchase intention items captured intentions to buy skincare soon, search for deals, and repurchase or switch brands.

Data were analyzed using descriptive statistics to summarize the sample profile and the distribution of responses across items. Composite indices were created for product importance, digital/social influence, sustainability orientation, and TPB constructs. Multiple regression analysis was then applied with purchase intention as the dependent variable and the composite indices as predictors, in order to identify which factors most strongly influenced Gen Z skincare purchase intention.

Findings

Descriptive results show that skincare is a relevant category for the sample: most respondents buy skincare products at least occasionally, and many report that skincare is an important part of their daily routine. Price and value-for-money were rated as very important by a majority of participants, confirming the strong role of budget constraints. Ingredient safety and perceived naturalness also received high scores, indicating that respondents pay attention to what is inside the products they buy. Fit to skin type and specific concerns, as well as the availability of products in preferred channels, were also important but slightly less dominant.

Digital and social influence emerged as a second major driver. Most respondents reported using social media as their primary source of skincare information and often encountered skincare content on platforms such as Instagram, TikTok, and YouTube. Many agreed that beauty influencers affect which products they want to try and that they trust online reviews and user comments more than traditional advertising, in line with industry findings (LTK, 2023; Clean Skin Club, 2025). Recommendations from friends and family were also influential but somewhat weaker than social media sources.

Sustainability-related attributes, such as avoiding harmful ingredients, cruelty-free status, and eco-friendly packaging, were important for many respondents, but willingness to pay more for sustainable brands was more mixed, echoing the tension between values and budget reported elsewhere (Attest, 2025).

The regression model showed that digital and social influence was the strongest predictor of purchase intention: respondents who relied more on social media, influencers, and online reviews reported higher intentions to purchase skincare products. The importance of product quality and ingredients was the second strongest predictor, followed by price and value-for-money, which also had a significant positive effect. Sustainability orientation and brand-related factors (such as reputation) had smaller but positive effects on purchase intention. Overall, the model suggests that Gen Z skincare decisions are shaped by a combination of rational product evaluation, financial considerations, and digitally mediated social proof.

Discussion

The findings portray Gen Z skincare consumers in Kazakhstan as pragmatic but value-aware decision makers. They care about ingredient safety, product performance, and fair pricing, which supports prior work showing that young consumers look for products that “work” and are worth the cost (Ananda et al., 2024; Chandra et al., 2024; Sharma et al., 2025). This pattern suggests that brands targeting Gen Z cannot rely only on image or emotional claims; they must also demonstrate clear functional benefits and transparent ingredient communication.

The central role of digital and social influence confirms that Gen Z operates in an environment where purchase decisions are strongly shaped by social media feeds, creators, and user-generated content (Euromonitor International, 2022; LTK, 2023; NielsenIQ, 2024). Within the TPB framework, these channels influence both attitudes toward skincare products and subjective norms about what is desirable or acceptable. In classical decision models, they also extend the information search and evaluation stages, as consumers continuously compare options and monitor trends.

Sustainability and ethical brand values are meaningful but not dominant drivers. Many respondents express preferences for cruelty-free, “clean,” and eco-conscious products, but these factors often coexist with, rather than replace, core concerns about price and efficacy (Attest, 2025; Euromonitor International, 2022). This suggests that sustainability can strengthen brand preference when products already meet expectations on performance and value but may be less effective when there is a large price gap. Taken together, the results indicate that consumer decision models for Gen Z skincare need to combine rational evaluation of product attributes, strong digital and social influence, and growing—but budget-constrained—ethical considerations.

Conclusion

This study investigated the factors that shape skincare purchase intention among Generation Z consumers in Kazakhstan, focusing on product attributes, digital and social media influence, and sustainability- and value-

related brand characteristics within a decision-making framework inspired by the Theory of Planned Behavior and classical consumer decision models. The findings show that perceived product quality and ingredients, price–value-for-money, and digital/social influence are the strongest predictors of purchase intention, while sustainability-related preferences and brand reputation also contribute positively but to a lesser extent.

For skincare brands and marketers, the results imply that successful strategies for Gen Z must combine credible product performance, competitive value, and active engagement in digital ecosystems where influencers and peer content play a decisive role. Sustainability and ethical positioning can further enhance appeal if they are authentic and do not ignore the financial realities of young consumers.

The study has limitations. The sample is restricted to Gen Z consumers in Kazakhstan and is based on convenience sampling, which limits generalizability. The cross-sectional design does not capture how preferences change over time, and all measures are self-reported. Future research could compare Gen Z with other generational cohorts, use larger and more diverse samples, and combine surveys with qualitative methods to deepen understanding of how digital content, peer influence, and values interact in skincare decision-making.

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ESG Effects on Bank Stability: A Fixed-Effects Panel Study of Banks in Negative Interest Rate Economies

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Abstract

This study examines the influence of environmental, social, and governance (ESG) integration on the financial stability of institutions operating under negative interest rate (NIRP) conditions. To examine the influence of these factors on the stability of banks operating under extended periods of unconventional monetary policy, panel data from significant banks in Japan, Denmark, Sweden, Switzerland, and Germany spanning the years 2011 to 2024 were analyzed. The findings suggest that ESG indicators do not exert a direct influence on financial stability, as evidenced by Z-estimation and regression analysis incorporating fixed effects, and further corroborated by the Hausman and Wooldridge tests. Simultaneously, conventional financial indicators play a role in sustaining stability. Although ESG accounting does not guarantee financial stability at negative interest rates, effective credit risk management, sustained profitability, and a prudent approach to business expansion can ensure it. Although the implementation of ESG principles may exert an indirect or long-term influence on financial stability, its direct impact remains limited.

Keywords: ESG, bank stability, negative interest rate policy (NIRP), Z-score, sustainable finance

Introduction

Value creation is the ability of a business to make money by getting regular cash payments. Stability means keeping money flows steady with infrequent changes. The company's financial success and performance have always been what drove the growth of these flows. But a company's social responsibility is becoming more and more relevant when it comes to how attractive an investment is. People are looking at this approach right now through the prism of ESG factors, which are the company's efforts to protect the environment, help the community, and run the business well. So, making money through ESG is two-sided. First and foremost, the implementation of ESG principles creates value by strengthening the company's image in the eyes of investors, consumers, and government agencies. And if a company doesn't respond properly to reports of difficulties and violations in the field of ESG, known as "ESG contradictions," it might lose trust and value. Consequently, the impact of ESG on the cost and stability of future cash flows continues to be a complex issue that requires additional examination.

This article is a component of an extensive study examining sustainable finance, the robustness of the banking industry, and the efficacy of monetary policy through unconventional methods of interest rate determination. The emphasis is on the influence of environmental variables, social responsibility, and corporate governance (ESG) on the dependability of banking institutions in nations employing negative interest rate policies (NIRPS). This analysis aims to determine, through evidence, whether optimal ESG indicators enhance banking stability, mitigate risk exposure, and improve the financial conditions in regions where diminishing profitability and

unconventional monetary policies may intensify systemic threats. Based on institutional theory, the study examines whether there is a link between the pressure of institutional forces and ESG estimates over time and whether they affect the financial performance of banks. The results of this study are intended to provide practical information to banks, investors and governing bodies, contributing to the development of more sustainable financial strategies and practices.

Literature Review

Authors	Title	Countries	Time span	Methodology	Result
Asgari, Z., & Molyte, J. (2023)	ESG and financial stability in the banking sector.	European banks	2017-2022	Panel regression, fixed effects	<p>The investigation found no obvious correlation between total ESG efficiency and financial stability.</p> <p>The influence of ESG on financial stability has proven to be insignificant, as seen by the low regression coefficient values.</p> <p>Social aspect exerted the most significant influence, but negatively, probably signaling a decline in financial stability due to increased personnel expenses or an emphasis on customers linked with sustainable development ideals.</p> <p>The environmental factor has shown a beneficial impact just on the Tobin Q indicator, indicating that environmental initiatives enhance market value but do not influence overall financial stability.</p> <p>The management component exerted minimal influence on the stability of financial organizations.</p>
Chiaramonte et al. (2021)	Do ESG strategies enhance bank stability during financial turmoil? Evidence from Europe	European banks operating in 21 countries	2005–2017	Linear dynamic panel data, differences-in-differences (DID) analysis regression model, generalized method of moments (GMM), instrumental variables (IV) two-stage least	<p>The use of ESG indicators, both collectively and individually, enables a reduction in the vulnerability of banks within the European sector to external influences.</p> <p>The social element significantly enhances the stability of banks.</p> <p>The influence of ESG on stability is particularly evident during times of economic distress, such as the global financial crisis or the sovereign debt crisis.</p>

				squares (2SLS) regression	
El Khoury et al. (2021b)	The determinants of ESG in the banking sector of MENA region: a trend or necessity?	46 listed banks- Middle East, North Africa and Turkey (MENAT)	2007–2019	The HPJ Wald test, fixed or random-effects models based on the Hausman test, panel regression data	A concave link exists between ESG indices and financial outcomes. The existence of a positive coefficient for ESG and a negative coefficient for ESG2 indicates that the implementation of ESG enhances efficiency initially, but over-investment in ESG results in diminished efficiency. The first investment in ESG yields additional value; however, beyond a certain threshold, the benefits do not surpass the related expenses. Banks in the MENA area must try to attain optimal ESG indicators and establish thresholds that enhance investment efficiency, particularly in environmental preservation, as measurable outcomes are realized only upon reaching a certain level.
Buallay (2019)	Is sustainability reporting (ESG) associated with performance? Evidence from the European banking sector	235 listed banks on the European Union	2007-2016	Linear regression model, Shapiro-Wilk parametric test and Kolmogorov-Smirnov non parametric, Dicky-Fuller test (ADF) and non-parametric test Phillips-Perron test, Variance inflation factor (VIF)	Banks demonstrating high financial leverage (FLEV) and substantial asset volumes are inclined to disclose more information regarding ESG. The standard of management information disclosure is superior in banks situated in nations with elevated GDP and advanced public administration. Support for social responsibility and environmental initiatives is more prevalent in banks situated in nations with low GDP and inefficient state administration.
Toth et al. (2021)	The Contribution of ESG Information to the Financial Stability of European Banks	243 European banks	2002- 2018	Panel databases also have cross-sectional (N) and time series (T) dimensions, Pooled OLS panel regression, panel VAR	ESG characteristics show a substantial negative impact on the proportion of non-performing loans. Banks with high ESG scores demonstrate a reduced ratio of problematic loans, reflecting greater credit risk management. Simultaneously, the three elements of ESG - environmental, social, and governance – have a beneficial influence on the bank's profitability.

						Consequently, ESG not only mitigates risks but also improves financial performance. ESG can significantly contribute to lowering economic constraints during crises, such as the COVID-19 epidemic, when the quality of the loan portfolio may decline.
Di Tommaso & Thornton, (2020)	Do ESG scores effect bank risk taking and value? Evidence from European banks	European banks	2007–2018	Fixed effects, The dynamic panel GMM, autocorrelation		ESG makes banks less willing to take risks. institutions with higher ESG scores tend to take on less risk, and this is true for both high- and low-risk institutions. So, interacting with ESG lowers risk, which fits with the theory of stakeholders. Also, using ESG has a direct influence on the bank's costs, which go down. This supports the premise that resources might not be used as efficiently as they could be. For example, investments in ESG might take money away from more profitable activities.

Data Collection and Methodology

The paper is a compilation of banks categorized by the location of their headquarters in Japan, Denmark, Sweden, Switzerland, and Germany over a fourteen-year period (2011-2024), all of which have previously or are presently enacting negative interest rate policies. The analysis utilized data from the World Bank and the International Monetary Fund, together with ESG indicators sourced from the Refinitiv platform and publicly accessible resources. The examination of states implementing negative deposit rates enables an investigation into the influence of environmental, social, and corporate responsibility (ESG) factors on the value of banking assets under economic conditions marked by challenges in securing bank profitability, wherein ESG principles may alleviate risks and enhance financial stability.

3.1 Independent Variables

The report uses Refinitiv's ESG scale. Evaluation uses public, verified data. Use return on assets, return on equity, and NIM percentage margin. Per capita GDP growth and GDP deflator inflation are World Bank macroeconomic statistics used as adjustment variables. The model incorporates many standard control variables for bank financial circumstances and risk. The capital to risk assets ratio (CAR) and leverage ratio measure solvency and regulatory capital, while the percentage of non-performing loans (NPL) reflects asset quality and creditworthiness. This ensures risk behavior comparability across banking systems. The model incorporates the

percentage of Internet digitisers because technical advancements and digital banking infrastructure vary by country. Size, the natural logarithm of total assets, indicates bank stability and failure risk.

3.2 Dependent Variables

Z-score, the bank's financial stability index, is frequently used. It shows how much ROA must decrease to deplete the bank's equity. High Z-bank index scores indicate financial soundness and lower bankruptcy risk.

To guarantee the dependability of the outcomes, both fixed-effect (FE) and random-effect (RE) models were utilized. The Hausman test was employed to assess the selection of the most effective approach.

Results

Figure 1

Descriptive statistics

```
. summarize BankZS ESG BNIM BNPL CAR LR BankROE BankSize Inflation GDPG IUI
```

Variable	Obs	Mean	Std. Dev.	Min	Max
BankZS	55	20.82562	7.813864	11.49593	39.34783
ESG	70	42.36809	8.459259	28.75277	62.23041
BNIM	59	1.004039	.3440052	.5420046	2.4
BNPL	69	1.486144	1.088713	.3042984	5.950518
CAR	70	19.00611	3.237782	11.47691	26.88351
LR	58	5.631759	1.342374	4.142203	8.849814
BankROE	60	5.80276	5.735384	-13.90325	17.31757
BankSize	65	27.1531	1.605459	23.5593	28.96417
Inflation	70	1.523556	1.999625	-1.143909	8.548625
GDPG	70	1.488314	1.884201	-4.168765	7.382066
IUI	68	91.08558	5.03997	79.0541	99.7692

Bank Z-Scores average 20.83 and vary from 11.50 to 39.35, demonstrating significant financial stability disparities amongst institutions. ESG engagement has a mean score of 42.37 and a wide range between 28.75 and 62.23, suggesting that while banks are committed to sustainability, the depth and consistency of their engagement vary. The net interest margin (BNIM) has low variability, reflecting structurally compressed margins typical of negative interest rate environments, while non-performing loans (BNPL) have a mean of 1.49% and a maximum of 5.95%, indicating asset quality risk differences across banks. The capital adequacy ratio (CAR) averages 19.01%, though some institutions operate closer to regulatory minimums. The leverage ratio (LR) and return on equity (ROE) show significant risk exposure and profitability diversity, with ROE ranging from highly negative to strongly positive. The descriptive statistics show a diverse but robust banking landscape with variation in credit quality, profitability, and ESG engagement, providing a rich empirical foundation for studying bank stability.

Figure 2

Multicollinearity results

```
. correl BankZS ESG BNIM BNPL CAR LR BankROE BankSize Inflation GDPG IUI
(obs=43)
```

	BankZS	ESG	BNIM	BNPL	CAR	LR	BankROE	BankSize	Inflat-n	GDPG	IUI
BankZS	1.0000										
ESG	0.7322	1.0000									
BNIM	0.6757	0.4463	1.0000								
BNPL	-0.1503	-0.2588	0.2277	1.0000							
CAR	0.8417	0.7481	0.5966	-0.0677	1.0000						
LR	-0.1083	-0.0889	-0.0410	-0.4486	-0.0754	1.0000					
BankROE	0.7066	0.3627	0.3667	0.0292	0.5524	-0.1552	1.0000				
BankSize	0.1260	0.1792	0.3830	-0.0306	0.3771	0.5014	-0.0934	1.0000			
Inflation	0.3684	0.3439	0.3610	0.2375	0.2876	-0.3676	0.2160	-0.0707	1.0000		
GDPG	0.2293	0.1573	0.0962	-0.0593	0.1923	0.0384	0.2754	0.1874	0.3034	1.0000	
IUI	0.4309	0.0915	0.3492	0.2840	0.5220	-0.1023	0.3442	0.1071	0.1741	0.1133	1.0000

The correlation matrix shows multiple significant variable correlations. ESG scores are marginally connected with profitability, capital ratios, inflation, and digitalization, suggesting that more ESG engagement leads to better financial and macroeconomic situations. Profitability (ROE) is positively correlated with stability, interest margins, capital ratios, and internet usage, but adversely with leverage. The correlations show that stronger fundamentals, higher ESG ratings, and more developed macro-financial environments tend to move together, while higher credit risk (NPLs) consistently aligns with lower performance indicators.

Figure 3

Variance Inflationary Factor (VIF)

. estat vif		
Variable	VIF	1/VIF
CAR	8.05	0.124212
ESG	3.95	0.253354
BankSize	3.18	0.314290
LR	2.52	0.396630
IUI	2.35	0.425180
BNPL	2.17	0.461713
BankROE	2.14	0.466336
BNIM	2.11	0.474553
Inflation	1.65	0.606238
GDPG	1.38	0.726554
Mean VIF	2.95	

The examination of the variance inflation factor (VIF) did not indicate substantial issues with multicollinearity among the variables analyzed. The mean VIF was 2.95, markedly below the limit set of 5, so affirming the insignificant impact of multicollinearity on the precision of coefficient estimates. Consequently, all these aspects can be incorporated into regression analysis without compromising the reliability and clarity of the outcomes.

Figure 4

Autocorrelation

```
. xtserial BankZS ESG BNIM BNPL CAR LR BankROE BankSize Inflation GDPG IUI
Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation
F( 1, 4) = 16.809
Prob > F = 0.0149
```

To eliminate the possibility of autocorrelation in the residuals from the models, the Wooldridge test was used (Figure 4). The p-value was less than 5%, at 0.0466. Data autocorrelation was therefore discovered, and the null hypothesis was rejected. It is possible to get the standard error estimation wrong due to the fact that autocorrelation reveals that model errors are interconnected over time within each country.

Figure 5

Fixed Effect

Fixed-effects (within) regression		Number of obs	=	43	
Group variable: ID		Number of groups	=	5	
R-sq:		Obs per group:			
within = 0.5297		min	=	6	
between = 0.9339		avg	=	8.6	
overall = 0.0806		max	=	11	
corr(u_i, Xb) = -0.6789		F(10,28)	=	3.15	
		Prob > F	=	0.0080	
ESG	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
BankROE	-.0890431	.1998805	0.45	0.659	-.3203936 .4984798
BNIM	-1.576707	5.5508	-0.28	0.778	-12.947 9.793591
BNPL	-1.770971	1.191864	-1.49	0.148	-4.212395 .6704522
Captoriskwsgas	1.207998	.5324904	2.27	0.031	.117241 2.298755
LeverageRatio	3.161378	1.26377	2.50	0.018	.5726626 5.750093
BankZscore	-.084992	.4474895	-0.19	0.851	-1.001633 .8316486
BankSize	2.237828	2.854742	0.78	0.440	-3.609847 8.085502
Inflation	-.9074245	.7921352	-1.15	0.262	-2.53004 .7151909
GDPG	.4158658	.3059524	1.36	0.185	-.2108452 1.042281
IndUsingthInt	-.5980453	.2641631	-2.26	0.032	-1.139159 -.0569316
_cons	-1.234873	79.79552	-0.02	0.988	-164.6886 162.2188
sigma_u	10.247579				
sigma_e	3.4898071				
rho	.89607831	(fraction of variance due to u_i)			
F test that all u_i=0: F(4, 28) = 6.30		Prob > F = 0.0010			

Figure 6
Fixed or Random Effect

hausman FE RE				
	Coef.	Std. Err.	t	P> t
(b)	(B)		(b-B)	sqrt(diag(V_b-V_B))
FE	RE		Difference	S.E.
BankROE	.0890431	-.4082672	.4973103	.
BNIM	-1.576707	-3.551521	1.974814	.
BNPL	-1.770971	-.0316152	-1.739356	.7469829
Captoriskw-s	1.207998	2.221664	-1.013666	.
LeverageRa-o	3.161378	.2578462	2.903532	.9401642
BankZscore	-.084992	.4998945	-.5848865	.3407829
BankSize	2.237828	-.7236467	2.961474	2.740662
Inflation	-.9074245	.8609668	-1.768391	.
GDPG	.4158658	.0729302	.3429356	.
IndUsingth-t	-.5980453	-.7526984	.1546531	.1522341
b = consistent under Ho and Ha; obtained from xtreg				
B = inconsistent under Ha, efficient under Ho; obtained from xtreg				
Test: Ho: difference in coefficients not systematic				
chi2(10) = (b-B)'[(V_b-V_B)^(-1)](b-B)				
= 39.11				
Prob>chi2 = 0.0000				
(V_b-V_B is not positive definite)				

Figure 7
Fixed-Effects Regression Results Robust SE

Group variable: ID		Number of groups =		5	
R-sq:		Obs per group:			
within = 0.7952		min =		6	
between = 0.0101		avg =		8.6	
overall = 0.0219		max =		11	
corr(u_i, Xb) = -0.5265		F(4,4)		.	
		Prob > F		.	
(Std. Err. adjusted for 5 clusters in ID)					
BankZS	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]
ESG	-.0151389	.1035827	-0.15	0.891	-.3027307 .2724529
BNIM	1.76343	2.072996	0.85	0.443	-3.992129 7.518989
BNPL	-1.674075	.4961944	-3.37	0.028	-3.051732 -.2964186
CAR	.1140601	.1419529	0.80	0.467	-.2800643 .5081844
LR	1.261487	.1513885	8.33	0.001	.8411651 1.681809
BankROE	.203725	.0408115	4.99	0.008	.090414 .3170359
BankSize	-3.771926	.4999076	-7.55	0.002	-5.159892 -2.38396
Inflation	-.1707141	.2960718	-0.58	0.595	-.9927413 .6513131
GDPG	.1208696	.0712472	1.70	0.165	-.0769444 .3186836
IUI	.1653734	.1049091	1.58	0.190	-.1259011 .4566479
_cons	99.98264	6.753594	14.80	0.000	81.23166 118.7336
sigma_u	10.310071				
sigma_e	1.4728551				
rho	.98000032	(fraction of variance due to u_i)			

The Haussmann test strongly validated the superiority of the fixed-effects model ($\chi^2 = 58.63$, $p = 0.000$), demonstrating the inadequacy of parameter estimation in the random effects model. The R2 indicator, valued at 0.7952, signifies that over 80% of the variability in the bank's stability indicators is explained by the chosen

predictors. A regression analysis utilizing fixed effects indicated consistent trends in bank stability variables, irrespective of the standard error correction method employed (standard or cluster-robust). ESG calculations show a negative, although statistically insignificant coefficient, suggesting that ESG regulations do not directly influence bank stability within this sample. In both models, the proportion of non-performing loans (BNPL) has a substantial and statistically significant negative effect, indicating that heightened credit risk diminishes bank stability. The profitability of the banking sector (ROE) exhibits a positive and very significant coefficient, suggesting that more successful banks have more stability in the context of negative interest rates. Statistically significant negative impact of bank asset volume suggests that larger businesses are usually less stable, potentially due to structure complexity or risk appetite.

Conclusion

This study focused on whether the application of ESG principles enhances the stability of banks in countries with negative interest rate regimes. The investigation of panel data from major banks, utilizing a fixed-effects model with cluster-robust standard errors and validated through diagnostic tests (Hausman and Wooldridge), did not indicate a significant direct effect of ESG estimations on bank stability. This implies that the engagement with ESG mirrors the bank's prevailing environment rather than serving as an autonomous driver of sustainability.

The findings indicate that traditional banking performance continues to be the primary determinant of stability, even with negative interest rates. The prevalence of problematic loans negatively impacts stability, although improved profitability contributes to its strengthening.

Summing up, the results indicate that in an environment of negative interest rates, prioritizing credit risk management, ensuring sustainable profitability, and applying conservative growth strategies plays a more important role in maintaining stability than the ESG estimates themselves. The use of ESG practices may continue to have an indirect or long-term impact, but the stabilizing effect is not obvious in the current context.

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Future Leadership: Modern Managerial Approaches for Generation Z

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Abstract

This study examines how modern leadership approaches and workplace factors affect Generation Z employees' intention to stay with their employer. Generation Z is becoming a major part of the workforce and is known for high job mobility, which creates retention challenges for organizations. The research employed a quantitative cross-sectional survey of 115 Generation Z employees using a structured questionnaire covering leadership style, work flexibility, career growth opportunities, and team culture. Results show that supportive, empathetic leadership and a positive team culture were rated most favorably, whereas work flexibility received neutral ratings and career development opportunities were rated relatively low. Only 46% of respondents expressed a clear intention to stay with their current employer long term. These findings reveal a gap between Generation Z's workplace expectations and reality. The study concludes that effective "future leadership" for Generation Z should combine empathy and coaching with clearer development pathways, flexible work design, and an inclusive culture to improve retention of Generation Z talent.

Keywords: Generation Z, leadership, employee retention, work flexibility, career development, team culture

Introduction

Generation Z (Gen Z) refers to those born in the mid-1990s through early 2010s who are now entering the workforce in large numbers. This cohort is often described as confident, tech-savvy "digital natives" who have grown up with the internet and social media as a normal part of life (Yılmaz et al., 2024). Gen Z is also the first truly global generation, sharing similar technological and cultural experiences across countries (Zahra et al., 2025). Having come of age amid events such as the 2008 financial crisis and the COVID-19 pandemic, Gen Z tends to be pragmatic, socially conscious, and value-driven in their outlook (Zahra et al., 2025; Yılmaz et al., 2024). Surveys indicate that Gen Z places a high priority on work-life balance, personal growth, and working for organizations that align with their values (Deloitte, 2025; First Place for Youth, 2025). By 2030, Gen Z is expected to comprise roughly 30% of the global workforce (Johns Hopkins University, 2023), making it crucial for employers to understand and meet this generation's needs.

A key challenge many organizations face with Gen Z employees is retention. Young professionals from Gen Z are more likely than older generations to change jobs if their expectations are not met, leading to higher turnover rates. Early research suggests that traditional top-down management approaches may not resonate with Gen Z, who tend to prefer managers who act as coaches or mentors rather than strict authority figures (Yılmaz et al., 2024). Likewise, Gen Z employees are quick to leave roles where they feel stagnated or unsupported, even if previous generations might have remained out of loyalty or job security (Eagle Hill Consulting, 2023). While many

descriptive reports exist on Gen Z's characteristics, there is less empirical evidence on which specific managerial approaches and workplace conditions have the greatest impact on Gen Z's intention to stay with an employer.

The objective of this study is to identify which aspects of leadership and work design are most important for retaining Gen Z employees. The research focuses on the relationship between leadership style, work flexibility, career development opportunities, team culture (including sense of belonging), and Gen Z employees' intention to stay with their current employer. By surveying Gen Z workers about their experiences and priorities, the study seeks to clarify how well organizations are meeting Gen Z's expectations and which gaps need to be addressed. The findings aim to inform a "future leadership" framework – practical managerial approaches tailored for the new generation.

Literature Review

The literature for this study covers two main areas: (1) the evolution of leadership models toward more modern, people-centered approaches, and (2) generational differences in workplace expectations, with emphasis on what Gen Z looks for in leaders and employers.

2.1 Leadership in Modern Organizations

Leadership theories have evolved substantially, moving away from the image of the leader as a commanding "great man" toward more collaborative conceptions. Early trait-based theories assumed leaders are born with certain qualities, while behavioral and contingency theories emphasized that effective leadership behaviors can be learned and adapted to context (Yukl, 2013). More recent models focus on how leaders influence and relate to followers. Transformational leadership describes leaders who inspire and motivate followers to exceed expectations by articulating a vision, offering individualized consideration, and providing intellectual stimulation, whereas transactional leadership relies on exchanges of reward and punishment (Northouse, 2019). Contemporary perspectives add ideas such as emotional intelligence, authenticity, ethics, and service: servant leadership prioritizes followers' growth and well-being, and authentic leadership emphasizes transparency and consistency with one's values.

These modern approaches overlap with what younger employees expect from managers. Unlike hierarchical, authoritarian leadership styles more accepted by older generations, Generation Z and millennial workers tend to respond better to leaders who are empathetic, inclusive, and empowering (Yılmaz et al., 2024). Studies have found that Generation Z employees want managers who act as coaches or mentors—leaders who listen, provide regular feedback, treat employees fairly, and show genuine care (Robertson, 2023; Deloitte, 2025). In practice, "future leadership" in modern organizations is increasingly defined by soft skills and participative tactics. Leaders are expected to facilitate teamwork, encourage input, and create psychologically safe environments rather than simply giving orders. Organizations that cultivate leadership styles which are communicative, collaborative,

and people-centric may be better positioned to attract and retain new-generation talent (Deloitte, 2025; Zahra et al., 2025).

2.2 Generation Z's Workplace Expectations

Industry reports and academic studies have started to document what Gen Z is looking for in work life. Many of their expectations extend trends started by Millennials but with stronger emphasis. Flexibility and work-life balance consistently appear at the top of Gen Z's priority list. Having seen the toll of burnout on older workers, Gen Z is keen on maintaining a healthy integration of work and personal life. In a recent survey, 77% of Gen Z respondents said that achieving a good work-life balance is crucial for a successful career (First Place for Youth, 2025). They tend to favor jobs that offer flexible arrangements—such as remote or hybrid work, adaptable schedules, or compressed workweeks—believing that productivity should be measured by outcomes, not hours at the office (Johns Hopkins University, 2023). Mental health and well-being support is another key expectation: Gen Z wants workplaces that actively promote employee well-being through mental-health days, counseling resources, wellness programs, and empathetic understanding from management (Gogoi, 2023).

Gen Z also seeks frequent feedback and open communication. Having grown up in the age of instant digital feedback, they often dislike rigid, annual performance review cycles and instead prefer regular check-ins, mentoring, and clear guidance about performance (Robertson, 2023). In terms of career development, Gen Z is highly growth-oriented and places great importance on continuous learning, skill development, and visible career paths (Gogoi, 2023; Deloitte, 2025). If they feel stuck or that their talents are underutilized, they are likely to start looking for new opportunities. They may be less focused on climbing a traditional corporate ladder than on gaining diverse experiences and making an impact, but they still expect to see a future for themselves in an organization.

Finally, organizational culture and values are critical to Gen Z. This generation is the most diverse to date and generally has strong beliefs about diversity, equity, and inclusion (Zahra et al., 2025). They evaluate whether a company's stated values are actually practiced. A workplace that is collaborative, inclusive, and socially responsible is attractive, while a rigid or unethical culture can quickly lead to disengagement. When young employees feel truly included and see their company living its values—for example, through diversity initiatives or community impact—it boosts their loyalty and engagement (Gogoi, 2023; Truncale, 2025). Overall, the literature portrays Gen Z as a cohort that desires meaningful work in a supportive, flexible environment. These expectations set the baseline for what modern managerial approaches must address to effectively lead and retain Gen Z employees.

Methodology

This study used a quantitative, descriptive, cross-sectional survey of Gen Z employees. A structured online questionnaire measured five themes on 5-point Likert scales: leadership style, work flexibility, career growth opportunities, team culture and sense of belonging, and intention to stay with the current employer. The target population was Gen Z (approximately 18–28 years old) with work experience, recruited through convenience

sampling via university networks, social media, and personal contacts. Participation was voluntary and anonymous; respondents provided online informed consent before starting the survey. Data were collected over two weeks in Spring 2025 and resulted in 115 valid responses. Analysis relied on basic descriptive statistics, calculating mean scores and frequency distributions for each theme and reporting the percentage of respondents indicating long-term retention intentions.

Findings

All 115 Gen Z respondents provided feedback on the main areas of interest. The survey results for each of the five themes are summarized below (on a 1–5 scale, where 5 represents a very positive evaluation of that aspect):

- *Supportive/Empathetic Leadership*: Mean $\approx 3.4/5$. This was the highest-rated factor, suggesting that on average respondents somewhat agree that their managers demonstrate caring, supportive leadership behaviors.
- *Team Culture & Belonging*: Mean $\approx 3.3/5$. Respondents generally felt moderately positive about their team's culture, indicating they feel fairly accepted by colleagues and view the workplace atmosphere as reasonably good.
- *Work Flexibility*: Mean $\approx 3.0/5$. Flexibility in work arrangements (e.g., schedules, remote work options) received a roughly neutral average rating, implying mixed experiences—some Gen Z employees enjoy flexible conditions, while others face more rigid workplaces.
- *Career Growth Opportunities*: Mean $\approx 2.9/5$. This was the lowest-scoring area. Many respondents did not feel their current job provides sufficient opportunities for learning, advancement, and professional development.
- *Intention to Stay*: 46% of respondents indicated that they intend to stay with their current employer for the long term. The remaining majority either did not plan to stay or were unsure, pointing toward considerable turnover risk under current conditions.

These results highlight that people-focused leadership and positive team dynamics are relatively strong points in the sampled organizations, whereas flexible work practices and especially career development appear to be weak spots. The low proportion of Gen Z employees expressing loyalty to their employer underscores the practical impact of these gaps.

Discussion

Findings show a clear pattern in what Gen Z finds satisfactory or lacking at work. On the positive side, leadership quality and team culture are relative strengths. Supportive, empathetic managers match prior research that Gen Z prefers leaders who act as approachable coaches rather than distant authorities (Robertson, 2023; Deloitte, 2025). A people-centric style with open communication and respect likely supports engagement. The

moderately good rating for team culture and belonging also suggests progress toward more inclusive, collaborative environments, in line with studies on Gen Z's desire for diversity, inclusion, and psychological safety (Gogoi, 2023; Truncale, 2025).

At the same time, gaps in work flexibility and career development appear closely related to turnover intentions. Neutral scores for flexibility indicate that many young employees still face traditional, inflexible arrangements despite high expectations for flexible work (Johns Hopkins University, 2023; Qualtrics XM Institute, 2024). The lowest ratings for career growth suggest a lack of clear advancement or skill-building paths. This supports earlier findings that Gen Z is growth-oriented and disengages quickly when feeling stuck (Gogoi, 2023; Deloitte, 2025). The fact that more than half of respondents are unsure about staying mirrors evidence that Gen Z is more open to job-hopping, especially when progression and work-life balance needs are unmet (Eagle Hill Consulting, 2023; Deloitte, 2025). This looks less like a lack of loyalty and more like a rational response to workplaces that have not yet adjusted to their expectations. When growth, flexibility, and purpose are present, Gen Z can be highly committed (Qualtrics XM Institute, 2024), which means leadership must adapt both interpersonal behavior and organizational structures to improve retention.

Conclusion

This study shows that Generation Z employees bring a new set of expectations to the workplace, and meeting these expectations requires future-oriented leadership as well as changes in how work is organized. Gen Z workers in the sample appreciated empathetic, supportive managers and a friendly team environment, but they also highlighted significant shortcomings in flexibility and career development. These gaps correspond with a low long-term commitment to employers, indicating that many organizations risk losing young talent if they do not adapt. The findings are based on a convenience sample of 115 respondents and a cross-sectional design, so causation cannot be established and generalizability is limited. Nevertheless, the results are consistent with broader surveys of Gen Z and provide useful insights for practice. Future research could examine more diverse samples, compare Gen Z with other generations, and track changes over time as Gen Z advances in their careers.

Based on the study and the literature, several recommendations are proposed for organizations and leaders aiming to attract and retain Gen Z employees:

- *Emphasize Career Growth.* Make development opportunities a core part of the employment offer. Clearly communicate possible career paths and promotion criteria, provide regular mentoring or development conversations, and offer training or cross-functional projects (Gogoi, 2023; Deloitte, 2025). Growth should include both vertical promotions and lateral moves that build skills.
- *Increase Work Flexibility.* Expand flexible work arrangements where roles allow. Consider hybrid work, flexible start and end times, or compressed workweeks. Focus on outcomes rather than strict schedules.

Gen Z engagement rises when they feel trusted with autonomy and when work-life balance is respected (Johns Hopkins University, 2023; Qualtrics XM Institute, 2024).

- *Develop Empathetic Leadership.* Continue investing in leadership development that builds soft skills such as active listening, coaching, and fair feedback. Gen Z consistently ranks empathy and fairness among the most important leadership traits (Deloitte, 2025). Managers should regularly recognize contributions, show interest in employees' aspirations, and be transparent.
- *Empower Gen Z Voices and Purpose.* Give Gen Z employees a voice in how work is done and help them connect their work to a larger purpose. Solicit ideas from younger staff on improving processes and involve them in meaningful projects. When Gen Z feels heard and sees that their work matters, they are more likely to develop long-term commitment.

By implementing these modern managerial approaches, organizations can create a more engaging and supportive environment that resonates with Generation Z. In doing so, they not only improve retention but also unlock the potential of a generation that is tech-savvy, adaptable, and eager to make a positive impact.

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Determinants of Corporate Bond Yields Index in Kazakhstan: The Roles of Monetary Policy, Inflation, and Exchange Rate

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Abstract

The research identifies essential factors which determine corporate bond yield to maturity (YTM) in Kazakhstan while showing how base rate changes and inflation rates and exchange rate movements affect corporate borrowing expenses. The research uses daily data from 2018 to 2025 which comes from the Kazakhstan Stock Exchange (KASE) and the National Bank of Kazakhstan to analyze short-term and long-term relationships between variables through OLS and ARDL models.

The OLS analysis shows that corporate bond yields increase when the base interest rate and exchange rate rise but inflation rates decrease bond yields at a statistically significant level. The research shows that higher price levels decrease real returns which leads investors to request higher risk premiums. The ARDL model confirms a long-term connection between YTM and its macroeconomic factors through diagnostic and stationarity tests. The base interest rate and exchange rate have positive significant effects on bond yields during the long run but inflation creates negative effects that are statistically significant. The base rate shows an immediate strong effect on yields during short periods but inflation and exchange rate effects remain statistically weak. The research evidence supports both the Fisher Effect and risk-premium theory in Kazakhstan's emerging financial market.

The research provides useful information to help policymakers improve market efficiency and issuers control their financing expenses and investors evaluate corporate bond risk versus return potential.

Keywords: yield to maturity, base rate, inflation, exchange rate, Kazakhstan, corporate bonds

Introduction

The country of Kazakhstan exists within the Central Asian territory together with Uzbekistan and Kyrgyzstan and Tajikistan and Turkmenistan. The economy of Kazakhstan depends on resource extraction through oil and gas and metal mining while maintaining the largest GDP in Central Asia which makes it the financial center of the region. The government has made capital-market development its main priority to reduce financial dependence on banking institutions since 2010. The Kazakhstan Stock Exchange (KASE) operates as the main platform for corporate bond issuance through its Bond Market Yield (BMV) index which also receives support from the Astana International Exchange (AIX). The YTM formula combines investor predictions about monetary policy actions and inflation rates and currency exchange risks and credit market stability and market liquidity and interest rate differences across time periods.

The emerging market status of Kazakhstan requires investors to understand how economic factors affect corporate bond yields because this knowledge helps them evaluate risks and control their financial resources and

set appropriate policy actions. The BMY index which KASE publishes allows users to monitor corporate YTM averages in real-time while providing essential data for macroeconomic financial research.

The policy base rate of emerging markets functions as their main monetary tool because it determines short-term interest rates and shapes interest rate duration. The monetary transmission mechanism drives corporate YTM to rise when the NBK base rate increases because it elevates both discount factors and risk-free benchmarks. The Fisher channel enables inflation to affect nominal yields through two mechanisms: expected inflation rates and risk premium adjustments that occur when price volatility increases market uncertainty. The exchange rate between KZT and USD shows how currency market fluctuations and external trade imbalances affect investment returns. The actual market dynamics show how these different factors work together. A negative terms-of-trade shock will cause KZT depreciation which leads to higher inflation rates and monetary policy tightening that will increase corporate bond yields. The research investigates how different factors influence corporate bond yields through time-series analysis of Kazakhstan market data. The period from 2018 to 2025 provides valuable data to study how macroeconomic factors influence corporate bond yields because of market growth and economic instability.

Literature Review

The following section examines previous research about bond yield determinants which focuses on developing and emerging market economies. The analysis presents both theoretical and empirical evidence about how macroeconomic factors including monetary policy and inflation rates and exchange rates affect corporate bond yields. The review analyzes various research approaches while showing both shared results and conflicting findings between studies and demonstrates the current lack of research about Kazakhstan's corporate bond market.

The factors that determine bond yields differ substantially between developed economies and developing economies because of their distinct monetary systems and market size and investor conduct. The United States and Japan and Eurozone countries experience yield changes because of investor expectations about monetary policy actions and inflation projections and international investment movements. The additional structural obstacles in emerging markets create higher bond yield volatility because these markets experience exchange rate instability and restricted market liquidity and lower credit ratings.

Developed economies show stable yield movements that result from policy actions yet developing economies experience greater volatility because of inflation rates and exchange rates and worldwide interest rate changes. The distinct characteristics of Kazakhstan require researchers to conduct separate analyses because the country experiences changes in its monetary policy framework and exchange rate management system and inflation targeting system.

Research conducted on emerging markets during the last few years shows that bond yields follow macroeconomic fundamentals which include policy interest rates and inflation rates and exchange rates and

sovereign creditworthiness. Multiple research studies have used time-series and panel data analysis to determine how these variables affect bond yields in both short-term and long-term periods.

The analysis of corporate bond yields in Kazakhstan faces a significant research deficiency because scientists have not studied the complete monetary policy and inflation and exchange rate effects on these yields. The research investigates corporate bond yield index (KASE BMY) as a borrowing cost indicator and market sentiment measure through time-series regression (OLS and ARDL models) to analyze base rate and inflation and exchange rate effects on corporate bond yields from 2018 to 2025. The research unites worldwide research findings with Kazakhstan's monetary system to develop better knowledge about how economic indicators affect corporate funding terms in its evolving capital market.

Methodology

The research methodology section explains how the study investigates YTM determinants of corporate bonds in Kazakhstan through daily time-series data from 2018 to 2025. The research uses quantitative time-series methods to study how base interest rates and inflation rates and exchange rates affect domestic corporate borrowing expenses.

The research used Ordinary Least Squares (OLS) and Autoregressive Distributed Lag (ARDL) models to analyze data through econometric methods while performing diagnostic and stationarity tests for result validation. The OLS model shows immediate relationships between variables but the ARDL model shows both short-term patterns and long-term stable connections between variables.

The research data originated from KASE and IRIS Finance and Refinitiv and NBK which offer trustworthy monetary policy and financial market performance indicators. The selected time frame holds economic value because it includes major monetary policy adjustments and inflation-targeting adoption and exchange rate movements that affected business funding options. The research performed all statistical operations through Stata which serves as a full-featured econometric tool for data manipulation and regression modeling and model verification.

Findings

The research investigated which macroeconomic factors affect corporate bond yield to maturity in Kazakhstan between 2018 and 2025 through daily data from the Kazakhstan Stock Exchange and National Bank of Kazakhstan. The research employed Ordinary Least Squares and Autoregressive Distributed Lag models to study BMY Index relationships with Base Interest Rate and Consumer Price Index and Exchange Rate across short-term and long-term periods. The researchers performed multiple diagnostic tests before starting their ARDL analysis. The ADF test results showed that all variables followed an $I(1)$ pattern which fulfilled the requirements for ARDL modeling. The VIF test results showed no evidence of independent variable multicollinearity and the Bounds

Cointegration Test results demonstrated a strong existence of long-run equilibrium between the variables. The Breusch–Pagan test detected heteroscedasticity but robust standard errors were used to achieve reliable results.

The OLS regression results showed that corporate bond yields increase when the Base Interest Rate and Exchange Rate rise but decrease when inflation increases. The research results match theoretical models because policy rate increases and currency value decreases lead to higher borrowing costs but inflation reduces actual investment returns.

The ARDL results validated these relationships by showing a statistically significant long-term connection between YTM and macroeconomic variables. The Base Interest Rate and Exchange Rate variables positively affect bond yields in the long run but inflation creates negative effects on bond yields. The Base Interest Rate showed a significant immediate effect in the short run. The error correction term (−0.019) showed negative significance which indicated that the system adjusts to long-run equilibrium at a rate of 1.9% per time period.

Table 1

The ARDL results

Component	Variable	Coefficient	t-stat	p-value	Interpretation
Adjustment	ECT(−1)	−0.0190	−4.48	0.000	Adjustment to equilibrium (1.9% speed)
Long-run	BaseInterestRate	0.6555	10.10	0.000	Positive, significant
	CPI	−0.1881	−4.75	0.000	Negative, significant
	KZTBID	0.000074	2.39	0.017	Positive, significant
Short-run	D.BaseInterestRate	0.0594	4.04	0.000	Positive, short-run effect
	D.CPI	−0.0147	−1.16	0.245	Not significant
	D.KZTBID	0.0000131	1.76	0.078	Weakly significant (10%)

Discussion

The research demonstrates that stable macroeconomic management through fixed monetary policies and controlled exchange rate movements leads to lower yield volatility and better financing terms. The research findings enable policymakers to develop enhanced policy instruments which will decrease borrowing expenses while fostering sustainable capital market expansion in the long run. The research findings enable corporate issuers to predict their borrowing expenses by tracking base rate decisions and inflation patterns and exchange rate fluctuations. The knowledge of these factors enables issuers to select the best time for issuance and determine optimal pricing and maturity lengths when they access both local and international markets. The research findings enable investors to make better decisions about risk versus return because they understand the factors that affect their investments. The YTM in Kazakhstan shows high sensitivity to base rate adjustments and currency value decreases which demands investors to implement hedging strategies and track all macroeconomic statement releases. Theoretical Implications The research adds new knowledge to emerging market studies through its analysis of how monetary policy and macroeconomic elements affect bond yields in Kazakhstan. The research confirms part

of the classical theories through its findings. The positive relationship between exchange rate depreciation and yields supports risk-premium theory. The negative relationship between inflation and yields during 2022–2023 resulted from the NBK's initial view that inflation increases would be short-term. The Fisher Effect requires modification when studying emerging markets because of this specific situation. The research creates a scientific framework which enables researchers to study: how investors react to inflation-related market changes, how monetary policy affects different economic sectors, how Central Asian financial markets integrate with global markets, how Kazakhstan compares to other emerging markets in terms of financial market development. The research demonstrates that Kazakhstan's corporate bond market will need sustained macroeconomic stability and policy reliability to achieve future growth.

Conclusion

The research results demonstrate that Kazakhstani corporate bond yields respond mainly to three macroeconomic elements which include monetary policy choices and exchange rate movements and inflation rate changes. The base interest rate shows a positive and statistically significant relationship with YTM which proves that monetary policy affects the corporate bond market. The National Bank's base rate increases lead to higher borrowing expenses which drives investors to seek higher returns according to traditional monetary policy transmission principles. The positive relationship between exchange rate changes and bond yields shows that tenge depreciation leads to higher currency risk for investors. The weakening tenge currency leads investors to request higher returns for their local-currency bond investments which results in higher bond yields. The risk-premium theory which emerges in emerging markets supports this finding. The inflation variable produces negative effects on YTM according to both OLS and ARDL long-run analysis results. The Kazakhstani market displayed an inverse relationship between inflation rates and nominal yields during the studied time period which contradicts the traditional Fisher Effect theory. The National Bank maintained its base rate at a stable level during 2022-2023 because it viewed the inflation surge as a short-term phenomenon. The market failed to increase yields in response to inflation so the empirical results showed a negative relationship between CPI and YTM. The research establishes that Kazakhstan's bond market responds strongly to both internal monetary policy decisions and external currency market fluctuations. The market requires stable macroeconomic management through consistent base rate decisions and exchange rate stability to achieve balanced funding for issuers and stable risk-return dynamics for investors. The research findings provide essential knowledge for market efficiency improvement efforts by policymakers and for issuers who need to control their funding costs and investors who want to evaluate their exposure in Kazakhstan's corporate bond market.

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The Impact of Macroeconomic Factors and Regulatory Policy on the Dynamics of Banking Consumer Lending in Kazakhstan

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Abstract

The research investigates how key economic changes affect consumer lending market in Kazakhstan during the period from 2003 to 2024. To examine both the short-run and long-run linkages, the Autoregressive Distributed Lag Stationarity (ARDL) model in its error-correction specification in STATA was applied. The research uses multiple indicators which previous studies show affect banking credit activity including GDP, inflation, the exchange rate, the policy interest rate, market, the broad money supply and the share of non-performing loans in total credit. According to findings credit expansion rise during the economic growth and high financial market development. The increase in non-performing loans and currency depreciation decreased credit distribution because they lead to higher loan costs and rise payment risks. On the other hand, the study found no statistical connection between inflation rates, money supply growth and credit expansion because monetary and regulatory actions in Kazakhstan's banking sector seem to cancel out these effects.

Keywords: Kazakhstan, consumer credit, macroeconomic factor, loan, GDP

Introduction

1.1 Consumer Lending Market

The household lending market in emerging markets operates through multiple economic factors which include macroeconomic performance, monetary conditions, banking stability and financial development (Guo & Stepanyan, 2011; Melecky & Podpiera, 2015). The relationship between macroeconomic factors and financial elements requires extensive empirical analysis - particularly in economies like Kazakhstan, which has undergone substantial economic and financial transformations during the last twenty years.

The banking sector in Kazakhstan has experienced substantial growth in consumer lending since 2000. Banks shifted their loan distribution from corporate to individual consumer loans because retail lending generates higher profit margins, lower risk exposure, more stable payment streams and digital credit products draw in more customers.

The amount of personal loans issued by banks increased continuously from 3.3 trillion tenge in 2013 to 20.7 trillion tenge in 2024. Consumer loans held the largest market share of outstanding retail credit at 56.1% during 2024. The second-largest loan segment consists of mortgage loans at 28.7% while auto loans account for 13.7% of the total portfolio. The financial stability does not face a systemic threat from consumer lending but this risk continues to grow as an important emerging concern. On the other hand, the problem of excessive debt creates major concerns about consumer protection for specific segments of the population.

1.2 Research Problem

Research has extensively investigated how macroeconomic indicators affect household credit expansion in developed nations. The academic field lacks sufficient research about emerging markets including Kazakhstan's retail credit expansion during its digital transformation period and changing regulatory framework. The research conducts a detailed time series evaluation of Kazakhstan through multiple macro-financial indicators within a rigid econometric structure.

Literature Review

Recent research studies have found multiple determinants which affect bank lending patterns including economic stability, direction of monetary policy, regulatory and supervisory frameworks, institutional quality, and the financial soundness of banking institutions.

This chapter examines existing studies about bank lending factors (Table 1) while showing how different research methods, data sources and economic results affect developed and developing countries.

Table 1

Overview of the most recent researches about the determinants of lending

Author(s)/ Year	Title	Period	Countries	Approach	Key Variables	Empirical Findings
Guo, K., & Stepanyan, V. (2011)	Determinants of Bank Credit in Emerging Market Economies	2002Q 1- 2010Q 1	38 emerging economies	Panel regression analysis, fixed-effects regression models, robustness check	Domestic credit growth, foreign liabilities, deposit base, inflation, interest rate differentials	Domestic and external sources of funding both contribute to lending expansion. The effect is asymmetric: foreign financing has a stronger influence in periods of rapid credit growth.
Claessens, S., Kose, M. A., & Terrones, M. E. (2012)	How Do Business and Financial Cycles Interact?	1960- 2010	44 advanced and emerging economies	Panel VAR and correlation analysis	Economic growth indicators, credit market expansion, and asset-price movements	Credit expansions tend to reinforce economic cycles: stronger GDP growth and rising inflation are typically accompanied by more intensive and rapid credit growth.

Beck, T., Degryse, H., & Kneer, C. (2014)	Is More Finance Better? Disentangling Intermediation and Size Effects of Financial Systems	1990-2011	77 countries (including emerging markets)	Dynamic panel GMM	GDP growth, inflation pressures and interest-rate differentials	The positive role of the financial sector in supporting lending is limited: once credit expansion exceeds a certain threshold, the system becomes more exposed to macro-financial vulnerabilities.
Melecky, M., & Podpiera, A. M. (2015)	Macroeconomic Determinants of Credit Growth: The Role of Risk and Regulation	1995-2012	43 emerging and advanced economies	Panel regression with fixed effects	Output growth, consumer-price dynamics, banking-sector capitalization and regulatory conditions	The study suggests that robust economic and monetary conditions stimulate credit activity, whereas stricter regulation and rising interest rates may slow lending.
Thi Hong Hanh Pham (2015/14)	Determinants of Bank Lending	1990-2013	146 countries	Log-linear panel regression model, fixed and random effects estimations	Domestic credit ratio, deposit base, real interest rate, banking-sector performance measures	Evidence shows that tighter monetary policy and weaker bank performance reduce lending capacity, while stronger banking conditions promote increased credit supply.
Sviryzdenka, K. (2016)	Introducing a New Broad-based Index of Financial Development	1980-2013	183 countries	Composite index analysis (IMF WP/16/5)	Financial depth, access, efficiency, stability	Shows that deeper, more accessible financial systems correlate with higher levels of household and consumer credit.
Shijaku, G. (2017)	Macroeconomic Determinants of Credit Growth: The Albanian Case	2003-2015	Albania	ARDL and VECM	<ul style="list-style-type: none"> • bank credit • GDP • Inflation • interest rate • NPL ratio • exchange rate 	GDP and interest rate have the largest long-run effect on credit growth.
Abilov, M. (2021)	Financial Frictions and Shock	2001-2019	Kazakhstan	DSGE estimation using	<ul style="list-style-type: none"> • monetary policy shocks 	Financial frictions amplify the effects of macroeconomic

	Transmission in Kazakhstan: A DSGE Approach à la Gerali et al.			Bayesian methods	<ul style="list-style-type: none"> • technology shocks • bank net worth shocks, • borrowing constraints tied to housing and entrepreneurs' capital • 	shocks on credit and output; housing collateral and entrepreneur capital are key transmission channels.
Rasa Kanapickiene, Greta Keliuotytė-Staniulienė, Deimante Vasiliauskaitė, Renatas Špicas March 2023	Macroeconomic Factors of Consumer Loan Credit Risk in Central and Eastern European Countries	2008-2020	11 CEE countries	Panel data analysis, bivariate and multiple regressions	<ul style="list-style-type: none"> • general macroeconomic condition factors, • economic direction factors • factors of the financial market conditions 	The aggregate of general macroeconomic condition factors is negatively related to consumer loan NPLs.
Mayibongwe Sangweni, Oliver Takawira 2024	The impact of changes in macroeconomic factors on banks' lending behaviour	2001Q1-2022Q1	South Africa	Autoregressive Distributed Lag Model (ARDL)	<ul style="list-style-type: none"> • domestic credit • REPO • price index • real effective exchange rate • GDP • activity rate 	The relationship between the REPO, inflation, REER

Methodology

The research used time-series econometric methods to study how macroeconomic and financial indicators influence consumer credit growth in Kazakhstan throughout 2003 to 2024. The several multiple diagnostic tests were conducted to assess data statistical quality before starting model estimation. The study applied unit-root tests to verify proper integration levels, VIF value assessments to validate stable coefficient estimates and performed autocorrelation, heteroskedasticity tests to determine the suitable modeling method.

Based on theoretical perspective following econometric model for further analysis was settled:

$$LN_CONS_CREDIT = \alpha + \beta_1(LN_GDP) + \beta_2(INF) + \beta_3(IR_NB) + \beta_4(EXRATE) + \beta_5(LN_M3) + \beta_6(NPL) + \beta_7(LN_MCAP) + \varepsilon$$

The Table 2 below presents all the variables implemented in the study, description, abbreviation and other details the econometric model was based on.

Table 2*Variables*

#	Variable	Definition	Source
<i>Dependent Variable</i>			
1	Consumer credit (LN CONS CREDIT)	Natural log of total consumer bank credit outstanding, end-of-year	NBK
<i>Independent Variable</i>			
2	GDP (LN GDP)	Natural log of gross domestic product, annual	World Bank
3	Inflation Rate (INF)	Inflation rate, % (CPI, year-over-year)	World Bank
4	Interest Rate (IR NB)	Policy (base) interest rate of the central bank, %	NBK
5	Exchange Rate (EXRATE)	Nominal KZT per USD exchange rate	World Bank
6	Money Supply (M3_G)	Growth rate of the broad money supply (M3), year-over-year.	World Bank
7	Non Performing Loans (NPL)	Non-performing loans, % of total loans	World Bank
8	Market Capitalization (LN MCAP)	Natural log of stock market capitalization of domestic listed companies, nominal dollar US, end-of-year.	World Bank

3.1 Model Selection

The ARDL methodology was selected as the primary estimation framework for analyzing the macro-financial drivers of consumer lending in Kazakhstan. The modeling technique works best for macroeconomic time-series data because it allows researchers to analyze both short-term market reactions and long-term equilibrium patterns within a single analytical structure (Pesaran & Shin, 1999; Pesaran et al., 2001).

The best lag structure was selected through Akaike Information Criterion (AIC) optimization. The ARDL (1,0,0,0,1,0,0,0) specification which uses annual data from 2003 to 2024 demonstrates strong explanatory power because it explains 92.82% of consumption growth variation through its R-squared value and 82.04% through its adjusted R-squared value. The model structure shows that the dependent variable receives a one-period lag but all other variables enter at the current time except for NPL which receives a short-run lagged difference. The error-correction term shows a negative significant value of -1 which indicates that the system adjusts quickly to its long-run equilibrium by eliminating almost all discrepancies during each time period.

Findings

The long-term analysis shows that GDP, non-performing loans, exchange rates, market capitalization values determine consumption patterns in the long run. The long-term consumption levels decrease when non-performing loans increase and when the exchange rate depreciates but GDP and market capitalization values lead to increased consumption. The research findings show that inflation rates, money supply expansion and policy interest rates do not affect consumption patterns in the long run. The model includes structural break dummies for 2009, 2015 and 2020 but these variables fail to produce significant short-term effects. The research findings demonstrate that

consumption maintains a strong long-term connection with major economic variables while showing fast equilibrium recovery which supports the stability of consumption patterns during this time period.

Discussion

The long-run ARDL estimates reveal essential information about the macroeconomic elements which affect consumer credit in Kazakhstan.

Table 3

Theoretical Findings

Hypothesis	Statement	Result	Interpretation
H1	Economic growth (GDP) has a positive and significant effect on consumer credit	Accepted	A 1% increase in real GDP is associated with about a 1.65% increase in consumer credit. Very strong and significant effect
H2	Inflation negatively affects consumer credit	Rejected	Inflation does not have a clear long-run effect on consumer credit in this sample
H3	Money supply (M3) positively influences consumer credit	Rejected	Increase in money growth changes consumer credit by only 0.01%, and is clearly insignificant
H4	Higher non-performing loans (NPLs) reduce consumer credit	Accepted	A 1 p.p. increase in the NPL ratio reduces the long-run level of consumer credit by about 4.85%.
H5	Exchange-rate depreciation reduces consumer credit	Accepted	If the exchange rate rises by 1 unit, consumer credit falls by about 0.5% in the long run.
H6	Higher interest rates reduce consumer credit	Rejected	Higher interest rates do not show a robust long-run impact
H7	Financial-market development (market capitalization) positively affects consumer credit	Accepted	A 1% increase in stock-market capitalization leads to about a 0.34% increase in consumer credit in the long run.

The positive relationship between GDP growth and consumer lending in Kazakhstan shows that consumption-based credit rise when economic of developed countries rise (Guo & Stepanyan, 2011; Shijaku, 2017). The negative relationship between non-performing loans indicates that credit-risk conditions limit the ability of lenders to provide loans. The research supports risk-based lending approaches because asset quality deterioration limits credit access (Abilov, 2021; Kanapickiene et al., 2023). The depreciation of exchange rates leads to negative effects on household credit because foreign currency loans and dollarization practices make loan repayments more challenging when the domestic currency value decreases (Igan & Tamirisa, 2009). The monetary transmission in Kazakhstan remains weak because policy tools do not affect enough on lending market due to structural issues such as administrative barriers, subsidized credit programs and financial system structural problems (Bernanke & Blinder, 1988).

Conclusion

This study contributes new empirical evidence on how macroeconomic conditions influence consumer lending market in Kazakhstan. This topic remains insufficiently explored in the existing literature and findings may serve as a practical reference for policymakers seeking to decrease existing structural imbalances.

In addition, the results offer value to banks better evaluate risks and the potential profitability of the consumer credit segment. For the academic community, the study helps understanding of lending dynamics in economies undergoing transformation from resource-driven models toward more diversified economy.

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Factors Affecting the Volumes of Business Lending by Banks in Kazakhstan: Analysis of Macroeconomic and Bank-Specific Factors

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Abstract

The aim of the study is to analyze the influence of macroeconomic and certain bank-specific factors on the amounts of loans the banks provide for business purposes in Kazakhstan. The research included the panel data of ten Kazakhstani private banks over the period from 2008 to 2024. The Feasible generalized least square (hereinafter referred to as “FGLS”) model is applied in regression analysis the results of which show that annual GDP growth rate, bank size, return on equity, current ratio, and deposit-to-asset ratio have a statistically significant positive influence on lending, while return on assets, cash ratio, and the broad money variables have a statistically significant negative effect. Such macroeconomic variables as inflation rate and the central bank’s base rate have no significant influence on the volumes of lending by banks to business entities.

Keywords: liquidity, broad money, GDP growth, inflation, central bank’s base rate

Introduction

The questions of business financing play an important role for every country, because the share of business enterprises in the GDP certainly affects the level of stability of the country's economy. This can be explained by the fact that the economic base of the regions, the level of competition and other important economic processes directly depend on the size and stability of the small and medium-sized enterprises segment and other business entities.

In this sense, it is necessary to note that banks are considered as a vital source of financing for business. However, based on statistical data published by the National Bank of Kazakhstan (hereinafter referred to as the “NBK”) on its official Internet resource, from 2007 till 2024 the proportion of loans to business in the GDP of Kazakhstan decreased from 39,1% to 9,7%. The issue of insufficient financing of the country's economy by second-tier banks of Kazakhstan problem was also noted by the President of the Republic of Kazakhstan in his Address to the people of Kazakhstan “Economic course of a Just Kazakhstan” dated September 1, 2023.

Thus, given the noticeable reduction in the volumes of business lending by banks, it becomes relevant to analyze the factors that influence the amount of lending to businesses by banks in Kazakhstan. This paper will focus on several external macroeconomic and certain bank-specific factors.

Literature Review

Various factors that influence the behavior of banks in corporate lending were the subject of research in many countries. Previous studies analyzed the effects of not only macroeconomic factors and monetary policy, but also such bank specific factors as bank size, liquidity ratio, credit risk, volume of deposits, return on assets and

equity. For macroeconomic and monetary policy factors, mostly GDP growth rate, inflation, central bank's base rate was examined.

In examining the influence of various internal and external factors on the volumes of bank lending mostly the bank capital channel and economic growth theory were considered. Economic growth theory generally states that economic growth leads to higher demand for loans from businesses, as firms seek funding to expand and invest. According to the bank capital channel theory, in turn, more available capital allows banks to lend more, as they are better equipped to compensate losses. The money supply theory was also applied in several studies, as it plays the significant role in determining the supply of credit.

Salmanov, Zayernyuk, and Lopatina (2015) considered the influence of monetary policy on bank lending in Russia. Generalized method of moments was used by the authors to analyze the official data of the Russian central bank for the period from 2002 to 2013. It was found that the central bank's base rate, monetary base, and money supply, as well as the interbank interest rate are statistically significant for the analysis of the determinants of the corporate lending by banks in Russia. However, the statistical significance of the interest rate for interbank lending appeared to be lower than others.

In another study, Alkhazaleh (2017) analyzed the impact of certain external and internal factors on the private Jordanian banks' lending. The author applied the Ordinary Least Square (hereinafter referred to as "OLS") model to analyze the panel data of the financial statements of sixteen Jordanian banks were taken from 2010 to 2016. The study showed that liquidity and credit risk significantly and negatively impact the volumes of lending by banks in Jordan. In turn, gross domestic product growth, inflation, and money supply, as well as such bank-specific factors as size of the bank and its return on assets, have a statistically positive effect.

Rabab'ah (2015) also investigated the effect of various determinants of lending by Jordanian banks. In this study a larger period from 2005 to 2013 was analyzed, though a sample of only ten banks was taken. The study also showed the statistically significant positive effect of economic growth and bank size on bank lending behavior, and statistically significant negative effect of liquidity ratio. The author did not analyze the credit risk itself, the effect of the ratio of non-performing loans was analyzed instead which also showed the significant negative effect on the volumes of loans. The effect of such variable as window rate demonstrated a negative result as well.

Zandi, Haseeb, Widokarti, Ahmed, and Chankoson (2019) examined the effects on lending behavior in ASEAN countries. Namely, the banks of Brunei, Malaysia, Indonesia, and Thailand were analyzed in determining the factors affecting their lending volumes using robust regression method. Five banks from each of the mentioned countries with the financial and other official data for the period of 2011 to 2017 were considered. The research showed that GDP growth and inflation are significantly determined by the lending behavior of banks. While in Brunei inflation negatively impacts lending by banks, in Thailand the influence of GDP and inflation are significantly positive. Such bank-specific factors as risk, liquidity ratio, return on equity, and return on assets are also significantly influence lending by banks.

Amidu and Wolfe (2008) applied OLS model to analyze the panel data from the Bank of Ghana and the IMF covering the period from 1998 to 2004. The study considered both external factors, such as inflation, money supply, and the base lending rate established by the central bank, as well as bank specific factors including bank size and liquidity. According to the findings, the base lending rate established by central bank has a negative effect on lending by banks in Ghana. Additionally, the research demonstrated positive effect of broad money on lending by banks which is also statistically significant. Such bank-specific factors, as bank size and liquidity positively influence the volumes of bank lending.

Despite the variety of research done in the mentioned area, most studies analyzed the effect of certain factors on the total amount of loans without differentiating them into the loans for business and non-business purposes. However, the economic factors tend to affect lending to business more rather than to personal and consumer credits, as the behavior of business is more sensitive to various economic changes. Therefore, the aim of the present study is to understand the effect of external and bank-specific factors on bank lending for business purposes. For each macroeconomic and banks' financial indicator the following hypotheses are analyzed:

H₀: no significant effect on the volumes of lending by banks to business in Kazakhstan;

H₁: significant effect on the volumes of lending by banks to business in Kazakhstan.

Methodology

The current study is conducted on the basis of the panel data over the period from 2008 to 2024. The choice of such a period is determined by the availability of data on audited financial statements of banks of Kazakhstan on the internet resource of the financial statement's depository only since 2008.

The external (macroeconomic) parameters, such as gross domestic product growth, broad money, and inflation rate, were downloaded from the "world development indicators" section of the World Bank electronic database. The information of such parameter as base rate, established by the NBK, had been taken from its official internet-resource.

All bank-specific factors, including bank size, the volumes of deposits, the amount of loans to businesses, equity, net income, cash and cash equivalents, current assets, and current liabilities were formed based on the audited financial statements of banks. The study analyzes the data from 10 Kazakhstani banks that are actively engaged in lending to borrowers for business purposes, i.e. to SMEs and other legal entities. Currently there are 23 banks operating in Kazakhstan; however, this study excluded one state owned bank focused on mortgage lending and other banks that have a small market share in the banking sector or focus more on retail (consumer) lending.

The robust regression analysis was applied in the present research to investigate the influence of various macroeconomic and bank-specific factors on the volumes of credits provided by each of the banks for business purposes from 2008 to 2023.

The econometric model is as follows:

$$\text{Loans}_{it} = \text{Bo} + \text{B1}(\text{GDPgrowth}_t) + \text{B2}(\text{Iflation}_t) + \text{B3}(\text{Broadmoney}_t) + \text{B4}(\text{Baserate}_t) + \text{B5}(\text{Banksizes}_{it}) + \text{B6}(\text{Deposit-to-asset ratio}_{it}) + \text{B7}(\text{ROA}_{it}) + \text{B8}(\text{ROE}_{it}) + \text{B9}(\text{Current ratio}_{it}) + \text{B10}(\text{Cash ratio}_{it}) + \text{B11}(\text{Year2014}) + \text{B12}(\text{Year2022}) + \text{U}_{it}$$

Where:

- Loans_{it} : the total amount of loans to business scaled by the total assets of bank i at year t ;
- GDPgrowth_t : GDP growth rate as a percentage of total GDP at year t ;
- Iflation_t : inflation rate at year t ;
- Broadmoney_t : the logarithm of total broad money in local currency unit at year t ;
- Baserate_t : an arithmetic mean of the base rates established by the NBK at year t ;
- Banksizes_{it} : the logarithm of total assets of bank i at year t ;
- $\text{Deposit-to-asset ratio}_{it}$: the ratio of the total volume of deposits accepted from clients to the total assets of bank i at year t ;
- ROA_{it} : return on assets of bank i at year t ;
- ROE_{it} : return on equity of bank i at year t ;
- $\text{Current ratio}_{it}$: the ratio of current assets to current liabilities of bank i at year t ;
- Cash ratio_{it} : the ratio of cash and cash equivalents to current liabilities of bank i at year t ;
- Year2014 : time dummy variable of year 2014;
- Year2022 : time dummy variable of year 2022;
- U_{it} : the error term of regression.

The time dummy for year 2014 was chosen because it marks some notable macroeconomic events taken place in Kazakhstan, such as national currency devaluation, sharp decline of oil prices and some shifts of the monetary policy. Year 2022 was chosen because of the sharp increase of the base rate during this year. An arithmetic mean of the base rates established by the NBK at year 2022 increased approximately from 9.3% to 14.1%.

Findings and Discussion

The FGLS method was used in the present study to do regression analysis. The adoption of the FGLS estimator in this study is motivated by the statistical properties of the panel dataset and the outcomes of the diagnostic tests conducted prior to model estimation, namely, the tests for Multicollinearity, Autocorrelation and Heteroscedasticity. The tests showed that there is no Multicollinearity, as the Variance inflationary factor is less than 5%. There is Autocorrelation in our model, since according to the Wooldridge test, $\text{Prob} > F$ is less than 1%. The tests also showed that there is a Heteroscedasticity with a $\text{Prob} > \chi^2$ being less than 1% level of significance.

The regression analysis showed that P value for inflation rate and the central bank's base rate is more than 10%. It means that we cannot reject the null hypothesis at all levels of significance and there is no effect of these

variables on the amount of loans provided by banks for business purposes. For the same reason we can conclude that there is not any impact of time dummy of year 2014 on bank's lending.

Cross-sectional time-series FGLS regression

Coefficients: generalized least squares

Panels: heteroskedastic

Correlation: common AR(1) coefficient for all panels (0.3144)

Estimated covariances = 10 Number of obs = 166

Estimated autocorrelations = 1 Number of groups = 10

Estimated coefficients = 13 Obs per group:

Min = 14

Avg = 16.6

Max = 17

Wald chi2(12) = 430365.95

Prob > chi2 = 0.0000

Table 1

Results of FGLS model

LoanstoTotalAssetsRatio	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
LogTotalAssets	0.0324949	0.0090881	3.58	0.000	0.0146825	0.0503073
DeposittoAssetRatio	1.03009	0.0018817	547.41	0.000	1.026402	1.033778
ROA	-0.0454466	0.0027305	-16.64	0.000	-0.0507983	-0.0400949
ROE	0.0029416	0.0005395	5.45	0.000	0.0018842	0.0039989
CurrentRatio	0.1447029	0.0298385	4.85	0.000	0.0862206	0.2031852
CashRatio	-0.1397413	0.0660943	-2.11	0.034	-0.2692837	-0.0101989
LogBroadMoney	-0.2071425	0.0362112	-5.72	0.000	-0.2781151	-0.1361698
GDPgrowthannual	0.0087026	0.0044864	1.94	0.052	-0.0000906	0.0174959
Inflationconsumerpricesannu	-0.0004274	0.00423	-0.1	0.920	-0.008718	0.0078631
Baserefinancerate	0.010778	0.0069988	1.54	0.124	-0.0029394	0.0244955
IYear 2014	0.0563475	0.0457457	1.23	0.218	-0.0333124	0.1460073
IYear 2022	-0.0715893	0.0422598	-1.69	0.090	-0.154417	0.0112384
cons	4.879414	1.044678	4.67	0.000	2.831882	6.926945

The null hypothesis can be rejected for such variables as broad money, bank size, return on assets and equity, deposit-to-asset and current ratios at 1% level of significance. The null hypothesis for cash ratio can be rejected at 5% level of significance. Finally, the null hypothesis for annual GDP growth rate can be rejected at 10% level of significance.

The negative influence of broad money growth on business lending by banks can be explained using the credit channel disruption theory. As Bernanke (2019) argued, financial crisis may negatively affect the credit market and disrupt the credit channel. Previous research also showed that during financial crisis entrepreneurs suffer the difficulties of accessing bank financing because the banks become reluctant to take on more risk (Harrison, Li, Vigne, and Wu, 2022). In this regard, it should be noted that the period covered by this study starts from year 2008 marked by the global financial crisis. Its consequences heavily reduced the access for Kazakhstani banks to foreign sources of borrowing and the volume of non-performing loans rose sharply (Glass, Kenjegalieva, and Weyman-Jones, 2014). In years 2009, 2014 and 2015, there were also oil price collapses which usually significantly impact bank risk (Jin, Zhai, and Zhu, 2022). In 2014, the oil price drop was accompanied by the decrease of the national currency value by almost 20 percent. Finally, in 2020 and 2021, the banking system might have experienced the reduction of bank stability and performance due to the COVID-19 pandemic.

All the mentioned events could create the circumstances in which banks preferred to use their liquidity in less risky types of banking activities. The financial data statistics on the official web-resource of the NBK shows that the increase in consumer lending by banks is also the case in Kazakhstan. From 2008 till 2024 the proportion of loans to business entities in the credit portfolio of the banks decreased from 73,4% to 38,8%. Thus, it may be concluded that the increase in broad money does not necessarily has a negative influence on lending in general, but only the amounts of loans provided for business purposes, because of the shift in the banks' policies towards consumer lending.

Annual GDP growth in Kazakhstan, in turn, positively influence the amounts of lending by banks to business entities and this supports the findings in similar research of Amidu and Wolfe (2008), Alkhazaleh (2017). The findings can be explained by the fact that economic growth of the country increases the demand for entrepreneurs in financial resources for further investments in their business.

The bank size positively influences the amount of loans that the banks provide to business and this aligns with the findings of previous studies conducted by Chernykh and Theodossiou (2011), Rabab'ah (2015), Amidu and Hinson (2006). The bigger banks have more available funds to finance the borrowers.

The banks' deposit-to-asset ratio positively influences their lending behavior. Similar findings were achieved by Kim and Sohn (2017), Dombret, Foos, Pliszka, and Schulz (2019) in their analysis of the impact of liquidity on the amounts of bank loans. Generally, the banks that have more deposits tend to increase the amount of loans they provide despite any external factors, because they possess a stable source of financing their lending activity. The same evidences can be applied in explaining the positive influence of current ratio of the banks on their lending behavior. Interestingly, the banks' cash ratio has a negative influence on the amount of loans provided to business entities. It may mean the banks' preference to preserve liquid assets in the form of cash and their reluctance to use them in lending activities.

Return on equity significantly and positively impacts bank lending and it is aligned with the results achieved by Zandi, Haseeb, et al. (2019). Indeed, more profitability increases the banks' potential to provide more loans to business. Return on assets, in turn, has a significant negative impact on lending by banks. High return on assets may demonstrate the conservative strategy of the banks in terms enhancing their credit portfolio because of the corresponding risks.

Finally, the results of the regression analysis show the negative influence of time dummy variable for year 2022. Even though the central bank's base rate, as an independent variable, has no statistically significant effect on the volumes of bank loans, the negative influence of time dummy of year 2022 might show the dependence of lending by banks on the base rate.

Conclusion

Almost all the bank-specific and macroeconomic factors that have a statistically significant influence on the amount of loans the banks provide to business are concordant with the findings of the previous research results achieved in similar studies. The negative effects of return on assets and the broad money on bank lending could not be supported by previous research. In this regard, the statistical data published on the official web-resource of the NBK demonstrated the shift of credit policies of Kazakhstani banks towards consumer lending. This means that despite the availability of the liquidity on the financial market, the banks become increasingly reluctant to provide loans to businesses, increasing the share of consumer loans in the credit portfolios.

The findings of the present research show that the financial regulator in Kazakhstan together with the Government shall take certain measures directed at decreasing the share of consumer lending in the banks' credit portfolios. This may necessitate providing the banks with more incentives to lend to business entities rather than to population. Such measures can include certain tax incentives and some regulatory relaxations (liberalization of prudential standards for loans to business entities). It may be also reasonable to take measures directed at the release of certain amount of banks' liquidity, given that an increase of liquidity indicators positively influences the volumes of loans the banks provide to business in Kazakhstan.

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Generation Z and Job Burnout: Workplace Expectations and The Reality

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Abstract

This research examines the expectation-reality gap experienced by Generation Z employees in Kazakhstan and its correlation with job burnout. The relevance of the study connects with the growing entry of Generation Z into the global labor market, which has created a significant gap between the career expectations and the conditions currently available in the market. The primary research question of this study is identified as “How does the gap between what Generation Z employees expect at work and what they truly face contribute to burnout?” The literature review helped develop a survey based on the MBI-GS and make an assessment using the JD-R model.

Keywords: generation Z, burnout, job demands-resources model, expectations-reality gap

Introduction

The twenty-first century has been characterized by substantial social and organizational changes, which have fundamentally transformed the work environment. A central reason for these shifts is the entry of Generation Z into the global labor market, which has created a significant gap between the career expectations and the conditions currently available in the market. Generation Z is classified as those born between the mid-1990s and the early 2010s. The perception of these professionals is formed through the prism of digitalization and globalization. Comparing Zoomers with other generations' representatives, they mostly prioritize a sense of belonging and are willing to make a real impact. Unfortunately, there is still a tendency among many modern companies to undervalue the needs and expectations of younger employees, and they still suggest conservative working conditions and apply irrelevant leadership styles.

The primary research question of this study is identified as “How does the gap between what Generation Z employees expect at work and what they truly face contribute to burnout?” Based on this research question, the following hypothesis is proposed:

“Discrepancies between expectations and realities in specific work domains are positively associated with higher levels of burnout among Generation Z employees.”

Literature Review

Burnout has been operationalized by the World Health Organization as a result of chronic workplace stress that has not been successfully managed and is characterized by three dimensions:

- a feeling of energy depletion or exhaustion;
- increased mental distance from one's job, or negative and cynical attitudes toward work;
- a reduced sense of professional efficacy and achievement.

The Job Demands-Resources (JD-R) model asserts that each employee can complete only the amount of work that corresponds to the resources they possess. When they are required to work beyond the resources available to them, stress and burnout occur.

The Maslach Burnout Inventory (MBI) was used as the “gold standard” and includes three subscales: emotional exhaustion, depersonalization, and personal accomplishment.

My research integrates both the JD-R model and the Maslach Burnout Inventory (MBI) framework to examine how discrepancies between Generation Z employees’ expectations and actual workplace experiences in Kazakhstan contribute to burnout.

Methodology

Quantitatively, the results were analyzed by measuring the gap between expectation and reality scores, from the prism of different demographic factors: positions, spheres of work, and participants’ levels of experience.

A cross-sectional design was chosen because the purpose of the research is to analyze the current state of workplace attitudes and burnout symptoms within a specific timeframe.

The survey is divided into multiple sections to collect only relevant but sufficient data and subsequently analyze the correlations systematically.

Data was collected via an online survey created in the Google Forms application. The questionnaire was distributed through professional networks, corporate alumni groups, and social media platforms. The intended sample size was 200-250 respondents, which is sufficient for statistical analysis.

Data analysis was conducted using SPSS. Correlation analysis was conducted to assess the strength and direction of relationships between expectation-reality gaps and burnout dimensions.

Ethical integrity constitutes a core principle of this research, and all participants were informed of confidentiality and anonymity.

Findings

In this section, I present and interpret the empirical findings of the study on job burnout among early-career professionals in Kazakhstan, integrating both quantitative and qualitative evidence gathered from the survey responses of 230 respondents. The data was collected from the Generation Z representatives, mostly within the age group from 22 to 25. The final results have also shown that 70% of all participants have full-time jobs, while 20% are part-timers and only 10% are freelancers or self-employed.

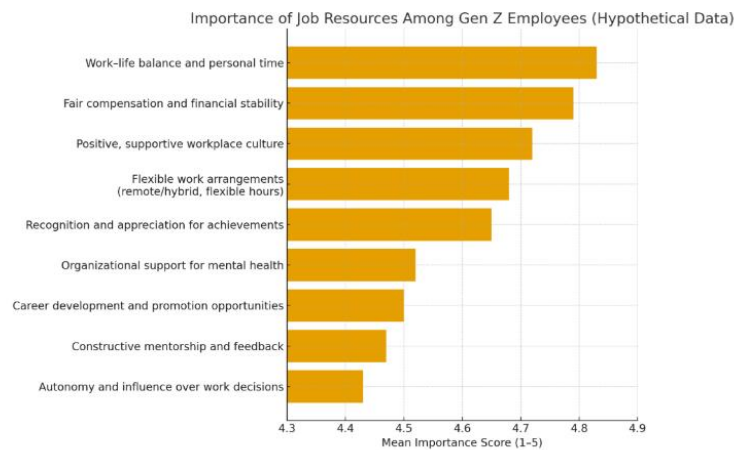
Firstly, I would like to analyze the Expectation Score, which assesses respondents' perceptions of various job resources. The table above presents the mean scores for each type of expectation items. As it may be seen, all mean scores vary from 4.4 to 4.8, which is relatively high, which means that all listed aspects are critically important

and may influence the perception of work itself. The most highly valued aspect is work-life balance and personal time, with a 4.83 mean score.

Figure 1

Importance of job resources among Gen Z Employees

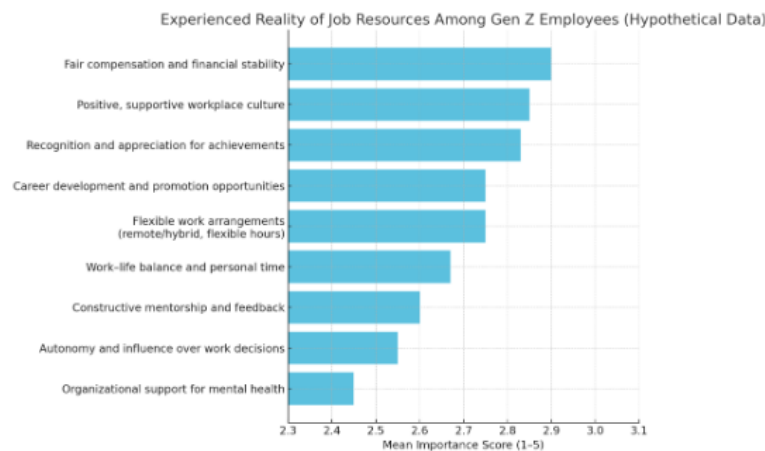
Importance Of Job Resources Among Gen Z Employees (Hypothetical ...



The element is crucial, but unfortunately, the majority of respondents have already experienced the inability to combine professional and personal lives, despite the fact that most of them have only 1-2 years of experience. The second-highest item is fair compensation and financial stability, with a mean of 4.79. Gen Z representatives believe that their labor is undervalued, and they should be paid more for their commitments and competencies. They also cite high inflation, higher tax rates, and currency devaluation as the reasons for the increase in salaries and bonuses. No less important job resource is a positive, supportive workplace culture, with a mean = 4.72. Undoubtedly, friendly communication and healthy relationships with colleagues, especially with more senior managers, make Zoomers feel safe and more comfortable in the work environment, which directly influences the motivation and desire to stay and contribute.

Next, we would analyze the Reality Scores, which illustrate the elements of job resources that already exist and are implemented by the organizations. All mean values cluster between 2.45 and 2.90, which is severely insufficient to cover job demands in survey participants' actual work environments. The lowest score was observed in organizational support for mental health and well-being, which shows a mean of 2.45. Respondents confirmed that there is still a shortage in mental health initiatives, even considering the fact that many enterprises offer free consultations with experts in psychology. They lack daily practices in which supervisors regularly demonstrate appreciation and support for their teams, respect their personal boundaries, and work hard to develop their emotional intelligence.

Figure 2
Overview of Reality Scores



The second-from-the-end aspect is autonomy and influence over work decisions, with a mean score of 2.54. Interpretation is as follows: Gen Z employees need to be notable, heard, and decisive. However, due to bureaucracy, complex approval processes, and a strong hierarchy that have been established in the companies for years, suggesting ideas and quick decision-making seem complicated, almost impossible. I would also like to highlight the low reality score for constructive feedback and well-structured mentorship systems (2.6). From a Generation Z perspective, routine tasks that other employees have performed many times can be done more effectively through competent coaching and knowledge transfer. In reality, employees tend to act rather selfishly and do not devote sufficient attention to mentorship, which results in prolonged task completion and a lower quality onboarding process.

4.1 Expectation-reality gaps by dimensions

Figure 3
Expectations vs. reality across job resource dimensions

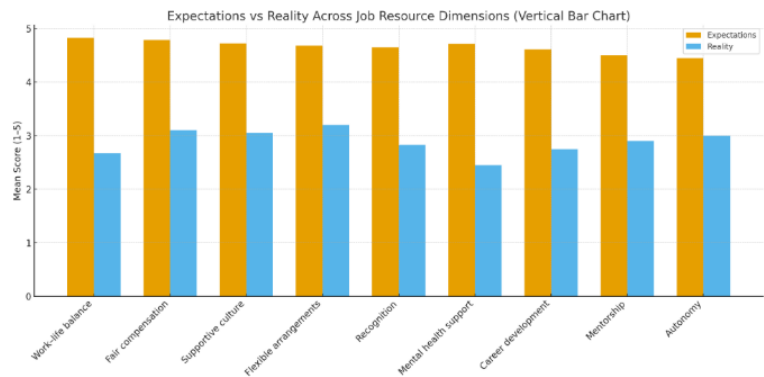
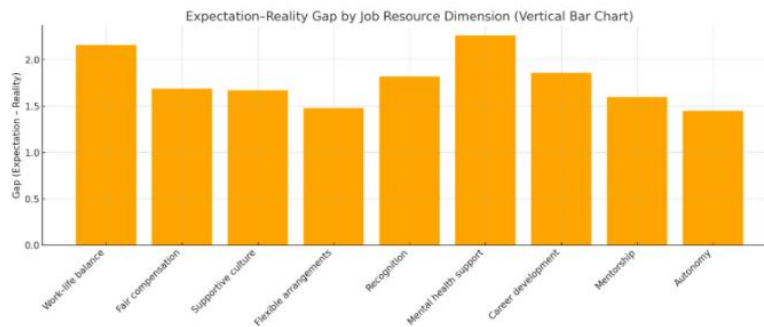


Figure 4

Expectation-reality gap by job resource dimension



The graphs above demonstrate that there is a gap between expectations and reality, and this mismatch is significant enough. Graph 3 consolidates information from sections 5.2 and 5.3 for visual convenience, while Graph 4 displays the gap itself.

1. The largest gap result is observed in the “mental health support” dimension (gap is 2.26). Gen Z wants companies to recognize that the timely provision of assistance and support should become a corporate priority, while employers continue to give insufficient attention to mental health. When evaluating corporate benefits packages, psychological support was ranked as more important than financial guidance, gym memberships, and free meals.

Despite the fact that international markets have long offered effective solutions to these issues, companies in Kazakhstan have still not integrated these practices, which creates a significant gap. Employees are aware of how things could be, based on examples from foreign or multinational organizations, yet do not receive similar support within their current workplace.

2. Work-life balance’s results are as follows: expectation score is 4.83, reality score is 2.67, and the gap is 2.16. This gap emerges when an employee faces regular overtime, which can extend beyond eight working hours and even into weekends, while receiving nothing in return except additional workload. In contrast, companies with a healthy work–life balance see employees who are happier, and that directly improves productivity.

3. Recognition gap is 1.82. Recognition among colleagues refers to situations where employees publicly acknowledge one another’s help, contributions, skills, talent, or well-executed work. It may take different forms and vary in scale: in a team or company chat, during meetings (online or offline), by email, through a feedback tool, through micro-bonuses, endorsement on LinkedIn, and so on.

In times of accelerated globalization, individuals increasingly share their achievements publicly through social media. They post awards and accomplishments, and such visible success often triggers anxiety among others, as well as the desire to be recognized by their own leaders. Even if a company lacks the resources to launch a large-

scale recognition program, there are small steps that can be taken to begin building a culture of acknowledgment as early as possible.

Discussion

The findings demonstrate a substantial gap in key job resources, specifically in mental health support, work-life balance, and the recognition process. These factors are also strongly correlated with all three burnout dimensions in accordance with MBI theory. Respondents confirmed that there is still a shortage in mental health initiatives, difficulties in maintaining work.

The analysis confirmed that unmet expectations serve as job demands, while expected benefits serve as job resources, which directly aligns with the JD-R model.

Conclusion

This research examined the expectation-reality gap experienced by Generation Z employees in Kazakhstan and its correlation with job burnout. Evidence was gathered from the survey responses of 230 respondents. The findings demonstrate that the largest misalignments occur in work-life balance, recognition processes, and mental-health-related support.

Burnout levels demonstrated strong associations with the identified gaps across all three dimensions of MBI-GS.

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Personalization: The Impact of AI on Customer Experience in E-Commerce

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Abstract

The rapid diffusion of digital technologies and the growth of e-commerce have made customer experience a critical source of competitive advantage. In this context, firms increasingly rely on AI-driven personalization to tailor products, content and offers to individual customers. This conference paper condenses a master's thesis that investigates how AI-driven personalization affects customer experience in e-commerce, with a particular focus on the tension between perceived benefits and privacy- and fairness-related risks. The study adopts an integrative literature review approach, synthesizing academic research and industry reports, and develops a conceptual framework that links AI-driven personalization to customer experience through dual benefit–risk pathways. On the benefit side, personalization can enhance perceived relevance and usefulness, reduce information overload and support higher satisfaction, engagement and loyalty. On the risk side, opaque, intrusive or overly aggressive personalization can trigger privacy concerns, reduce perceived fairness and erode trust, ultimately harming customer experience. The framework highlights the central role of trust as a mediator and identifies perceived control and transparency as key moderators that can shift the balance toward positive or negative outcomes. The paper concludes with implications for managers and researchers, emphasizing that sustainable value from AI-driven personalization requires not only technical sophistication but also responsible data practices, clear communication and user-centric governance.

Keywords: AI-driven personalization, customer experience, e-commerce, privacy, trust, Kazakhstan

Introduction

Digitalization has reshaped how customers search for information, compare alternatives and interact with firms, with e-commerce becoming a key arena for these changes. As platforms scale, they increasingly depend on data and artificial intelligence (AI) to manage vast numbers of interactions, making AI central to how online customer experience is designed and delivered.

Within this context, AI-driven personalization has become especially influential, but it also intensifies the personalization–privacy paradox. Customers value tailored, convenient experiences, yet feel uneasy about opaque data collection, potential manipulation and loss of control. In e-commerce—where personalization is closely tied to commercial goals such as conversion and basket size—this paradox is particularly acute: the same AI-driven mechanisms that enhance experience for some may appear intrusive or “creepy” to others. This thesis examines how AI-driven personalization affects customer experience in e-commerce and under what conditions it enhances rather than undermines it, drawing on customer experience research, technology acceptance, trust in e-commerce, privacy calculus, digital nudging and ethical AI.

Literature Review

Customer experience (CX) is a core concept in contemporary marketing, referring to customers' holistic cognitive, emotional and behavioural responses to interactions with a firm across the entire journey, rather than to isolated transactions. In digital and e-commerce settings, CX is shaped by usability, information quality, perceived security, personalization, service support and social influence. AI-driven systems increasingly mediate these elements by controlling search results, recommendations, prices, content and interaction flows, making AI a built-in component of CX design.

AI-driven personalization typically uses machine-learning algorithms and large-scale customer data to adapt content, recommendations, prices, interfaces and communications to individual users. Instead of a static catalogue, platforms dynamically adjust rankings, suggest add-ons, trigger discounts and personalise messages based on browsing history, purchases and contextual signals. Empirical research finds that such personalization can increase perceived relevance and decision quality, boosting satisfaction, purchase intention and loyalty. Recommender systems on platforms such as Netflix and Amazon illustrate how algorithmic curation drives a substantial share of consumption.

The Technology Acceptance Model (TAM) explains why customers may embrace these systems: perceived usefulness and ease of use drive attitudes and intentions. In e-commerce, personalization enhances perceived usefulness by reducing search effort and helping customers find suitable products quickly. However, positive outcomes also depend on trust. Trust in the platform's competence, benevolence and integrity reduce perceived risk in environments where product quality, seller reliability and data security are uncertain. Transparent, helpful personalization can strengthen trust, whereas opaque algorithms, extensive tracking and overly intimate recommendations can make customers feel surveilled or manipulated.

Privacy calculus theory adds that customers weigh the benefits of data disclosure (convenience, personalization) against its costs (loss of privacy, surveillance, potential misuse). This trade-off underpins the personalization–privacy paradox: customers both value personalization and worry about privacy. Transparency, perceived control and institutional trust can shift this calculus, increasing willingness to share data when customers understand how personalization works and can adjust or opt out.

Digital nudging and choice architecture further show how AI-personalized interfaces steer behaviour through the design of defaults, prompts, recommendation panels and cookie banners. AI makes these nudges adaptive, tailoring what is salient and easy to each user. While this can support better decisions, it raises ethical concerns when nudges primarily maximise short-term sales rather than customer welfare.

Finally, research on ethical AI and algorithmic bias stresses that personalization is not neutral. Systems trained on biased data or optimised solely for commercial metrics can reproduce inequalities, for instance via differential pricing, product offerings or service quality. Fears about filter bubbles, discrimination and exclusion compound privacy concerns and can erode trust. Regulatory frameworks such as the GDPR and emerging AI-

specific rules set boundaries for profiling and data use, but uneven enforcement means that customers' perceptions of control, risk and fairness continue to vary across AI-mediated e-commerce contexts.

Methodology

The underlying study adopts a conceptual research design based on an integrative literature review. Rather than collecting primary survey or interview data, the research synthesises existing academic and practitioner sources to develop a structured understanding of how AI-driven personalization influences customer experience in e-commerce. This design is appropriate because AI-driven personalization is a fast-moving, interdisciplinary topic that spans marketing, information systems, service management, data protection and ethics; an integrative review allows the researcher to bring together fragmented evidence and identify cross-cutting patterns.

Studies were included if they examined AI-based or advanced data-driven personalization mechanisms in digital commerce contexts and reported conceptual or empirical insights on at least one of the following: perceived relevance or usefulness, satisfaction, trust, loyalty, privacy risk, perceived intrusiveness, perceived control or transparency. Purely technical machine-learning papers without a customer perspective, studies focused solely on internal process efficiency, and work on offline personalization were excluded. Practitioner sources, such as reports from management consultancies and technology firms, were used to complement academic evidence where they provided systematic data on customer attitudes and business performance related to personalization.

For each included source, relevant information was extracted on the type of personalization studied, context, customer-experience outcomes and privacy- or trust-related variables. The review then grouped findings into themes aligned with a conceptual framework built around dual benefit–risk pathways. Although this design does not allow for statistical meta-analysis, it supports theory-building by revealing recurring patterns across diverse studies. Quality assessment considered publication outlets, methodological rigour and transparency of reporting. The conceptual nature of the study implies limitations: it depends on the availability and quality of existing work, and it cannot directly test causal relationships. Nonetheless, it offers a structured platform for future empirical research.

Findings

The integrative review supports a dual-pathway view of how AI-driven personalization affects customer experience in e-commerce. On the benefit pathway, personalization enhances perceived relevance and usefulness. By filtering large assortments and highlighting products that match customers' preferences and past behaviour, AI systems reduce information overload and search effort. Many customers report that they can find suitable products more quickly and feel that the platform “understands” them. These perceptions are associated with higher experience quality, satisfaction, engagement and loyalty intentions. In this pathway, personalization functions as a value-creating service that simplifies decisions and improves the overall journey.

On the risk pathway, however, the same mechanisms generate privacy concerns and feelings of intrusiveness. Customers often have limited visibility into what data are collected, how long they are stored, how they are combined with third-party data and how algorithms use them to make inferences. When recommendations become “too accurate” or when platforms appear to anticipate sensitive life events, customers may feel that the system knows more about them than they intended to reveal. Opaque consent mechanisms, default-on tracking and complex privacy settings reinforce perceptions of surveillance. These perceptions feed into broader concerns about fairness, discrimination and manipulation, especially when customers suspect that prices, offers or content may be individually tailored in ways that are not transparent.

Trust emerges as a central mediator between these benefit and risk forces. When customers trust a platform to handle their data responsibly and to act in their interests, they are more likely to focus on the functional benefits of personalization and to tolerate some level of data collection. Trust can be strengthened by clear communication, predictable behaviour, visible security measures and the absence of “dark patterns” in interfaces. Conversely, when trust is low, privacy concerns dominate: even technically accurate recommendations may be interpreted as evidence of surveillance or manipulation, and customers may respond with avoidance, reduced engagement or switching to competing providers.

The review also highlights the moderating role of perceived control and transparency. Customers who feel that they understand how personalization works and can meaningfully influence it—for example by adjusting recommendation settings, refusing certain types of tracking or easily opting out—tend to experience lower privacy risk and higher trust. Transparent explanations of why a particular recommendation are shown, coupled with simple privacy controls, help shift the privacy calculus towards acceptance. By contrast, when control is limited or purely symbolic, personalization is more likely to be experienced as something that is done to customers rather than with them, which exacerbates negative reactions.

Discussion

Taken together, the findings support a dual-pathway framework in which AI-driven personalization exerts simultaneous positive and negative pressures on customer experience. On the positive side, personalization functions as a technology-enabled service that enhances relevance and convenience, consistent with technology acceptance and customer-experience theories. On the negative side, it creates new forms of perceived surveillance, loss of control and potential unfairness that can erode trust. Whether AI-driven personalization ultimately enhances or harms customer experience depends on how these pathways balance out in a given context.

Theoretically, the framework contributes by integrating customer experience, privacy calculus and digital nudging perspectives into a single model of AI-driven personalization in e-commerce. It explicitly recognises that personalization is not only a technical function but also a form of adaptive choice architecture, which can steer behaviour in subtle ways. By emphasizing trust as a mediator and perceived control and transparency as moderators,

the framework connects micro-level perceptions to broader debates on ethical AI, data protection and algorithmic governance.

Managerially, the results underscore that “more personalization” is not automatically better. Firms that focus exclusively on short-term conversion metrics risk over-optimising personalization in ways that feel intrusive, trigger privacy concerns and damage long-term relationships. Responsible personalization requires at least three design principles. First, transparency: customers should be able to see, in plain language, what data are collected, why they are collected and how they influence recommendations and offers. Second, meaningful control: privacy and preference settings should be easy to find, understand and adjust, with real consequences for data flows and personalization intensity. Third, fairness and inclusion: firms should monitor personalization outcomes for potential disparate impacts on different segments and adjust algorithms and governance processes accordingly.

For firms in emerging markets such as Kazakhstan, these principles are particularly important. Rapid adoption of marketplace platforms and mobile commerce can generate strong pressure to import global personalization practices without fully considering local expectations, regulatory environments or digital literacy levels. Building trust in AI-driven personalization may therefore require proactive communication, culturally sensitive design and collaboration with regulators and consumer-protection bodies. At the same time, emerging markets offer opportunities to leapfrog legacy systems and embed responsible data practices from the outset.

Conclusion

The analysis suggests that AI-driven personalization can indeed be a powerful driver of value for both customers and firms, but only when embedded in responsible data practices and user-centric governance. For researchers, the framework points to the need for empirical studies that test the proposed relationships in specific e-commerce contexts, including emerging markets such as Kazakhstan, and that examine long-term effects on trust and loyalty. For managers, the key implication is that sustainable personalization strategies must balance technical sophistication with transparency, control and fairness. In doing so, firms can move beyond the simple promise of “relevance” towards AI-mediated customer experiences that are both effective and trustworthy.

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Generation Z Consumer Behavior: Motives and Preferences

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Abstract

This study examines how social media alcohol content affects gen Z alcohol intake. The study explores the relationship between online influencers, brands, friends, and peers, as well as personal values such as attitudes toward health, culture, and religion, and their consumer choices and preferences. A quantitative method, namely a questionnaire, was chosen for data collection. Using an online questionnaire, we collected data from young people aged 21-27. The results demonstrate a high concentration of alcohol-related content, and that health and social norms are significant factors in shaping their decisions. It was also found that health-conscious individuals are less influenced by social media on their alcohol consumption. The study would be useful for marketers, healthcare professionals, and educational campaigners.

Keywords: Generation Z, Kazakhstan, alcohol, social networks, health, consumer behavior

Introduction

1.1 Overview of Generation Z's Drinking Habits

Zoomers, who were born between 1997 and 2012, don't drink alcohol the same way as prior generations did. Studies show that Generation Z drinks less alcohol in many countries and is more likely to choose not to drink at all or to drink in moderation (Saad, 2023). For example, Time.com made a research where they found that over the past two decades, the percentage of young people under 35 who drink alcohol has decreased from 72% to 62%(Burga, 2025). Similarly, an Australian longitudinal study found that even when demographic factors are taken into account, Generation Z drinks nearly 20 times less alcohol than baby boomers, according to data from Di Censo. These data show a generational differences: what previously was normal for young adults is no longer a dominant factor, as the younger generation rethinks the concepts of socializing and live with less alcohol consumption. Zoomers drinking habits shift the culture of drinking to one that puts greater emphasis on health and balance (Rand, 2025).

Significance: Starting from the perspective of health as an important human issue today. The relationship between Gen Z, alcohol consumption and social media can be starting point to prevent future problems. If we will find that it is the fact that interaction with alcohol- related content increases the intention to consume alcohol among gen z, the authorities can develop preventive measures to avoid potential harm. If the analysis shows that health-conscious youth are less influenced by social media, this will highlight the importance of preventive health programs by schools or government. Methods for circumventing the influence of social media will help the younger generation intelligently assess the benefits and harms of alcohol in their lives. Teaching teenagers how the glamorous life of Instagram, represented by parties and the cult of alcohol, can influence them subconsciously and

help them make better choices. The study could also have implications for online content regulation. If social media is found to have a significant impact on young people and their desire to drink, this could lead to stricter laws on online alcohol advertising. Kazakhstan has long banned traditional alcohol promotion on TV, outdoor advertising, and in the media, which is precisely relevant to this topic. However, Instagram, TikTok, and other social media platforms have fewer restrictions and regulations.

1.2 Consumer Behavior Theories

To understand how and why people buy, it's important to look at how they behave as consumers. Numerous scholars have proposed theories to elucidate customer purchasing decisions and product perceptions. This chapter talks about the core ideas behind making buying decisions and how they relate to Generation Z. These hypotheses elucidate Gen Z's choices and the distinctions in their drinking behaviors compared to previous generations.

Generation Z is distinguished by the prominent role of digital social influence in their lives and certain specific value preferences (such as authenticity and health) that influence their consumer choices. By applying consumer behavior theories to this generation, we can understand why, for example, Generation Z might choose a sober lifestyle, support environmentally sustainable products, or buy viral products from TikTok en masse. For each decision, key psychological elements can be used to help clarify these theories. Students, marketers, health educators, and anybody else who wants to work well with Generation Z could find it helpful to learn about these things from an academic point of view.

Literature Review

The late 1990s and early 2000s were the years of Gen Z. They were raised in a digital world. They are health-conscious and care about social issues, thus they utilize social media a lot. Generation Z drinks alcohol in ways that are substantially different from how previous generations did. Public health and policy need to know this. There is more concern over alcohol-related content on various platforms. Recent studies show that Generation Z, who are permitted to consume alcohol, drink less than older men. A survey conducted in Kazakhstan in 2021–2022 found that approximately 24 percent of participants had consumed alcoholic beverages in the past month. Adults consumed alcohol significantly more often than young people under the age of 24. Alcohol consumption in this age group is 40 percent lower than among adults, Ibraeva said. Young people also consume alcohol in significant quantities more often than adults. All of these data may indicate a shift in trends in Kazakhstan, where today's youth consume alcohol much less frequently than is commonly believed. The study also showed that ethnicity and region of origin significantly influence eating habits. Alcohol consumption is higher among people of Slavic origin than among ethnic Kazakhs. In addition, alcohol consumption was more popular and widespread in the northern regions and large cities of Kazakhstan. Kazakhstan is a multi-ethnic society that preserves its traditional Muslim heritage and disapproves of alcohol consumption. In addition, Russia and Europe are examples of normal alcohol consumption. This context may explain the tension within the country to some extent. However, the general trend

shows that global cases correlate with alcohol consumption in Kazakhstan. There is also a risk that Kazakh dentists with access to social media may influence the same health trends as their colleagues in other countries.

In summary, it can be concluded that the Zoomers generation around the world, including in Kazakhstan, now drinks less than previous generations due to changes in their attitudes, values, and awareness of the importance of health and well-being. However, alcohol consumption remains a serious public health problem, as it has not disappeared. This makes us think about how social media affects people who don't drink and whether healthy people can avoid the consequences of drinking. The next parts of this essay will look at social media, the media, and how a health-focused strategy may help people drink less.

Study Design and Methodology

In the social sciences, research methodologies are usually either quantitative (deductive), qualitative (inductive), or a mix of the two. Quantitative methods look at objective notions by looking at how quantifiable components are related to each other. This makes it possible to do statistical analysis and make broad generalizations. The qualitative method, on the other hand, uses open-ended questions to get a lot of background about what people think. Mixed methods bring together the best parts of both systems. There are good and bad things about each strategy.

Quantitative research is useful for testing specific ideas, using large samples, and making broad statements about a group of people. But it might miss the big picture and is only as good as the tools it uses to measure.

3.1 Data Collection

Data was gathered through structured internet surveys. Dillman, Smyth, and Christian (2014) say that online surveys work well for young, tech-savvy groups and those who live far apart. The questionnaire comprised Likert scale and categorical inquiries regarding customer behavior (Bryman & Bell, 2015). Certain items, including those concerning why people drink, were taken from well-known scales to see if the questionnaire was doing what it was designed to do. To make sure it was more reliable, I first tested the questionnaire on a small group of Gen Z people. This pilot test demonstrated if the questions worked. Bryman and Bell (2015) suggest doing pilot tests to enhance the phrasing and organization of questions. The pilot test showed that several terms were confusing, therefore they were made clearer. This step also showed that the tool could be used outside the immediate study. A few specialists in marketing and social psychology reviewed the questionnaire as well, checking whether the wording was understandable and whether the items made sense (Saunders et al., 2019). After their comments and a few adjustments, the final version of the survey was shared through academic contacts and different social-media channels so it could reach a wider group of Gen Z adults. Using more than one platform helped bring in a more mixed group of participants and also increased the number of replies (Fowler, 2014).

During the four-week data-collection period, several hundred responses were received.

3.2 Sample

The study population was all Generation Z individuals (born between 1997 and 2012) who consume alcohol. The researcher was able to reach Generation Z college students in their city. Neuman (2014) recommends selecting a manageable and accessible group to enhance the study's feasibility and objectives. This group was a good choice for studying alcohol motivation because of their age and education.

We used non-probability sampling. Convenience sampling was used to swiftly get answers from a lot of people in Generation Z (Etikan, Musa, & Alkassim, 2016). Convenient sampling is helpful, but it makes it hard to use the results for all of Generation Z. But it is widely employed in academic studies where it is hard to choose randomly (Bryman & Bell, 2015). To reduce systematic sample error, students from various departments and courses were incorporated to enhance representation. This offered the planned research a sample size that was big enough to be statistically significant.

3.3 Data Analysis

After the survey responses came in, the data was checked and put in order. This meant that the surveys had to be thorough and consistent, with no duplicate or ambiguous answers. Then I figured out the average values and the response rates for the questionnaires. This highlighted how Generation Z feels about alcohol, how often they read posts about alcohol on social media, and how they think about their health goals.

To uncover patterns in the data, I looked at how strong or weak the relationships were between groups of survey questions. This helped me figure out if the study backed up what I thought before I did it. I also checked the reliability of the questionnaire pieces by seeing if questions about the same topic had the same answers. If participants often responded to several health inquiries, a portion of the survey was effective.

I wrote the main findings in a clear way that stayed loyal to the research. The goal was more than just displaying how well Gen Z did in school. I wanted to see if what people read online and how they feel about their health affects how much they drink.

Findings and Discussion

The survey results showed patterns for both hypotheses, although nothing was perfect or the same.

H1: Gen Z participants asserted that they contemplate drinking more when they come across alcohol-related content. Exposure continued to be a significant predictor in the regression ($\beta \approx .30$, $p < .01$). H1 worked for most people, but not for everyone.

H2: The second hypothesis gave in comparable results. When the posts came from influencers that people tend to trust or see as “serious,” the intentions to drink were higher compared to posts shared by regular peers or friends. In other words, the person who shares the post seems to matter, and in some situations, it even feels more important than the message itself. For example, in our model, the influence of an authoritative influencer ($\beta \approx 0.35$, $p < 0.001$) exceeded that of a peer ($\beta \approx 0.20$, $p < 0.05$). *H3:* Health orientation mitigated the effect of exposure. The

interaction between exposure and health consciousness was significant ($\beta_{\text{interaction}} \approx -0.15$, $p < 0.05$), indicating that the influence of alcohol images on intention was attenuated among those who had a strong health orientation. Thus, higher social media exposure predicted higher alcohol intention, influencer credibility had a stronger effect than peer credibility, and health-conscious respondents were less susceptible to the effect.

These results are consistent with our hypotheses. First, we saw that Gen Z respondents who often came across alcohol-related posts on social media tended to report stronger intentions to drink.

Conclusion

This study found that Generation Z respondents' propensity to drink alcohol is positively correlated with alcohol-related content on social media. Our study confirms earlier research that regular exposure to alcohol content online increases young adults' propensity to consume alcohol (Moreno, D'Engelo, & Whitehill, 2016). Respondents' health orientation mitigated the relationship. Alcohol use is lower in those with high health-conscious factors. People who care about their health are less affected by alcohol ads. These main findings demonstrate Gen Z's health consciousness already shapes their alcohol-related media response: Health-conscious respondents were less likely to increase their alcohol consumption after viewing alcohol posts than their less health-conscious peers.

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Earnings Management and Firm Performance (Based on Telecommunications Companies Listed in KASE)

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Abstract

This study explores whether the earnings management influences firm performance. Discretionary accruals and return on assets are used as their proxies respectively. They are calculated based on figures taken from financial reports for the period between 2015 and 2024 of Kazakhstani telecommunications companies found in Kazakhstan Stock Exchange. Modified Jones Model was applied to calculate discretionary accruals, while the regression analysis was conducted using Panel-Corrected Standard Errors (PCSE) to identify the impact DA has on ROA. The results revealed that the impact is statistically present, however, only a small proportion of the model is explained by the variation in the dependent variable, suggesting that other firm-specific or external factors outside the scope of the model may be more impactful.

Keywords: earnings management, discretionary accruals, firm performance, regression analysis

Introduction

Detecting earnings management is crucial for interested parties who wants to be aware of the real value a company has in the face of possible earnings management involved in the process of preparing financial reports (Huang et. al., 2021). The question is whether such earnings management affects the firm performance in certain environment. This research study is aimed at analyzing how earnings management impacts on firm performance within an emerging market context, using Kazakhstan's listed companies as a case study. To achieve this, a regression analysis of figures taken financial reports of Kazakhstani telecommunications companies for the period between 2015 and 2025 will help to reveal the impact of discretionary accruals on return on assets, which are used to indicate earnings management level and firm performance respectively. This paper will firstly provide an overview of what earlier research studies have found about the relationships between earnings management and firm performance, and then will examine data collected for the purposes of this study.

Literature Review

Earnings management is identified as decisions making opportunity that arises due to the availability of a discretion in accounting that managers can exploit, which means that the earnings can be manipulated depending on how managers decide to report them (O'callaghan et al., 2018). Therefore, identifying earnings manipulation seems to be important in the light of concerns that can come up as to how it can affect companies in the long run (Huang et al., 2021).

Different reasons were identified to explain why the need in such manipulation can arise. Mensah and Boachie (2024) state that many researchers agree on certain reasons why companies can engage in earnings

management, some of them being meeting certain targets and expectations, increasing possible bonus payments, and securing jobs.

There were several models developed to measure earnings management (Gajdosikova et al., 2022). Among them Jones (1991) focused on detecting earnings management based on discretionary accruals. This method later became a foundation for a widely used accounting research method called Modified Jones Model (Dechow et al., 1995). Effectiveness of it has also been questioned by different research studies (McNichols, 2000; Lee et al., 2006). Kothari et al. (2005), for example, argued that while detecting earnings management through Modified Jones Model some accruals can be mistakenly attributed to earnings manipulation, while being normal performance related accruals. Their modification been proven to produce more accurate results than Modified Jones Model itself can provide (Gajdosikova et al, 2022).

Based on the above it is clear that discretionary accruals (DA) indicates earnings management in quantitative research studies. Those among them that study the impact of DA on firm performance indicate the latter with profitability or performance related indicators, most of them preferring to use ROA in their research (Shoaib & Siddiqui, 2022; Mamo & Çela, 2024; Mensah & Boachie, 2024; Alabdullah & Zubon, 2023). They consider ROA as a clear and comprehensive measure indicating the resources related efficiency of a company in generating profit.

There are also several control variables that are commonly used in similar research.

Firm size is a common control variable since it is considered as a significant factor affecting firm performance (Mensah & Boachie, 2024; Alsulami, 2024; Thi, 2025). According to Dao and Le (2022) firm size is considered important because companies perform differently depending on their size.

Leverage is also a common control variable when assessing the profitability of a company (Mensah & Boachie, 2024; Alsulami, 2024; Thi, 2025). Even though leverage involves certain risks to companies it is also referred to as having positive impact on firm performance (Dao & Le, 2022). Mamo and Çela (2024) also agree that leverage provide useful information about the risks companies are facing.

In addition, growth is often used in research as a control variable when analyzing earnings management and firm performance, since rapidly growing firms may face greater pressure to report favorable results (Mensah & Boachie, 2024; Herciu & Șerban, 2018).

Methodology

Audited financial statements of 6 listed telecommunications companies for the period between 2015 and 2024 were taken from the official website of Kazakhstan Stock Exchange (KASE, 2025). The selection of this data was primarily determined by its availability.

The research is conducted within the framework of Signaling theory, which according to Mensah and Boachie (2024) suggests that in the context of accounting and finance companies send signals about the firm's performance to outsiders (like investors or regulators) through their financial disclosures (Mensah & Boachie,

2024). For example, while some companies try to provide positive image of their company (Mamo & Çela, 2024), others may aim to give negative impression about their financial performance (Jones, 1991). In our case, listed companies can be viewed as the parties seeking, for example, investors and signaling to them that they can be a good investment material.

Variables chosen for the regression analysis are based on the previously conducted research studies on related topics.

The following model was developed for the estimation:

$$\text{Return on assets} = \beta_0 + \beta_1 \text{discretionaryaccruals} + \beta_2 \text{firm size} + \beta_3 \text{leverage} + \beta_4 \text{sales growth} + \beta_5 \text{terrestrial and marine protected areas} + \beta_6 \text{individuals using the internet} + \beta_7 \text{regulatory quality} + \beta_8 \text{timedummy2020} + \beta_9 \text{timedummy2021} + \beta_{10} \text{timedummy2022} + \varepsilon$$

or in short:

$$ROA = \beta_0 + \beta_1 DA + \beta_2 Size + \beta_3 Lev + \beta_4 Growth + \beta_5 E + \beta_6 S + \beta_7 G + \beta_8 TD2020 + \beta_9 TD2021 + \beta_{10} TD2022 + \varepsilon$$

where:

- ROA is dependent variable;
- β_0 – is the constant parameter;
- β_{1-10} – are independent variables;
- ε – error term.

Return on assets (dependent variable): used as a profitability indicator or a proxy for firm performance. It is represented as a number, and not being converted into percentages.

Discretionary accruals: indicate earnings management and are calculated using Modified Jones Model with Kothari (2025) modification using the following formula (1):

$$1) TA_t - A_{t-1} = \beta_0 + \beta_1 A_{t-1} + \beta_2 \Delta REV_t - \Delta REC_{t-1} + \beta_3 PPE_{t-1} + \beta_4 ROA_{t-1} + \varepsilon_t$$

here:

- t – current year;
- $t - 1$ – indicates previous year;
- TA – indicates total accruals are calculated using cash flow method as NI minus CFO;
- A – indicates total assets;
- ΔREV – indicates change in operating revenue;
- ΔREC – indicates change in receivables;
- PPE – indicates balance of property, plant and equipment;
- ROA – Kothari (2005) modification is calculated as current year's net income lagged by previous year's total assets;
- ε – error term.

β_{1-4} – the coefficients are calculated using OLS regression for each year separately using the following formula (2):

$$2) NDA_t = \beta_1 A_{t-1} + \beta_2 \Delta REV_t - \Delta RE C_{t-1} + \beta_3 PP E_{t-1} + \beta_4 RO A_{t-1}$$

here: NDA – indicates non-discretionary accruals.

Discretionary accruals (DA) can be calculated by subtracting non-discretionary accruals (NDA) from total accruals (TA) using the following formula (3):

$$3) DA = TA_{t-1} - NDA$$

Positive DA suggests possible earning management with and upward trend (by increasing earnings), while negative DA suggests the downward trend of reducing earnings. Closer to 0 (zero) means less earnings management, and very little percentage can even indicate accruals of normal business operations.

Firm size: is represented by total assets of companies.

Leverage: represents how much debt a company uses to finance its assets. It is calculated using debt ratio.

Sales growth: represented by the increase (or decrease) in the revenue of a company compared to the previous period. It is calculated as change in the trade receivables divided by trade receivables of the previous year.

Percentages of Terrestrial and marine protected areas (E), Individuals using the Internet (S) and Regulatory quality (G): used as ESG indicators (Environment, Social and Governance respectively) to estimate how ESG factors influence firm performance. The data is taken from World Bank data base (2025) and chosen based on the availability and close connection to the telecommunications industry.

Time dummies for 2020, 2021 and 2022: used to control COVID-19 related effects.

Overall, this research aims to find out whether earnings management influences firm performance. To achieve this aim, this study examines whether Return on Assets (ROA) is affected by Discretionary Accruals (DA). The formulated hypotheses are:

H₀ (null hypothesis) - DA does not have significant impact on ROA;

H₁ (alternative hypothesis) – DA has significant impact on ROA.

The following section presents and discusses the results obtained from testing the proposed hypotheses.

Findings

Once all variables were confirmed to be stationary, further tests were conducted to test for multicollinearity, autocorrelation, and heteroscedasticity:

- test for Multicollinearity revealed that variables are not correlated;
- Wooldridge test identified Autocorrelation;
- no Heteroscedasticity was identified.

Based on the results of the tests above, Panel-Corrected Standard Errors (PCSE) model helps to analyze the relationship between the variables. All computations were performed using STATA (version 15).

The data results reveal that we need to reject null hypotheses for control variable, including firm size, leverage, and sales growth, since their P-values are more than all levels of significance. Even though the P-value for size is 0,13, which suggests that the size may have certain effect on firm performance results, it is still not significant. All in all, in case of control variables it can be concluded that they do not have an influence on ROA.

Similarly, regulatory quality indicating the governance (G) factor among ESG related variables has P-value of more than all levels of significance. This result suggests that regulatory quality does not effect firm performance contrary to the assumptions that it should have a certain effect among firms operating in emerging markets such as Kazakhstan, since they often have less stringent regulation, limited enforcement, and evolving accounting standards. Such environment usually creates more room for managers to manipulate earnings to meet targets, attract investors, or secure financing, which should have affected firm performance as well. Due to the lack of evidence suggesting that regulatory control influences firm performance based on these results, it is suggested to test the relationship between regulatory control and discretionary accruals to determine whether the former influences the latter.

In addition, time dummy variables also have P-value of more than all levels of significance indicating that, there were no major time related effect on ROA during the period between 2020 and 2022 relative to the base year.

On the other hand, it appears that discretionary accruals (DA) and ESG factors for environment (terrestrial and marine protected areas) and social (S) aspect (individuals using the Internet) have a statistically significant effect on return on asset (ROA): DA at 5%, environment (E) at 10% and social (S) at 1% of the level of significance.

Discussion

The above results suggest that in case of discreassionary accruals (DA) and percentage of terrestrial and marine protected areas indicating the environmental (E) factor among ESG related variables, provided that everything else remains constant a one-unit increase in DA and E will result in 0,1026-unit and 0,6318-unit increase in ROA respectively. On the contrary, based on the results of the regression analysis, holding everything else constant a one-unit increase in percentage of individuals using the Internet indicating the social (S) factor among ESG related variables will result in 0,5292-unit decrease in ROA.

R-squared confirms that 30.81% of the changes in dependent variable can be connected to the changes in independent variables. Remaining 69,19% represents error term which also has positive effect on ROA.

Looking at Wald Chi² (10) statistic of 27.09 with a p-value of 0.0025 it can be seen that the model is statistically significant at 1%, which suggests that explanatory variables, when considered together, have a certain influence on firm performance, while the remaining variation depend on other firm-specific and/or external factors, that are not captured in the model.

Conclusion

This paper examined whether the earnings management practices affect firm performance of Kazakhstani telecommunications companies for the period between 2015 and 2024. Modified Jones Model helps to calculate discretionary accruals, that indicate earnings management, while panel data model is applied to see if DA affects return on assets of chosen firms. The results revealed that firm performance is measurably affected by earnings management. Based on the results of the study it is advised for the investors to be aware of the effects of possible earnings management practices in Kazakhstan and for the managers to champion transparent and reliable reporting practices. In addition, due to the limitations of this study, further research is required for improvement and further exploration of the issue.

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Artificial Intelligence and Managerial Decision-Making in Emerging Markets: Evidence and Research Design for SMEs in Kazakhstan

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Abstract

This study examines how small and medium enterprise (SME) managers in Kazakhstan use artificial intelligence (AI) tools in final decision-making. Based on prior research, three predictors were analyzed: frequency of AI use, decision type (operational vs strategic), and trust in AI. An online survey of 126 SME managers assessed AI's perceived influence on decisions. Descriptive analysis showed moderate AI use (mean frequency \approx 2.87/5) and trust (mean \approx 3.05/5), with AI exerting a modest impact (mean influence \approx 2.71). Correlation and regression results reveal that trust in AI is the strongest determinant of its influence ($r\approx$ 0.76, $\beta\approx$ 0.86, $p<$ 0.001). Frequency of use has a smaller effect, and decision type is insignificant. Thus, building managerial trust is crucial for deeper AI integration. These findings highlight that beyond technology, human factors shape the success of AI-enabled decision processes in emerging-market SMEs.

Keywords: artificial intelligence, management decisions, small and medium-sized enterprises, Kazakhstan, digital transformation

Introduction

Emerging economies lag in AI adoption: OECD (2023) reports only about 33% of SMEs use any AI tools. SMEs often struggle not due to lack of interest but to limited resources, inadequate infrastructure, and insufficient guidance. In fact, AI adoption is uneven globally; researchers note an urgent need to study developing regions, since most adoption occurs in wealthy countries. Kazakhstan exemplifies this tension: the government's 2024–2029 AI Development Concept shows a national commitment to AI, yet many SMEs still face implementation constraints.

This study addresses the gap by investigating how AI use affects managerial decisions in Kazakh SMEs. It focuses on three independent variables (X): (1) AI usage frequency, (2) type of decision supported (operational vs. strategic), and (3) trust in AI recommendations. The dependent variable (Y) is the perceived influence of AI on final decisions. We hypothesize that trust in AI is the key factor driving AI's impact, with frequency and decision type playing secondary roles. To test this, we conducted an online survey of managers and owners of SMEs across various sectors in Kazakhstan, aiming to quantify relationships among these variables. The results will inform both theory and practice on human–AI collaboration in emerging-market firms.

Literature Review

Management research has long examined human decision models (e.g. rational vs. garbage-can models) and recently emphasizes decision intelligence – integrating algorithmic forecasts with managerial judgement. In

this view, AI tools provide data-driven suggestions that leaders interpret within their business context. However, most studies focus on large firms in developed markets. For SMEs, studies report major adoption gaps: for example, only about one-fourth of European SMEs had attempted AI by 2024, and AI-based solutions are often too complex or poorly adapted to SMEs' needs. Moreover, global reviews (e.g. Yesuf, 2025) highlight that developing-country SMEs face unique challenges and are under-researched. Concurrently, widespread personal use of generative AI tools (e.g. ~75% of knowledge workers globally) suggests a rising digital maturity among employees, hinting at potential for business adoption.

In sum, prior work suggests that while AI has clear operational benefits, its managerial impact depends on human factors. In particular, trust is repeatedly noted as critical: people will only incorporate AI advice if they believe in its reliability. This study extends the literature by empirically testing how SMEs' usage patterns and trust jointly influence AI's role in decisions.

Research Methodology and Data Collection Tool

3.1 Participants

We collected survey data from 126 managers and business owners of SMEs in Kazakhstan. Participants represented diverse sectors (the largest group in retail sales, ~27%) and had varying demographics and experience. Over half were male (57%) and 41% female. Work experience ranged up to 20 years, with many early-career professionals. By covering multiple industries, the sample provides cross-sector validity for Kazakh SMEs.

3.2 Procedure

Data were gathered via an anonymous online questionnaire (Google Forms), distributed by email and social media. This allowed broad geographic reach and ease of participation. All respondents answered the same standardized questions, enabling aggregation for quantitative analysis. The survey included items on AI usage frequency, decision type supported (operational or strategic), trust in AI recommendations (0–5 scale), and perceived influence of AI on final decisions (0–5 scale). The focus on closed-ended, scaled questions ensured consistency and minimized missing data.

Results

Descriptive statistics show moderate AI use among Kazakh SME managers. The mean frequency score was 2.87 (SD = 1.44 on a 0–5 scale), indicating regular but not constant use. Decision support tends to be operational: the average coded "type of decision" was only 0.58, reflecting that most AI use focused on routine tasks rather than strategic ones. Trust in AI was above midpoint (M=3.05, SD=0.95), suggesting general confidence in AI's suggestions. Importantly, the influence of AI on decisions had mean 2.71 (SD=1.15). Almost half of respondents rated AI's influence as 3/5, and about 21% rated it 4 or 5. This indicates that AI is perceived as a significant but not

dominant factor in decision-making. Overall, AI is already integrated as an auxiliary aid, and with moderate usage and trust levels, it can grow further in SMEs.

The correlation matrix (Table below) highlights relationships among the variables: trust in AI correlates strongly with AI influence ($r \approx 0.76$, $p < 0.001$), while usage frequency has a moderate positive relation ($r \approx 0.43$, $p < 0.01$). Decision type shows minimal correlations ($r \approx 0.19$ with influence). Notably, managers who use AI more often also tend to trust it more ($r \approx 0.44$), suggesting a reinforcing cycle. These results confirm that trust is the key link: higher trust goes hand in hand with a larger role for AI in decisions.

Multiple regression analysis further clarifies these effects. A model predicting AI's influence from all three predictors is highly significant ($F = 59.05$, $p < 0.001$) with $R^2 \approx 0.59$. In this model, trust in AI has the largest coefficient ($\beta \approx 0.86$, $p < 0.001$). In practical terms, a one-point increase in trust raises AI's influence score by nearly 0.9 points on average. In contrast, frequency of use has a small positive effect ($\beta \approx 0.09$) that is only marginally significant ($p \approx 0.07$), and decision type has no significant effect ($\beta \approx -0.04$, $p > 0.7$). Thus, when all factors are considered, trust overwhelmingly drives AI's impact.

A simple regression using only trust as predictor yields an almost identical picture: trust alone explains about 58% of the variance ($R^2 = 0.58$) with a slope of ~ 0.92 . The scatterplot of trust vs. influence (not shown) confirms a tight positive trend. In summary, both bivariate and multivariate analyses show that higher trust predicts higher AI influence, whereas usage frequency and decision scope play much smaller roles.

Discussion

These findings support the hypothesis: managerial trust in AI is the central determinant of how much AI shapes decisions in SMEs. We observed a strong linear relationship between trust and influence, and regression coefficients above 0.8, indicating that trust alone accounts for most of the explained variation. Usage frequency contributes only marginally, and whether AI is used for operational or strategic tasks has negligible effect. In practical terms, this means that even if a manager uses AI tools often, those tools will influence decisions substantially only if the manager trusts them. AI thus functions not merely as a technical support, but as a collaborator whose input is weighted by human confidence.

These results align with models of human–AI collaboration that emphasize socio-psychological factors. They suggest that traditional decision-making theories (which focus on information and rational analysis) must be extended to include human attitudes toward algorithms. Trust emerges as a foundational element: if managers do not trust AI, it will not inform their satisficing or analytical processes. This complements recent literature on decision intelligence, which posits that effective AI use requires interpretability and user buy-in. Our study contributes by providing quantitative evidence from a developing market context, reinforcing the view that organizational psychology is as important as technology in AI adoption.

For SME leaders and policy-makers, the message is clear: to harness AI's benefits, invest in building trust. This could involve transparent communication about how AI tools work, hands-on training to demystify algorithms, and pilot projects that let managers experience AI success on low-risk problems. Even well-designed AI tools will have little impact if end users remain skeptical. By contrast, fostering trust (through explanation, reliability testing, and involvement) can amplify AI's influence on decisions. For example, as one manager experiences useful AI suggestions, their trust and reliance may grow, creating a virtuous cycle. Thus, strategies for digital transformation in SMEs should prioritize the human side of AI: clear interfaces, user feedback loops, and reassurance that AI is a partner rather than a black box.

Regarding the limitations there are also some caveats. First, the linear analyses assume monotonic relationships, but attitudes toward AI may exhibit non-linear effects (e.g. trust below a threshold might have little influence until it passes a tipping point). Our models explain ~58–59% of variance, leaving 41–42% unexplained, which could involve factors like digital maturity, AI tool quality, organizational culture, or individual risk preferences. Second, the study captures a snapshot in time (2025) in Kazakhstan; rapid changes in AI tools, government initiatives, or market shifts could alter these dynamics. Third, the findings reflect the Kazakh context, where cultural factors (mix of Western/Eastern business norms, high value on personal trust) may amplify the role of trust compared to other settings. Generalizing beyond similar emerging markets should be done cautiously.

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Enhancing Transparency and Efficiency in Purchasing Processes through Blockchain Technology

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Abstract

In the contemporary competitive landscape, the efficiency and transparency of purchasing processes are pivotal for organisational success. Traditional procurement systems are often having such issues, like inefficiency, opacity, and vulnerability to fraud, which in turn will lead to increased operational costs and supply chain disruptions. This study investigates the potential of blockchain technology to mitigate these challenges. A quantitative research design was employed, utilizing a survey distributed to procurement professionals, blockchain experts, and end-users. The data analysis, incorporating regression and ANOVA, revealed that blockchain adoption is positively associated with perceived improvements in process efficiency and transparency, largely attributed to the technology's immutable ledger and smart contract automation. However, the statistical significance of these improvements was moderate, highlighting that technology alone is not a panacea. Significant implementation barriers were identified, including integration complexities with legacy systems, a shortage of technical expertise, and internal resistance to change. The study concludes that blockchain holds substantial promise for transforming procurement by reducing transaction costs, mitigating agency problems, and strengthening supply chain networks. For successful adoption, we recommend a phased implementation strategy, supported by continuous technical training and robust organizational change management. The findings offer strategic insights for practitioners aiming to leverage blockchain for superior procurement outcomes.

Keywords: blockchain technology, procurement, transparency, efficiency, transaction cost theory, agency theory, supply chain management

Introduction

The procurement function serves as a critical artery for organizational health, directly impacting cost structures, operational fluidity, and ultimately, competitive advantage. Despite its strategic importance, conventional purchasing processes frequently suffer from profound shortcomings. Manual workflows, disjointed information systems, and a lack of real-time visibility create fertile ground for inefficiencies, errors, and fraudulent activities (Kakwezi & Nyeko, 2007). These issues not only inflate operational costs but also disrupt production schedules and erode stakeholder trust (Wang et al., 2021). In an era of demanding agility and accountability, these legacy systems represent a significant liability.

Blockchain technology, initially the backbone of cryptocurrencies, presents a paradigm-shifting solution to these enduring problems. Its core characteristics—decentralization, immutability, and transparency—offer a novel approach to recording and verifying transactions. By providing a shared, tamper-proof ledger visible to all

authorized participants, blockchain can potentially eliminate information asymmetry, automate contractual obligations via smart contracts, and create an unforgeable audit trail (Viswanathan & Raghavan, 2025).

The primary objective of this research is to empirically examine how blockchain technology can be utilized to enhance transparency and efficiency in business purchasing processes. This paper moves beyond theoretical postulation to present and discuss quantitative findings on blockchain's real-world impact, the challenges encountered during its implementation, and the practical strategies required for its successful integration into modern procurement functions.

State-of-the-Art Literature Review

A blockchain is a distributed digital ledger that records transactions in chronologically linked, cryptographically secured blocks. This structure ensures that once a transaction is recorded, it cannot be altered retroactively without altering all subsequent blocks, a feature that guarantees data integrity (Becher, 2025). In procurement, this immutability directly counters data tampering and fraud (Britt, 2024). Furthermore, smart contracts—self-executing agreements with terms written in code—can automate key procurement steps such as purchase order issuance, delivery verification, and payment processing, thereby reducing manual intervention, accelerating cycle times, and minimizing human error (Bai et al., 2024).

The potential of blockchain in procurement can be understood through several robust theoretical lenses. Firstly, Transaction Cost Theory (TCT), which states that economic exchanges involve costs related to negotiating, monitoring, and enforcing contracts. Blockchain reduces these costs dramatically by eliminating or reducing the need for intermediaries and by creating a trusted environment through its immutable record. Smart contracts automate enforcement, thereby lowering administrative overhead and the costs associated with disputes (Ketokivi & Mahoney, 2017).

Next, Agency Theory, which addresses the principal-agent problem, where one party (the agent) may not always act in the best interests of another (the principal), due to information asymmetry. Blockchain mitigates this by providing both principals and agents with access to the same immutable data in near real-time. This transparency reduces opportunities for opportunistic behavior and aligns interests more closely, thereby lowering agency costs (Jensen & Meckling, 1976).

Lastly, Network Perspective Theory, which views organizations as nodes within a broader network, where value is derived from connectivity and information flow. Blockchain enhances this network by providing a single, shared source of truth across the entire supply chain. It improves coordination and collaboration among all participants—suppliers, manufacturers, and distributors—by enabling secure and transparent data sharing, thus building a more resilient and responsive supply network (Pachucki et al., 2020).

Despite the promising synergy between blockchain and these theoretical frameworks, the literature reveals critical gaps. Scalability concerns often remain unaddressed, with questions about how blockchain networks will

handle the high transaction volumes of global supply chains without performance degradation (Jabbar et al., 2020). Furthermore, there is a scarcity of empirical research on the human and organizational factors—user perceptions, readiness, and resistance—that ultimately determine the success or failure of blockchain adoption initiatives (Chakraborty et al., 2023). This study aims to contribute empirical evidence to these underexplored areas.

Research Methodology and Data Collection Tool

To address the research objective, a quantitative research methodology was deemed most appropriate. This approach allows for the systematic measurement of relationships between variables and facilitates the generation of generalizable insights. The core research question was operationalized into three investigative themes: the impact on operational efficiency, the enhancement of transparency, and the challenges of adoption and scalability.

The primary data collection tool was a structured online survey. The survey was designed with predefined response options to ensure consistency and enable straightforward statistical analysis. It was distributed to a targeted sample of professionals, including procurement managers, blockchain technology specialists, and end-users within organizations that have experience with blockchain in their purchasing processes. The survey instrument collected data on key metrics such as:

1. Perceived levels of efficiency and transparency improvement.
2. Quantitative reduction in processing times.
3. Initial user adoption rates and satisfaction levels.
4. Scalability ratings and encountered challenges.

A sample size of 120 respondents was targeted to ensure sufficient statistical power for the analysis. The collected numerical data was subsequently analyzed using a suite of statistical techniques, including descriptive statistics (mean, median, standard deviation), regression analysis to model relationships, and Analysis of Variance (ANOVA) to compare means across different groups, such as transparency levels before and after implementation.

Data Analysis with Critical Thinking and Discussion

A majority of respondents reported positive improvements in both efficiency and transparency following blockchain implementation. Descriptive statistics showed a mean efficiency improvement score of 2.5 (on a scale where higher is better) and a mean transparency improvement score of 2.6. Regression analysis indicated a positive relationship between blockchain adoption and these improvements. For instance, the regression coefficient for processing time reduction on efficiency was 0.066, suggesting that as processing time decreases, efficiency scores tend to increase.

However, a critical examination reveals important caveats. The regression models for both efficiency and transparency had low R-squared values (0.02 and 0.03, respectively), indicating that blockchain adoption alone explains only a small portion of the variance in outcomes. Furthermore, an ANOVA test comparing transparency

levels before and after implementation yielded a p-value of 0.30, which is above the conventional threshold for statistical significance. This means that while the trend is positive, we cannot dismiss the possibility that the observed improvement occurred by chance.

These statistical results paint a picture of high potential tempered by practical implementation hurdles. The positive perceptions align with the theoretical promises of Transaction Cost and Agency Theories; respondents noted fewer manual errors, faster processing, and a greater ability to verify transactions, which should logically lead to lower costs and reduced information asymmetry.

Nonetheless, the lack of strong statistical significance directs our attention to the formidable barriers that can dampen blockchain's impact. The survey identified three predominant challenges:

First, the problem with integrating with legacy systems. Adding newest technology to existing Enterprise Resource Planning (ERP) and procurement systems is complex and costly, often causing delays and limiting functionality.

Secondly, there is a technical expertise gap. A noticeable shortage of technical skills to develop, manage, and maintain blockchain technologies creates dependency and increases various project risks.

Lastly, a prominent resistance to change and a fear of the unknown among employees and older generations can significantly slow down adoption rates, as evidenced by the finding that many organizations had initial adoption rates below 20%.

The theoretical benefits of blockchain are real and perceived by users, but they are often partially offset by the friction and inefficiencies introduced during the complex implementation phase. The value of blockchain is not inherent in the technology itself, but in its successful integration into the socio-technical fabric of the organization.

Summary, Conclusion and Recommendations

This study set out to investigate the role of blockchain technology in enhancing the transparency and efficiency of purchasing processes. The findings confirm that blockchain holds significant promise, with empirical data showing positive user perceptions regarding its ability to streamline operations, reduce processing times, and create a more transparent and trustworthy procurement environment. The results provide tentative support for the propositions of Transaction Cost, Agency, and Network Perspective Theories. However, the journey from promise to performance is not automatic. The moderate statistical significance of the results and the clear identification of implementation barriers lead to a central conclusion: the successful adoption of blockchain is less a technological challenge and more an organizational one. Therefore, I propose the following strategic recommendations for practitioners:

1. **Adopt a Phased Implementation Approach:** Instead of a risky, organization-wide rollout, begin with a pilot project targeting a specific, high-value procurement process. This allows for learning, adjustment, and the demonstration of quick wins to build organizational buy-in.

2. Invest in Continuous Training and Support: Bridge the technical expertise gap by implementing comprehensive, role-based training programs. Establishing a dedicated support team is crucial for resolving issues promptly and building user confidence.
3. Foster Management Leadership and Clear Communication: Strong, visible support from senior management is essential to drive adoption. The "why" behind the change must be communicated clearly and consistently to all stakeholders to overcome resistance and align the organization.
4. Prioritize Strategic Vendor Collaboration: Engage key suppliers early in the process. Since blockchain's network benefits are fully realized only when partners are also onboard, collaborative planning is critical for success.

In essence, blockchain technology can indeed transform procurement, but its success is contingent upon a thoughtful, human-centric implementation strategy that addresses both the technical and cultural issues.

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The Impact of IFRS Adoption on Financial Performance of Kazakhstan's Energy Sector Companies

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Abstract

This study examines how Kazakhstan's energy sector companies' financial performance changed between 2000 and 2024 as a result of implementing International Financial Reporting Standards (IFRS). This research provides a comprehensive empirical analysis of this topic in the Kazakhstani setting, addressing a significant gap in the literature concerning emerging economies. Modern method of econometric modeling of panel data was employed for the analysis, Panel Corrected Standard Errors (PCSE) to be specific, it allowed for the consideration of heteroscedasticity and autocorrelation in the data. The study's findings demonstrated a multidirectional impact of variables: Return on Assets was not significantly impacted by the introduction of IFRS. Concurrently, Net Margin had a negative effect on Financial Leverage but a significant favorable influence on ROA. While the company's size was linked to slower sales growth rates, the company's age had a consistent favorable impact on financial success. The findings, which highlight the complexity of the effects of the switch to IFRS and the significance of taking industry peculiarities into account when implementing standards in developing economies, have practical implications for Kazakhstani company managers and policy makers.

Keywords: IFRS, energy sector, return on asset, panel data, emerging economy

Introduction

In today's global economy, harmonization of financial reporting standards has become imperative for the effective integration of national economies into the global financial system (Dhaliwal et al., 2019). This process is particularly important for developing economies such as Kazakhstan, where the transition to International Financial Reporting Standards (IFRS) is a strategic tool for enhancing investment attractiveness and ensuring transparency in corporate governance (Gao & Sidhu, 2018).

The energy sector occupies a central place in Kazakhstan's economy, acting as the main source of export revenues and an important factor in ensuring the country's energy security (Azretbergenova & Syzdykova, 2020). In the context of growing global competition and the need to attract large-scale foreign investment, the question of the real impact of the introduction of IFRS on the financial results of energy companies is of particular practical importance.

So, the main research question is: Does the switch to IFRS lead to a statistically significant alteration in the return on assets of companies in Kazakhstan's energy sector after controlling for micro- and macroeconomic factors?

This study's primary goal is to offer a thorough empirical evaluation of the effects of transitioning to IFRS on the financial results of enterprises in Kazakhstan's energy sector, concentrating on return on assets (ROA) analysis.

To achieve this goal, the following research objectives were formulated:

- to carry out a methodical examination of theoretical ideas and empirical research related to the investigation of the effects of IFRS adoption;
- to form a representative panel data base for five systemically important companies in the sector for the period 2000-2024;
- to quantitatively assess the influence of the switch to IFRS on ROA using modern econometric methods;
- to develop practical recommendations.

The research adds to the scientific literature in several ways. It expands the empirical base of research on the impact of IFRS in emerging markets, especially in the context of Central Asian countries. Second, the focus on the energy sector allows for industry-specific considerations that are often overlooked in cross-industry studies. From a practical point of view, the study's findings can be utilized by regulators to assess the effectiveness of accounting standard harmonization policies, as well as by company management to understand the factors affecting financial performance in the context of IFRS application.

Literature Review

The theoretical basis for this study is agency theory, which explains the potential positive impact of the transition to IFRS on companies' financial results. According to this theory, the introduction of international standards helps to reduce information asymmetry between management and stakeholders, which reduces agency costs and improves the quality of corporate governance. In the context of the energy sector, this is particularly significant given the high capital intensity, complex financing schemes and long investment cycles characteristic of the industry.

Empirical studies of the impact of the transition to IFRS on companies' financial results, conducted in various countries and industries, show mixed results.

A number of studies identify a positive effect. For example, an analysis of Greek industrial companies (Iatridis & Dalla, 2011) showed a positive impact on profitability in most sectors. A study of Indian companies from various industries (Kamarajugadda & Bhanu, 2015) revealed a statistically significant improvement in liquidity ratios, as well as an increase in investment multiples (e.g., P/E), although the results for profitability were mixed.

Studies in emerging economies generally confirm this trend. In Nigeria (Asuquo & Jeremiah, 2020), an analysis of companies in the food and beverage industry showed a statistically significant positive impact on asset growth and liquidity, despite a decline in profitability (ROA). In Ghana (Mensah, 2020), the transition to IFRS led to a significant improvement in the quality of financial reporting by reducing earnings management practices.

However, some studies show no significant impact. In particular, a study of Turkish companies in the hotel sector (Dalcı & Özyapıcı, 2017) found no statistically significant impact of the transition to IFRS on key financial

ratios of liquidity, solvency and profitability. This suggests that the effect of IFRS implementation may vary significantly depending on country and industry specifics.

In the Kazakh context, empirical studies devoted to the quantitative assessment of the impact of IFRS on financial results remain limited, and existing works mainly analyze the regulatory and legal aspects of the transition without a quantitative assessment of the impact on financial results.

Based on theoretical analysis and considering industry specifics, the research hypothesis is formulated:

H1: IFRS adoption positively impacts the ROA.

H2: ROA is positively impacted by firm size.

H3: Older firms have a higher ROA.

H4: The ROA is significantly impacted negatively by the time dummy for 2015.

Methodology

Five of the largest public companies in Kazakhstan's energy sector, whose shares are traded on the Kazakhstan Stock Exchange (KASE), were selected as research subjects. The sample includes companies engaged in oil and gas production, exploration and transportation. The selection criteria were that the companies should be classified as an energy sector company in accordance with the classification by type of activity established by the statistical authorities of Kazakhstan and the availability of consolidated financial statements for the entire period under review (2000-2024).

The financial data was collected using the Refinitiv platform, which is available in the university's financial laboratory, and the missing data was collected and calculated manually from the companies' annual consolidated financial statements. For the period prior to the transition to IFRS, reports prepared in accordance with Kazakh standards were used, and after the transition, IFRS reports were used. The transition date for each company was identified in the notes to the financial statements. Macroeconomic data was obtained from the World Data Bank.

An econometric model system was constructed to assess the impact of the transition to IFRS.

Key characteristics of the model:

$$ROA = \beta_0 + \beta_1(\text{IFRS Dummy}) + \beta_2(\text{Debt-to-Equity}) + \beta_3(\text{Revenue Growth}) + \beta_4(\text{Firm Size}) + \beta_5(\text{Firm Age}) + \beta_6(\text{Liquidity}) + \beta_7(\text{Net Margin}) + \beta_8(\text{GDP Growth}) + \beta_9(\text{FDI}) + \beta_{10}(\text{Inflation}) + \beta_{11}\text{Year2015} + \beta_{12}\text{Year2020} + E$$

where:

- ROA – return on assets (dependent variable)
- β_0 – constant (intersection with the x-axis)
- β_1 - β_{12} – coefficients for the corresponding explanatory variables
- E – random error

Table 1*Summary of variables*

Symbols	Variables	Formulas
<i>Dependent variable</i>		
ROA	ROA	(Net Income / Average Total Assets) * 100%
<i>Independent variables</i>		
β_1	IFRS Dummy	0 - for periods before adoption, 1 - for periods after IFRS adoption
β_2	Debt-to-Equity	(Total Debt / Total Shareholders' Equity)
β_3	Revenue Growth	((Revenue t - Revenue t-1) / Revenue t-1) * 100%
β_4	Firm Size	Natural Logarithm of Total Assets (Ln(Total Assets))
β_5	Firm Age	Natural Logarithm of number of years since the company's incorporation
β_6	Liquidity	(Current Assets / Current Liabilities)
β_7	Net Margin	(Net Income/ Total Revenue) * 100%
β_8	GDP Growth	Annual GDP growth (percentage)
β_9	FDI	Foreign Direct Investment, net inflows (% of GDP)
β_{10}	Inflation	Annual consumer price inflation (percentage)
β_{11}	IYear2015	1 - if the observation is for the year 2015, 0 - otherwise
β_{12}	IYear2020	1 - if the observation is for the year 2020, 0 - otherwise

Panel data regression analysis was used to test the hypotheses. The analysis was performed using Stata statistical software. First, descriptive statistics and a correlation matrix were calculated, then time variables such as year 2015 and 2020 were added. Tests were also conducted to select an adequate specification, such as multicollinearity, autocorrelation, heteroscedasticity, and cross-sectional dependence.

Regarding the final model, based on the results of the diagnostic tests, robust estimation methods were applied, Panel regression with corrected standard errors to be specific.

Findings

This is the descriptive statistics table. The key takeaway is the high variation in the data, especially in financial metrics like ROA and Revenue Growth, highlighting a mix of mature and high-growth companies in a dynamic economic setting.

Table 2*Descriptive statistics*

Variable	Observations	Mean	Std. Dev.	Min	Max
ROA	108	11.34	11.67	-6.92	51.13
IFRS Dummy	124	0.75	0.43	0	1
Debt-to-Equity	106	-258.24	2943.57	-30236.15	690.01
Revenue Growth	109	52.53	288.22	-87.06	2204.06
Firm Size (ln)	116	11.49	2.30	3.55	15.16
Firm Age (ln)	118	2.70	0.90	0.00	4.11
Liquidity	116	5.35	39.19	0.06	423.63

Net Margin	114	14.91	18.82	-119.44	97.01
GDP Growth	125	5.82	3.66	-2.50	13.50
FDI	125	6.41	4.26	-0.24	13.01
Inflation	125	8.78	3.34	5.20	17.14

According to this correlation matrix, the biggest determinants of profitability (ROA) are internal variables like firm size and net margin. It's interesting to note that there is a strong correlation between the macroeconomic situation and the adoption of IFRS.

The assessment of multicollinearity is displayed in Table 3. A common rule is that a VIF above 5 or 10 indicates a severe problem. The highest VIF is 3.06 (GDP Growth), and the mean VIF is 1.81. All values are well below the critical threshold of 5.

Table 3

Variance Inflationary Factor (VIF)

Variable	VIF	1/VIF
GDP Growth	3.06	0.327
Firm Size (ln)	2.53	0.395
Firm Age (ln)	2.45	0.408
IFRS Dummy	2.05	0.489
Net Margin	1.93	0.518
Year 2020 Dummy	1.89	0.528
FDI	1.73	0.578
Liquidity	1.31	0.761
Inflation	1.31	0.765
Year 2015 Dummy	1.22	0.820
Revenue Growth	1.16	0.863
Debt-to-Equity	1.02	0.977
Mean VIF	1.81	

Then other diagnostic tests were done, based on them, two key problems were identified that violate the standard assumptions of the model. First, the heteroscedasticity test showed its presence with a p-value of 0.000, which indicates a violation of the assumption of constant error variance. Second, the test for autocorrelation also found a problem, a p-value of 0.0018 indicates the presence of first-order autocorrelation in the panel data. However, the Pesaran test for cross-sectional dependence did not reveal a significant correlation between observation units. To correctly derive the results, taking into account heteroscedasticity and autocorrelation, a model with standard errors adjusted for panel structure was used.

Table 4*PCSE panel regression results*

	Coefficient	p-value
IFRS Dummy	-0.492	0.838
Debt-to-Equity	0.000041	0.665
Revenue Growth	0.00391*	0.026
Firm Size (ln)	-1.403***	0.000
Firm Age (ln)	4.307*	0.045
Liquidity	0.0215	0.969
Net Margin	0.539***	0.000
GDP Growth	0.107	0.729
FDI	-0.0408	0.841
Inflation	-0.291*	0.039
Year 2015 Dummy	-5.502*	0.049
Year 2020 Dummy	-5.986*	0.016
Constant	8.407	0.238
N. of Obs	98	
N. of Groups	5	
R-squared	0.5588	
Wald χ^2 (12)	184.94	
Prob > χ^2	0.0000	

Discussion

The results of regression analysis demonstrate that the transition to IFRS does not in itself have a statistically significant direct impact on return on assets (ROA), which is consistent with the practice in emerging markets, where the introduction of standards primarily increases the transparency of reporting rather than immediate profitability, and may be offset by the initial costs of implementation. At the same time, internal operational factors such as revenue growth and net margin have a significant positive impact on company profitability, while the negative effect is associated with an increase in the size of the firm, inflation and external shocks. Capital structure, liquidity and macroeconomic trends showed no significant correlation with ROA, which highlights the dominant role of firm-specific characteristics and operational efficiency over accounting standards or broad economic conditions in shaping financial results.

Conclusion

An analysis of the effects of the switch to IFRS and other factors on return on assets (ROA) showed that the key drivers of profitability are operating indicators – revenue growth and net margin – while the transition to international standards itself does not have a direct significant effect. Based on these results, companies should focus on stimulating sales, improving operational efficiency and optimizing asset utilization, while developing resilience to macroeconomic shocks and inflation. Implementing these measures in conjunction with the deeper

implementation of IFRS principles will lay the foundation for sustainable improvement in financial results over the long term.

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**Современные подходы к мотивации персонала на предприятиях нефтеперерабатывающего
комплекса: теория и практика**

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Аннотация

Статья посвящена исследованию современных подходов к мотивации персонала в нефтеперерабатывающем комплексе, где высокая технологическая сложность, риски и повышенные требования к квалификации работников делают проблему мотивации особенно актуальной. Цель исследования заключается в выявлении ключевых факторов, формирующих эффективность мотивационных систем, и определении специфики мотивации в условиях нефтеперерабатывающего производства. Во введении рассмотрены теоретические подходы к мотивации, роль корпоративной культуры, организационной сопричастности, качества трудовой жизни и карьерного развития. Методологическая основа исследования включает анализ научной литературы и качественный контент-анализ официальных отчётов Компании с Ограниченной Ответственностью «Аджип Карачаганак Б.В.», что позволило оценить реальные механизмы стимулирования и определить их соответствие современным отраслевым стандартам. Полученные результаты показывают, что эффективность мотивации в нефтеперерабатывающем комплексе обеспечивается сочетанием материальных стимулов, развитой корпоративной культуры, высоким уровнем безопасности труда, возможностями профессионального развития и поддержанием эмоционального благополучия сотрудников, а нематериальные факторы приобретают всё более значимую роль. Основные выводы исследования подтверждают необходимость применения интегрированных мотивационных моделей, учитывающих психологические, организационные и социокультурные особенности отрасли. Интерпретация результатов демонстрирует, что успешная мотивационная система способствует снижению текучести кадров, повышению производственной эффективности и укреплению корпоративной устойчивости.

Введение

В условиях усиления глобальной конкуренции, повышенной волатильности сырьевых рынков и ускоряющейся технологической трансформации нефтеперерабатывающий комплекс (НПК) сталкивается с необходимостью обеспечения высокой эффективности использования трудовых ресурсов. Предприятия отрасли функционируют в сложной производственной среде, характеризующейся высокой степенью автоматизации процессов, жёсткими требованиями к безопасности, потребностью в высококвалифицированном персонале и постоянным внедрением инновационных технологий. В этих условиях вопросы мотивации работников становятся ключевым фактором устойчивого развития, влияющим

не только на производительность труда, но и на качество продукции, соблюдение технологических регламентов, дисциплину, повышение культуры безопасности и минимизацию производственных рисков.

Цель статьи заключается в анализе современных теоретических подходов и практических методов мотивации персонала на предприятиях нефтеперерабатывающего комплекса, а также в обобщении и оценке наиболее эффективных инструментов стимулирования работников с учётом отраслевой специфики и современных тенденций развития НПК.

Обзор литературы

Современные исследования в области мотивации персонала предприятий нефтегазовой и нефтеперерабатывающей отрасли подчеркивают необходимость комплексного рассмотрения факторов, влияющих на вовлеченность, продуктивность и удовлетворённость работников. В научном дискурсе доминирует междисциплинарный подход, объединяющий элементы организационной психологии, стратегического управления персоналом, социологии труда и промышленной экономики. При этом в последние годы акценты смещаются в сторону изучения нематериальных аспектов мотивации, организационной культуры, сопричастности работников и качества трудовой жизни, особенно в условиях цифровизации, усложнения технологических процессов и возрастания требований к безопасности.

Одним из фундаментальных направлений анализа является влияние корпоративной культуры на мотивацию персонала. В работе И. Н. Глазковой и К. В. Батяевой (2020) корпоративная культура рассматривается как системообразующий фактор мотивации работников нефтегазовой отрасли. Авторы, исследуя примеры ПАО «ЛУКОЙЛ», ОАО «Газпром» и ПАО «НК Роснефть», демонстрируют, что корпоративные нормы, ценности и ритуалы формируют не только трудовое поведение, но и степень вовлечённости сотрудников. Тем самым корпоративная культура выступает не просто фоном мотивации, а ее структурообразующим элементом.

Продолжая развивать тему нематериальных аспектов мотивации, С. М. Самохвалова и А. Н. Малюгина (2022) сосредотачиваются на феномене организационной сопричастности персонала – глубокой психологической связи сотрудника с организацией. Авторы уточняют понятие организационной сопричастности применительно к нефтегазовой отрасли, характеризующейся высокой степенью ответственности, рисками и необходимостью соблюдения регламентов. Исследователями представлена логическая модель идентификации мотивационного профиля работников, подчеркивающая необходимость сочетания индивидуальных и коллективных стимулов. Систематизация факторов организационной сопричастности показывает, что её формирование требует адресной работы с ценностями, эмоциональной вовлечённостью, идентификацией с корпоративной миссией и укреплением внутрикорпоративных коммуникаций. Таким образом, в нефте- и газодобывающей отрасли нематериальные аспекты играют роль

не меньшую, чем материальные стимулы, поскольку эмоциональная устойчивость и осознанность работников напрямую связаны с безопасностью производства.

Многочисленные исследования подчеркивают, что мотивация в нефтегазовой отрасли невозможна без эффективной системы стимулирования. Именно эту тему раскрывают Е. М. Кобозева и М. С. Тараненко (2022). Авторы анализируют структуру мотивационной системы предприятий нефтегазовой отрасли и выделяют ключевые факторы её эффективности: уровень оплаты труда, безопасность труда, возможности карьерного продвижения, поддержка профессионального развития. Указывая, что значительная часть производственных процессов требует высокой компетентности и дисциплины, исследователи приходят к выводу о необходимости интеграции материальных и нематериальных стимулов. Тем самым их работа дополняет исследования, ориентированные на корпоративные и культурные механизмы мотивации.

Зарубежные исследования подтверждают важность карьерного развития и качества трудовой жизни как мощных факторов мотивации и удовлетворённости работников. Так, Н. Pillay, Q. Dawood и А. Karodia (2015), анализируя южноафриканский нефтеперерабатывающий завод, выявили, что карьерное продвижение и доступ к обучению – ключевые факторы мотивации работников. Исследование показало, что отсутствие прозрачных карьерных траекторий снижает вовлеченность и увеличивает текучесть кадров, тогда как инвестиции в обучение укрепляют трудовую дисциплину и повышают удовлетворённость. Схожие выводы представляют М. Hammond, N. O. Owusu, E. K. Nunoo и др. (2023), исследовавшие влияние качества трудовой жизни на удовлетворённость персонала газоперерабатывающего завода в Гане. Авторы подтверждают статистически значимую связь между удовлетворённостью трудовой жизнью и такими факторами, как эмоциональное благополучие, баланс работа–жизнь, личностное развитие и безопасная среда. Эмоциональное благополучие оказалось наиболее сильным предиктором удовлетворённости, что ещё раз подтверждает значимость нематериальных факторов.

С точки зрения казахстанской специфики, значительный вклад в понимание кадрового развития нефтегазовых компаний внесли М. А. Мансурова, А. Д. Махмудов и Л. В. Федорченко (2020), исследовавшие систему обучения и развития персонала компании «Карачаганак Петролеум Оперейтинг Б.В.». Авторы подчёркивают, что эффективное обучение непосредственно влияет на мотивацию через повышение профессиональной уверенности, возможность карьерного роста и участие в международных программах. Системность обучения, наличие дуального образования, формирование национального кадрового резерва – всё это формирует условия для роста мотивации персонала на долгосрочном уровне. Интересный вклад в изучение мотивационных факторов в Казахстане внесла Г. С. Bilashova (2022), проведшая исследование удовлетворенности работой сотрудников компании Maersk Oil в Казахстане. Исследование показало, что значимыми факторами удержания работников и повышения их мотивации являются организационная поддержка, признание заслуг, справедливая система вознаграждения и возможности профессионального роста. Особое внимание автор уделяет тому, что уровень управления

персоналом в Казахстане отстаёт от мировых практик, что повышает ценность адаптации современных мотивационных моделей.

Методология исследования

Методологическая основа исследования обусловлена необходимостью комплексного анализа современных подходов к мотивации персонала в нефтеперерабатывающем секторе, а также выявления отраслевой специфики формирования мотивационных моделей на примере конкретной компании. В рамках статьи применяется сочетание теоретических и эмпирических методов. Теоретический компонент исследования основан на систематизации научных источников, включающих работы российских, казахстанских и зарубежных авторов, посвящённые вопросам построения систем мотивации и стимулирования персонала в нефтегазовой отрасли. Эмпирическая часть исследования основана на анализе официальных годовых и социальных отчётов Компании с Ограниченной Ответственностью «Аджи́п Карачагана́к Б.В.» (Agip/Epi), являющейся одним из ключевых операторов крупнейшего в мире газоконденсатного месторождения Карачаганак. Данный выбор обусловлен тем, что структура управления персоналом, корпоративная культура, система мотивации и социальная политика этой компании отражают типичные особенности нефтеперерабатывающей отрасли Казахстана, а также демонстрируют уровень соответствия международным отраслевым стандартам.

В рамках исследования были использованы следующие методы:

- контент-анализ отчетов компании, включающих корпоративные программы по обучению и развитию, систему вознаграждения, социальные инициативы, меры по обеспечению безопасности и внутренние коммуникации;
- структурно-функциональный анализ, направленный на выявление элементов мотивационной системы и их взаимосвязи;
- метод качественной интерпретации, применяемый для определения специфических характеристик мотивации персонала в условиях высокотехнологичного, капиталоемкого и экологически чувствительного производства.

Использование отчетов компании в качестве эмпирической базы позволяет установить реальные, а не теоретически предполагаемые особенности мотивации персонала, оценить практическую эффективность инструментов стимулирования.

Результаты

Для подтверждения гипотезы данного исследования был проведен анализ системы мотивации компании «Аджи́п Карачагана́к Б.В.», которая представляет собой новый современный производственный комплекс, входящий в число ведущих нефтеперерабатывающих заводов страны и располагается в

промышленной зоне одного из наиболее экономически перспективных областных центров Казахстана – городе Актобе. Вся производимая продукция сертифицирована в государственной системе технического регулирования Республики Казахстан (agipkaragachanakbv.kz, 2025).

На основе анализа ESG-отчётов компании выявлено, что система мотивации компании «Аджи́п Карачага́нак Б.В.» выстроена в соответствии с международными стандартами управления персоналом и адаптирована к особенностям высокотехнологичной, опасной и капиталоемкой нефтеперерабатывающей отрасли. Прежде всего, необходимо отметить, что мотивационная система компании «Аджи́п Карачага́нак Б.В.» интегрирована в корпоративную стратегию «КПО 365», определяющую ключевые направления развития персонала: безопасность, вовлечённость, национализация кадров, развитие компетенций, поддержание многообразия и равных возможностей (кро.kz, 2025). Для компании «Аджи́п Карачага́нак Б.В.» это означает, что HR-политика не ограничивается материальными стимулами, а строится вокруг ценностей устойчивого развития, этических норм и долгосрочных социальных обязательств.

Миссия и стратегические цели компании подчёркивают приоритет заботы о сотрудниках, что формирует основу для нематериальных аспектов мотивации – доверия, сопричастности, стабильности и предсказуемости карьерного развития. Такая концептуальная рамка является ключевой особенностью мотивации в компании «Аджи́п Карачага́нак Б.В.», где работа каждого сотрудника тесно связана с рисками эксплуатации опасного производственного объекта.

Система материального вознаграждения в компании «Аджи́п Карачага́нак Б.В.» является одной из наиболее привлекательных в отрасли, что подтверждается стабильным уровнем занятости и высокой лояльностью персонала. Основные элементы включают:

- конкурентные уровни заработной платы, сопоставимые с международными компаниями нефтегазового сектора;
- ежегодные бонусы, привязанные к результатам компании и индивидуальному вкладу сотрудника;
- расширенный социальный пакет, включающий медицинское страхование, жильё, транспорт, питание и другие формы поддержки;
- дополнительные выплаты за работу в условиях повышенной опасности, вахтовый метод, ночные смены и участие в проектах по реконструкции и модернизации установок.

Всем работникам, имеющим трудовой договор с Компанией, предоставляется пакет льгот, состоящий из денежных выплат и неденежных льгот. Большая часть льгот предусмотрена коллективным договором. В соответствии с условиями коллективного договора КПО выплачивает премию ко Дню работника нефтегазового комплекса, премию в конце года, премию к годовщине подписания ОСРП, а также материальную помощь для восстановления здоровья. Размер данных выплат также зависит от персонального грейда работника. Персонал компании «Аджи́п Карачага́нак Б.В.» получает доступ к

программам материальной поддержки, связанным с обучением детей, льготными условиями кредитования и корпоративными компенсациями.

Особенностью компании «Аджип Карачаганак Б.В.» является то, что безопасность труда выступает не только обязательством, но и одной из центральных форм нематериальной мотивации. Так, к примеру, в 2024 году компания реализовала масштабные инициативы в области охраны труда и здоровья: комплексная система обучения и ежегодной сертификации работников по ТБ; регулярные тренировки по готовности к ЧС; внедрение цифровых систем мониторинга опасных факторов; программы по снижению травматизма «Ноль происшествий». Для сотрудников участие в таких инициативах не только повышает личную безопасность, но и формирует чувство стабильности и защищённости, что является важным элементом мотивации в условиях опасного производства. Кроме того, компания «Аджип Карачаганак Б.В.» уделяет особое внимание психологическому благополучию сотрудников. В компании созданы программы поддержки, консультации специалистов, механизмы раннего выявления эмоциональных перегрузок, что особенно актуально в условиях высокой производственной ответственности.

Обучение и развитие сотрудников входит в топ-приоритетов компании. Для компании «Аджип Карачаганак Б.В.» это выражается в многоуровневой системе профессионального роста, включающей: внутренние тренинги и техническое обучение; международные сертификационные программы; стажировки в зарубежных филиалах материнских компаний («Эни», «Шелл», «Шеврон»); дуальные программы подготовки молодых специалистов; инициатива развития национального кадрового резерва. Динамика количества обученных работников компании в рамках международных сертифицированных программ за 2021-2024 гг. приведена в таблице 1.

Таблица 1

Динамика количества обученных работников компании в рамках международных сертифицированных программ за 2021-2024 гг.

Название программы	2021	2022	2023	2024
Управление скважиной / Контроль давления в скважине при газонефтеводопроявления (IWCF)	61	46	59	22
Сертификация по неразрушающему контролю (NDT)	13	20	50	30
Международный диплом института CIPS в области закупок и поставок по базовому курсу	13	19	19	43
Курс по аварийному реагированию на чрезвычайные ситуации MEMIR по стандарту OPIIO	17	17	11	8
Международный сертификат в области охраны здоровья, окружающей среды и техники безопасности (NEBOSH)	9		12	17
Дипломированный внутренний аудитор (CIA)			4	2
Сертификация по международной финансовой отчетности ACCA	2		3	1
Магистр делового администрирования	1	1	6	4
Сертификация по техническим стандартам API	10	9	8	12

Сертификация по курсу «Профессиональное управление проектом» (PMP) ®	1		13	
Международный сертификат IEMA в области экологического менеджмента	1	1		2
Инспектор завода по стандартам ASME		23	17	17
Коучинг в организации и бизнесе (ICF)			12	8
Международный сертификат по безопасной организации работ (IOSH)				10
Сертифицированный специалист по международным закупкам (CIPP)				3
Общее количество сотрудников, прошедших программы сертифицированного обучения	128	136	214	179

Такой подход обеспечивает высокую квалификацию персонала и формирует уверенность сотрудников в карьерных перспективах. Помимо этого, возможность горизонтальной мобильности между подразделениями КПО и участие в крупных проектах модернизации также являются значимыми мотивирующими факторами.

В целом, проведённый анализ демонстрирует, что система мотивации персонала компании «Аджип Карачаганак Б.В.» является комплексной и ориентированной на долгосрочное развитие человеческих ресурсов. Её ключевые особенности включают: высокий уровень материального вознаграждения; гибкую систему социальной поддержки; стратегический акцент на безопасности труда; развитую инфраструктуру профессионального роста; продвижение корпоративных ценностей; постоянный диалог с персоналом; акцент на психологическое благополучие и вовлечённость. Эта система отвечает современным требованиям нефтеперерабатывающей отрасли и соответствует лучшим международным практикам, что позволяет компании «Аджип Карачаганак Б.В.» удерживать высококвалифицированных специалистов и поддерживать устойчивое развитие компании.

Общее обсуждение

Проведённое исследование позволило выявить ключевые тенденции и закономерности формирования мотивационных стратегий в отрасли, характеризующейся высоким уровнем технологической сложности, повышенными рисками и строгими требованиями к квалификации работников. Анализ научной литературы показал, что мотивация в нефтегазовом секторе формируется под влиянием сочетания материальных, нематериальных, культурных и профессионально-ориентированных факторов. Особую роль играют корпоративная культура, организационная сопричастность, карьерное развитие, качество трудовой жизни и эмоциональное благополучие работников. Эмпирическая часть исследования – анализ системы мотивации персонала Компании с ограниченной ответственностью «Аджип Карачаганак Б.В.» – продемонстрировала, что в реальной практике современные компании используют интегрированные модели мотивации, включающие конкурентную оплату труда, расширенные социальные пакеты, инструменты безопасности, программы обучения, элементы культуры признания, диалог с персоналом и корпоративную социальную ответственность. Специфика нефтеперерабатывающего

производства усиливает роль нематериальных факторов, прежде всего безопасности, эмоциональной устойчивости, квалификационного роста и доверия к корпоративной политике.

Теоретический вклад исследования заключается в уточнении роли нематериальных стимулов в условиях высокорисковой и капиталоемкой отрасли. В отличие от классических мотивационных моделей, где приоритет принадлежит материальному вознаграждению и условиям труда, результаты настоящей работы демонстрируют, что в нефтегазовом секторе «высшие» потребности, связанные с чувством сопричастности, уверенностью в будущем, возможностью профессионального роста и качественным взаимодействием с организацией, оказывают более сильное влияние на трудовое поведение сотрудников. Таким образом, мотивация работников в нефтегазовой отрасли приобретает многомерный характер, что требует переосмысления традиционных теоретических подходов и обоснования интегративных моделей мотивации, объединяющих экономические, социально-психологические и культурные компоненты.

Практическое значение работы состоит в том, что выявленные закономерности и особенности мотивации могут служить основанием для совершенствования корпоративных HR-практик. На примере компании «Аджип Карачаганак Б.В.» становится очевидно, что наиболее эффективной является такая система мотивации, которая не только обеспечивает конкурентную компенсацию и качественные условия труда, но и формирует культуру безопасности, поддерживает профессиональное развитие, укрепляет эмоциональное благополучие сотрудников и обеспечивает их устойчивую вовлечённость. Для компаний нефтеперерабатывающего комплекса важным представляется развитие систем внутреннего обучения и наставничества, расширение программ поддержки персонала, формирование механизмов признания достижений, повышение прозрачности корпоративных коммуникаций и укрепление корпоративной идентичности. В бизнес-практике такие меры способствуют снижению текучести, повышению дисциплины, росту производственной эффективности и формированию устойчивой корпоративной среды.

В целом работа подчёркивает, что эффективная мотивация персонала в нефтеперерабатывающей отрасли должна рассматриваться как многокомпонентная система, основанная на сочетании экономических стимулов, корпоративных ценностей, развития компетенций и психологического благополучия. Современные тенденции свидетельствуют о растущей значимости нематериальных факторов мотивации, что открывает новые направления для дальнейших теоретических разработок и совершенствования управленческих практик.

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Интеграция искусственного интеллекта в процесс адаптации персонала в компаниях телекоммуникационной отрасли в РК

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Аннотация

Цифровизация экономики Республики Казахстан стремительно набирает обороты и создает новый контекст для управления кадрами в ключевых отраслях, включая телекоммуникационный сектор. Телеком компании играют ключевую роль в современной цифровой экономике, обеспечивая инфраструктуру и сервисы, на которых держится цифровизация. Отрасль испытывает нехватку специалистов ИКТ-профиля. Появляются новые профессии, связанные с цифровизацией. Данная научная работа посвящена интеграции искусственного интеллекта в функции адаптации вновь принятых сотрудников в телекоммуникационной сфере где удержание талантов имеет огромное значение. В качестве объекта исследования взят процесс адаптации персонала АО «Казахтелеком». Цель работы оценить возможности, механизмы и эффекты интеграции искусственного интеллекта в процесс адаптации персонала, а также разработать рекомендации по повышению эффективности онбординга с использованием ИИ – технологий для ускорения time-to-productivity, повышение удовлетворенности новичков, снижение текучести кадров, аналитики и поддержки 24/7. Методология исследования включает использование качественных и количественных методов.

Интеграция искусственного интеллекта в процесс адаптации персонала в телекоммуникационной отрасли РК демонстрирует значимый потенциал для повышения эффективности HR-процессов и качество управления человеческим капиталом. В ходе исследования установлено, что внедрение ИИ-решений позволяет автоматизировать повторяющиеся операции, ускорить ввод новых сотрудников в должность, что ведет к сокращению периода адаптации и снижению нагрузки на HR-специалистов до 50%. Полученные выводы подтверждают стратегическую значимость применения ИИ в управлении адаптацией персонала, обеспечивающего экономический эффект, рост организационной гибкости и повышение устойчивости кадрового потенциала телекоммуникационной отрасли Казахстана.

Ключевые слова: искусственный интеллект, адаптация персонала, цифровая трансформация, человеческий ресурс

Введение

Казахстан, страна с развивающейся экономикой, переходящая от централизованного управления к участию в глобальном рынке, сталкивается с проблемами, общими для других республик Содружества Независимых Государств. Конкурентные преимущества, которые предвещают успешный переход, включают в себя богатые запасы нефти, развивающуюся правовую систему и правительство, которое, по-видимому, извлекло уроки из ошибок других стран СНГ. Однако республика сталкивается с серьезными

проблемами сокращения населения, плохой инфраструктуры и привычек рабочей силы, несовместимых с рыночной экономикой. Экономическая стабилизация, развитие рыночных институтов, таких как правовая инфраструктура, и преодоление нехватки квалифицированной рабочей силы являются ключевыми проблемами, общими для стран СНГ (Hoskisson, Eden, Lau & Wright, 2000). Хотя эти республики имели общую отправную точку для развития рыночной экономики, они пошли разными путями и достигли разной степени прогресса (EBRD, 1998).

Президент Казахстана Касымжомарт Токаев ставит перед предпринимателями страны вызов что в ближайшие пять лет Казахстан должен стать цифровым государством. В своем выступлении президент отметил, что в мире происходят значительные технологические изменения, связанные со стремительным развитием искусственного интеллекта (ИИ). Эта технология напрямую влияет на развитие всех стран мира, без нее сейчас невозможно выдержать глобальную конкуренцию. По прогнозу Конференции ООН по торговле и развитию (ЮНКТАД), к 2033 году объем рынка искусственного интеллекта может достичь \$4,8 трлн. Его доля в мировой технологической индустрии увеличится от 7 до 29%. Это беспрецедентный рост. Искусственный интеллект открывает широкие возможности для развития», — цитирует главу государства пресс-служба Акорды (Бекбосын Т., 2025).

Отдел человеческих ресурсов (HR) играет ключевую роль в формировании кадрового состава организации, управлении процедурами найма, обеспечении соответствия новых сотрудников корпоративной культуре, мониторинге удовлетворенности работой и принятии ответственности за производительность и эффективность персонала. Исторически рассматриваемая как довольно изолированный аспект корпоративной сферы, область человеческих ресурсов (HR) в последнее время претерпела значительные изменения в связи с интеграцией цифровых технологий. Интеграция искусственного интеллекта (ИИ) в процесс адаптации персонала представляет собой значительное изменение в подходе, повышая эффективность и результативность многих процедур, таких как набор персонала, оценка эффективности, обучение, и программы наставничества. Этот шаг не только приводит к экономии средств и улучшению управления временем, но и означает уход от традиционных подходов, подчеркивая тенденцию к более совершенным системам принятия решений, основанным на анализе данных. Значение искусственного интеллекта (ИИ) в изменении динамики рабочего места, которое долгое время считалось понятием, ограниченным научной фантастикой, теперь общепризнано специалистами. Это признание означает прогрессивное развитие использования интеллектуальных технологий в области управления человеческими ресурсами.

Искусственный интеллект способствует экономии времени, повышению объективности и автоматизации многих процессов в сфере управления персоналом, особенно на этапе найма и отбора персонала, а также при разработке систем управления. Внедрение искусственного интеллекта также

сопряжено с рядом проблем, таких как высокие начальные инвестиционные затраты, вопросы безопасности данных и необходимость адаптации к технологическим изменениям и сдвигам в структуре рабочей силы.

Кроме того, стоит отметить, что значительная часть академических исследований, корпоративных отчетов об устойчивом развитии и годовых отчетов компаний в настоящее время включает в себя значительный объем анализа рисков для предприятий. Вышеупомянутые факторы включают системный риск, несистемный риск, вопросы безопасности и конфиденциальности, отношение сотрудников и риск производительности. Тем не менее, научные исследования потенциальных опасностей, которые системы ИИ могут представлять для сферы управления человеческими ресурсами, практически отсутствуют. Это является основной областью внимания в рамках данного исследования. Таким образом, в данной научной основное внимание будет уделено двум отдельным аспектам:

1. Проведение стратегической оценки телекоммуникационной организации для интегрирования искусственного интеллекта в процесс адаптации персонала;
2. Разработка программы онбординга с интеграцией искусственного интеллекта с учетом интересов поколения Z

Роль человека в надзоре и контроле по-прежнему остается важной для обеспечения долгосрочной гибкости и эффективности. То есть независимо от того, насколько развит искусственный интеллект, его эффективность и ответственность не могут быть полностью реализованы без участия человека. Поэтому роль человека в использовании искусственного интеллекта особенно важна как управляющего, проводника и ответственного владельца технологии. Данное исследование предоставляет эмпирические данные, которые помогут малым и средним предприятиям определить приоритеты для инвестиций в ИИ, а также предлагает стратегические направления для укрепления технологических возможностей и совершенствования эффективной системы управления человеческими ресурсами в эпоху цифровых технологий.

Данные будут изучаться путем изучения проведенных научных исследований, понимания и опыта менеджеров и специалистов по ИИ в области внедрения или использования искусственного интеллекта в своих соответствующих контекстах. Ожидается, что данное исследование станет ценной основой для управления искусственным интеллектом в организационных контекстах.

Обзор литературы

Область искусственного интеллекта (ИИ), характеризующаяся широким обсуждением и ожиданиями в технологическом дискурсе, приобрела ключевую роль в различных секторах, таких как наука, инженерия, бизнес и человеческие ресурсы. Современная эпоха свидетельствует о беспрецедентном процветании благодаря значительным успехам в развитии ИИ. Задачи, которые раньше выполнялись

вручную, теперь беспрепятственно выполняются с помощью машин, программных решений и ряда автоматизированных механизмов (Ginu George, Integration of Artificial Intelligence in Human Resource, 2019)

Различия подчеркивает необходимость использования точной терминологии при осмыслении масштабов и последствий искусственного интеллекта для технического и организационного прогресса.

Искусственный интеллект (ИИ): Любая методология, использующая логику, правила и сложные алгоритмы, позволяющие компьютерам имитировать когнитивные функции человека, относится к искусственному интеллекту (ИИ). Эта область компьютерной науки посвящена разработке интеллектуальных машин, способных выполнять действия и реагировать на них подобно человеческому поведению (Consulting, I., 2023).

Машинное обучение (ML): — это специализированное подразделение искусственного интеллекта (AI), сосредоточенное на способности компьютерных программ анализировать данные и самостоятельно учиться. В отличие от традиционного программирования, которое требует явных инструкций от программиста для выполнения задач, ML идентифицирует шаблоны и генерирует прогнозы, которые улучшают процессы принятия решений AI. Наглядным примером применения ML является его способность анализировать модели поведения сотрудников для прогнозирования их потенциального ухода в поисках новых возможностей. По сути, в то время как ИИ охватывает широкий спектр интеллектуальных возможностей компьютерных программ по принятию решений, ML конкретно занимается методологиями, с помощью которых ИИ приобретает и обрабатывает данные без прямого участия человека. (Corporation, 2019)

Глубокое обучение (Deep Learning, DL): Особая подгруппа машинного обучения, включающая в себя алгоритмы, позволяющие программному обеспечению автономно обучаться решению задач, включая распознавание речи и изображений, посредством воздействия на многослойные нейронные сети, такие как CNN, RNN (Dr. Bharath H Aithal, 2023).

Генеративный ИИ: генеративный ИИ включает в себя алгоритмы, которые создают контент, похожий на человеческий, например, текст, изображения и музыку, путем синтеза новых данных на основе изученных шаблонов. Он включает в себя особые искусственные нейронные сети (ИНС), такие как генеративные адверсарные сети (GAN) и большие языковые модели (LLM), ориентированные на получение данных, похожих на обучающие входные данные. (Mas, 2023).

Переход Республики Казахстан к инновационному развитию является основной целью государственной политики в области развития науки и технологий. Власти разработали и претворяют в жизнь стратегию диверсификации национальной экономики, уделяя особое внимание инновационной деятельности. Преобразование Казахстана в рыночную экономику по-прежнему сопряжено со многими проблемами. Две из наиболее актуальных проблем – это создание более надежного рынка труда и разработка нового стандарта управления человеческими ресурсами. Исследование Ардичвили является одной из

немногих попыток оценить западные модели лидерства и их соответствие культурам отдельных стран СНГ, и он обнаружил различия в применимости некоторых из протестированных им западных моделей лидерства. Тем не менее, западные модели экономического развития и управления человеческими ресурсами могут служить отправной точкой для понимания того, что происходит в Казахстане

Практики управления человеческими ресурсами (УЧР) считаются одним из ключевых факторов, влияющих на удовлетворенностью работой. В модели Wright и Nishii (2007) влияние практик управления человеческими ресурсами на отношение и поведение сотрудников происходит через восприятие сотрудниками практик управления человеческими ресурсами. Не сами практики управления человеческими ресурсами, а то, как сотрудники их воспринимают, должно оказывать сильное влияние на результаты работы сотрудников. Эти восприятия могут также влиять на производительность сотрудников. Хотя предполагается, что воспринимаемые практики управления персоналом имеют сильную связь с результатами работы сотрудников, на самом деле не многие исследователи проверяли эту связь. Вместо этого исследования сосредоточивались на влиянии фактических практик или систем управления персоналом на отношение и поведение или на роли восприятия одной конкретной практики, а не на комбинации практик. Чтобы учесть эти различия в интерпретации практик управления персоналом, в данном исследовании основное внимание будет уделено восприятию сотрудниками процесса адаптации персонала при практике управления персоналом.

Методология исследования

В рамках исследования использовался комплекс методов, обеспечивающий всесторонний анализ процессов адаптации персонала в телекоммуникационных компаниях Республики Казахстан с применением технологий искусственного интеллекта. Аналитический метод применялся для изучения научной литературы, нормативных документов, отраслевых отчетов и публикаций, посвящённых цифровой трансформации HR-процессов, что позволило выявить ключевые тенденции развития интеллектуальных систем обучения и адаптации. Комплексный подход обеспечил рассмотрение адаптации как взаимосвязанного комплекса процессов, включающего HR-администрирование, обучение, контроль эффективности, корпоративные коммуникации и ИТ-инфраструктуру. Для анализа использовались качественные и количественные методы: SWOT- и PESTEL-анализ, сравнительный анализ HR-показателей, оценка динамики текучести и времени выхода сотрудников на плановую производительность, статистическая обработка данных о прохождении адаптационных программ и использовании цифровых сервисов. Практический опыт телеком-компаний исследовался через кейс-анализ внедрения чатботов, рекомендательных систем, цифровых обучающих платформ и сервисов самообучения, что позволило оценить влияние ИИ на снижение нагрузки HR-специалистов и повышение качества адаптации. Комплексное применение методов позволило глубоко изучить объект исследования и сформировать

рекомендации по оптимизации адаптационных процессов, повышению вовлеченности сотрудников и формированию устойчивой модели цифровой адаптации на базе ИИ в телекоммуникационной отрасли Казахстана.

Результаты и обсуждения

АО «Казахтелеком» предоставляет своим сотрудникам социальную поддержку, инвестирует в программы обучения и развития работников, стремится улучшать условия труда. С целью привлечения в компанию цифровых талантов, выстраивают многоступенчатую программу по обеспечению кадрами, активно работая с вузами.

Компания продолжает реализацию проекта «Управление талантами», целью которого является формирование и подготовка кадрового резерва, как основного внутреннего источника замещения ключевых должностей в Компании.

В компании АО «Казахтелеком» существует программа Бадди для адаптации новых работников АО «Казахтелеком» разработанная в соответствии с Трудовым Кодексом Республики Казахстан, иными нормативными правовыми актами Республики Казахстан, а также Коллективным договором и другими внутренними документами АО «Казахтелеком».

Фактически в компании данной программой мало кто пользуется, данная программа не показала ожидаемую эффективность, в виду того что Бадди имеет следующие недостатки:

- Не всегда опытный сотрудник и обладает нужными педагогическими навыками, чтобы грамотно объяснить материал.
- Довольно сложно подобрать новичку бадди, который совпадал бы с ним по мировоззрению и темпераменту. Чтобы пары совпали, HR должен обладать отличными навыками психолога.
- Компания не всегда правильно оценивает работу по методу «баддинг». У работника появляется дополнительная нагрузка, которую нужно поощрять финансово. Не все организации это понимают, и они дают роль бадди без поощрения.
- Компания не всегда учитывает, что опытный коллега тратит своё время на обучение. Иногда «партнёр» должен уделить много времени новому сотруднику, из-за чего не успевает выполнить повседневные задачи и срывает дедлайны.
- Чтобы метод «баддинг» был эффективным, сотрудников нужно обучать этому. Это требует дополнительных финансовых вложений.

Также в ходе исследования процесса адаптации в АО «Казахтелеком» выяснилось, что дивизионы и филиалы самостоятельно разрабатывают программу адаптации. Подходы существенно различаются между регионами и подразделениями. Что касается информации для новичков, то материалы хранятся в разрозненных источниках: облачные папки, документы в различных БРД, переписка в чатах. HR-

специалисты по несколько раз в день отвечают на десятки однотипных вопросов. В итоге новые сотрудники начинают приносить пользу компании позже и иногда теряют мотивацию уже в первые недели.

Практическая значимость внедрения искусственного интеллекта в процесс адаптации персонала существенно усиливается за счёт развития экосистемы «Портал сотрудника» и интеллектуального помощника ktbot. Интеграция адаптационных сервисов в единый цифровой портал обеспечивает прозрачность процессов, автоматизацию ключевых HR-функций, доступ к персонализированным обучающим материалам и оперативную коммуникацию между сотрудниками и компанией. Благодаря ktbot сотрудники получают мгновенные ответы на вопросы, сопровождение в прохождении адаптационных модулей, напоминания о задачах и доступ к актуальным знаниям, что снижает нагрузку на HR-специалистов и ускоряет вхождение в должность. Использование алгоритмов ИИ позволяет формировать индивидуальные траектории обучения, прогнозировать риски ранней текучести, адаптировать контент под профиль должности и динамику прогресса.

Внедрение цифровой экосистемы создаёт ряд ключевых эффектов:

- Сокращение периода адаптации и рост производительности новых сотрудников за счёт персонализированного обучения и круглосуточной цифровой поддержки.
- Снижение нагрузки на наставников и HR-команды благодаря автоматизации консультаций, ответов на типовые вопросы и контроля прохождения программ.
- Повышение вовлечённости и удовлетворённости персонала, поскольку общение с компанией становится быстрым, удобным и предсказуемым.
- Улучшение качества данных и управленческих решений благодаря сбору аналитики о поведении сотрудников, проблемных зонах и эффективности контента.
- Рост организационной гибкости и устойчивости HR-процессов за счёт масштабируемости и самообучения алгоритмов.

Развитие «Портала сотрудника» и ktbot формирует современную цифровую HR-экосистему, которая обеспечивает комплексный технологический, организационный и экономический эффект, снижает затраты на адаптацию и укрепляет конкурентоспособность телекоммуникационных компаний Казахстана

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Слияния и поглощения в телеком-секторе Казахстана: трансформация операторов

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Аннотация

В статье рассматриваются процессы слияния и поглощения компаний в телекоммуникационном секторе Республики Казахстан на примере объединения двух мобильных операторов «Altel» и «Tele2» в 2016 году.

Объединение рассматривается в контексте технологических, экономических и институциональных факторов, характерных для развития телекоммуникационной отрасли Казахстана.

На основе теорий стратегического управления, экономики сетей и международной практики M&A выявлено, что сделка была обусловлена необходимостью масштабирования инфраструктуры LTE, оптимизации затрат и повышения устойчивости рынка. Анализ показывает, что консолидация привела к существенным технологическим и экономическим синергиям и способствовала формированию устойчивой модели конкуренции в отрасли.

Сделан вывод о том, что слияние операторов способствовало укреплению национального телекоммуникационного потенциала и стало важным этапом в развитии цифровой экосистемы Казахстана.

Ключевые слова: «АО Казахтелеком», слияние, поглощение, телекоммуникации, Altel, Tele2

Введение и обзор литературы

Телекоммуникационная отрасль представляет собой одну из ключевых основ цифровой экономики, обеспечивая доступ к информационным услугам, инновационным технологиям и цифровой инфраструктуре.

Период начала 2010-х годов стал для глобального рынка связи этапом ускоренного технологического развития, связанного с внедрением мобильного интернета, переходом к стандарту LTE и увеличением потребления данных на фоне стагнации традиционных услуг голосовой связи. Эти тенденции усилили значимость масштабирования сетевой инфраструктуры, оптимизации затрат и укрепления конкурентных преимуществ операторов.

Казахстанский телеком-рынок развивался в русле мировых тенденций, однако обладал структурными особенностями: большой территорией, низкой плотностью населения, высокой капиталоемкостью строительства сетей и ограниченностью частотного ресурса. В этих условиях формирование устойчивой отраслевой структуры требовало укрупнения операторов.

Слияние Altel и Tele2 в 2016 году стало стратегически значимым событием, определившим последующий вектор развития отрасли. Сделка позволила объединить ресурсы и компетенции двух операторов, обеспечив возможность масштабирования сетей, снижения затрат и ускоренного внедрения

LTE. В то же время, анализ данной консолидации в научной литературе ограничен, что определяет актуальность настоящего исследования.

Актуальность исследования обусловлена активной трансформацией телекоммуникационного сектора Республики Казахстан, в частности консолидацией национальных операторов связи под управлением АО «Казахтелеком». Объединение компаний Altel и Tele2 стало одним из наиболее значимых примеров реализации M&A в отечественной практике, продемонстрировавших стратегическое стремление к укреплению рыночных позиций и формированию единой цифровой среды. Подобные процессы оказывают существенное влияние не только на структуру рынка, но и на динамику его развития, конкурентные преимущества и инновационный потенциал отрасли.

Целью настоящей статьи является исследование особенностей и последствий слияния и поглощения операторов Altel и Tele2 под управлением АО «Казахтелеком», а также определение их влияния на развитие национального телекоммуникационного рынка. Рассмотрение данного кейса позволяет оценить, как интеграционные процессы в телеком-сфере способствуют укреплению позиций ведущего оператора, повышению качества услуг и формированию устойчивой цифровой экосистемы в Республике Казахстан.

Обзор литературы. Современные исследования в области слияний и поглощений подтверждают, что данные процессы являются одним из ключевых инструментов стратегической трансформации компаний, особенно в высокотехнологичных и капиталоемких отраслях, к которым относится телекоммуникационный сектор. В научных трудах отечественных и зарубежных авторов подчеркивается, что успешность подобных сделок определяется не только экономическими и финансовыми факторами, но и эффективностью управленческих систем, стратегическим подходом и способностью компаний адаптироваться к изменениям внешней среды.

Так, В.М. Мишин отмечает, что для обеспечения устойчивости бизнеса в условиях цифровой трансформации необходима четко выстроенная система управления, способная оперативно реагировать на технологические и организационные изменения. Его подход особенно актуален для телекоммуникационного сектора Казахстана, где слияние компаний Altel и Tele2 под управлением АО «Казахтелеком» потребовало пересмотра структуры управления, интеграции информационных систем и согласования стратегических целей (В.М. Мишин 2023).

В свою очередь, В.Н. Родионова рассматривает M&A как важнейший элемент стратегического менеджмента, направленный на усиление конкурентных преимуществ и расширение присутствия компании на рынке. Она подчеркивает, что подобные сделки должны рассматриваться не как разовые финансовые операции, а как часть долгосрочной стратегии развития, что напрямую соотносится с процессами консолидации в казахстанском телеком-секторе, ориентированными на укрепление национального цифрового потенциала (В.Н. Родионова 2022).

М.А. Шермет делает акцент на управлении изменениями, рассматривая интеграционные процессы как серьезный вызов для корпоративной культуры и системы внутреннего взаимодействия. Ее идеи находят отражение в практике АО «Казахтелеком», где успешная интеграция операторов Altel и Tele2 потребовала формирования новой организационной модели и выстраивания единых стандартов обслуживания (М.А. Шермет 2019).

С точки зрения корпоративной экономики, Н.И. Кондратьев определяет слияния и поглощения как форму стратегического объединения капитала, направленную на достижение эффекта синергии и повышение эффективности бизнеса. Его выводы применимы к телекоммуникационной отрасли Казахстана, где объединение операторов связи позволило повысить масштабность инфраструктуры и конкурентоспособность национального оператора (Н.И. Кондратьев 2015).

В.В. Бочаров подчеркивает, что финансовая оценка М&А должна включать не только анализ текущей выгоды, но и прогнозирование долгосрочных эффектов, связанных с инновациями, ростом рыночной стоимости и повышением устойчивости бизнеса. Этот подход важен для понимания финансовых последствий объединения Altel и Tele2, повлекшего за собой оптимизацию затрат, рост доходов и усиление инвестиционной привлекательности АО «Казахтелеком» (В.В. Бочаров 2018).

В контексте телекоммуникационного сектора Казахстана данная концепция приобретает особую актуальность, поскольку объединение операторов под управлением АО «Казахтелеком» стало примером эффективного использования М&А для построения современной цифровой экосистемы и укрепления национальной конкурентоспособности.

Результаты и обсуждения

Сделки слияния и поглощения представляют собой один из ключевых инструментов корпоративного развития, позволяющий компаниям адаптироваться к изменяющимся рыночным условиям, укреплять конкурентные позиции и достигать долгосрочных стратегических целей. Их основное преимущество заключается не только в объединении активов, но и в формировании новой, более эффективной организационной структуры, сочетающей управленческие, финансовые и технологические ресурсы участников.

Главной стратегической задачей М&А является достижение синергетического эффекта, когда совокупный результат совместной деятельности компаний превышает эффективность их самостоятельного функционирования. В зависимости от рыночной конъюнктуры и текущего состояния предприятий такие сделки могут быть направлены на укрепление рыночных позиций, оптимизацию финансовых расходов, расширение географического присутствия, получение доступа к инновационным технологиям, а также на диверсификацию направлений бизнеса и повышение устойчивости компании в условиях конкурентной среды рисунок 1.

Структурирование сделок М&А: Покупка активов (Assets Purchase)



Рисунок 1

Структурирование сделок слияний и поглощений при покупке активов

Примечание: составлено на основе источника (Фрэнк, 2016)

Коммерческая логика подобных сделок состоит в поиске устойчивых источников роста и прибыли. Путем объединения ресурсов, предприятия получают возможность снижать операционные расходы и минимизировать риски в управлении. Для многих компаний М&А становится стратегической альтернативой органическому росту, который требует больших временных и финансовых затрат.

Сделки по слияниям и поглощениям играют важную роль в формировании структуры современного рынка, позволяя компаниям объединять ресурсы, знания и капитал для повышения конкурентоспособности. Однако их последствия неоднозначны: они могут способствовать росту эффективности и инноваций, но одновременно создавать риски для конкурентной среды.

Основная цель М&А достижение синергетического эффекта, когда совокупная стоимость объединенной компании превышает сумму стоимостей участников до сделки. Этот эффект проявляется через снижение издержек, объединение технологий, оптимизацию управления и расширение рыночной доли.

В телекоммуникационном, банковском и IT-секторах такие объединения способствуют ускоренному внедрению инноваций и сокращению инфраструктурных расходов, тогда как в промышленности и транспорте они направлены преимущественно на модернизацию мощностей и улучшение логистики.

В 2016 году на телекоммуникационном рынке Казахстана состоялось одно из наиболее значимых событий объединение активов АО «Казахтелеком» (АО «АЛТЕЛ», бренд ALTEL) и шведской компании

Tele2 Sverige AB (ТОО «Мобайл Телеком-Сервис», бренд Tele2 Kazakhstan). Сделка ознаменовала создание нового совместного предприятия, управляющего двумя брендами Tele2 и ALTEL.

Цель объединения заключалась в укреплении конкурентных позиций и формировании мощного «третьего игрока» на рынке, способного конкурировать с лидерами Beeline Казахстан (доля рынка 37%) и Kcell (доля рынка 42%). Консолидация позволила объединенной компании достичь более 6 миллионов абонентов и занять порядка 20% рынка мобильной связи, а также получить контроль над 80% рынка мобильного интернета. Это обеспечило технологическое лидерство и расширение покрытия сети LTE (4G) по всей территории страны.

Сделка основывалась на принципе синергии объединение инфраструктуры, опыта и технологий обеих сторон. Tele2 Sverige AB внесла международный опыт управления и инвестирования, а «Казахтелеком» развитую инфраструктуру и знание национального рынка. В результате создавалась более эффективная и инновационная структура, ориентированная на развитие цифровых сервисов.

Согласно условиям соглашения, АО «Казахтелеком» становится собственником 51% общего уставного капитала совместного предприятия и 49.48% голосующих акций; Tele2 SVERIGE AB становится собственником 49% общего уставного капитала совместного предприятия и 50.52% голосующих акций, при сохранении обоих брендов для минимизации рисков потери клиентов. На момент объединения абонентская база ALTEL составляла около 1,9 млн абонентов (доля рынка 6%), а Tele2 - 4,2 млн абонентов (доля рынка 15%), что позволило новому оператору занять устойчивую третью позицию на рынке.

В таблице 1 представлен SWOT-анализ сделки Altel–Tele2, отражающий сильные и слабые стороны интеграции, а также ключевые возможности и угрозы для компаний. Оценка факторов проводилась по шкале от 1 до 5, где 1 - слабое влияние, 5 - сильное.

Таблица 1

SWOT-анализ к сделке Altel–Tele2 АО «Казахтелеком»

Сильные стороны	Оценка (1-5)	Слабые стороны	Оценка (1-5)
Синергия сетей и частотного спектра Altel и Tele2	5	Необходимость значительных инвестиций в унификацию систем и оборудования	3
Объединенная компания становится одним из лидеров отрасли	5	Культурные и управленческие различия между компаниями	3
Опыт и ресурсы АО «Казахтелеком»	4	Риск потери части абонентов при ребрендинге	3
Сокращение дублирующих затрат и управленческих издержек	4	Основная прибыль по-прежнему сосредоточена в мобильном сегменте	2
Масштабирование 4G и подготовка базы для новых технологий/	5	Сложности с локализацией оборудования и программных решений	3

цифровых сервисов на базе объединенной сети			
Итого	23	Итого	14
Возможности	Оценка (1-5)	Угрозы	Оценка (1-5)
Развитие сетей 4/5G и цифровых сервисов	5	Усиление конкуренции со стороны Beeline и Kcell путем объединения ресурсов	4
Расширение на региональные рынки Центральной Азии	4	Усиление регуляторного и антимонопольного контроля	3
Рост спроса на мобильный интернет и цифровизацию экономики	5	Технологические киберугрозы и утечки персональных данных	4
Государственная поддержка цифровизации Программы «Цифровой Казахстан» создают благоприятную среду	4	Удорожание импортного оборудования и лицензий	3
Партнерства с ИТ-компаниями	4	Риск устаревания технологий без своевременных инвестиций	4
Итого	22	Итого	18

Примечание: составлено автором на основе проведенного исследования

Сделка по объединению мобильных активов АО «Казахтелеком» и Tele2 Sverige AB стала стратегическим шагом. Основная цель — формирование устойчивого и конкурентоспособного оператора с современной технологической базой и оптимизированным управлением.

Технологическая ситуация характеризовалась необходимостью масштабирования LTE. Altel запустил первую в стране сеть 4G ещё в 2012 году, но покрытие оставалось ограниченным. Tele2 обладал растущей абонентской базой, но испытывал дефицит частотного ресурса и отсутствие возможности ускоренного внедрения 4G. На фоне стремительного роста трафика и необходимостью внедрения новых технологий, потребность в крупных инвестициях становилась критической.

Объединение активов позволило обеим сторонам достичь баланса интересов, повысить операционную эффективность и обеспечить долгосрочный рост компаний. Сделка стала примером успешного международного партнерства, которое способствует развитию телекоммуникационной отрасли страны и усилению ее цифрового потенциала.

Потенциальное объединение с Tele2 Sverige AB соответствовало стратегии АО «Казахтелеком» по укреплению лидерства на телекомрынке Казахстана. Сделка обеспечила бы рост в сегменте фиксированной и мобильной связи, повышение операционной эффективности и внедрение международных практик. Синергия инфраструктуры и клиентской базы способствовала бы снижению затрат, ускорению цифровой трансформации и укреплению конкурентных позиций компании.

Объединение мобильных бизнесов АО «Казахтелеком» и Tele2 Sverige AB предусматривало создание совместного предприятия для укрепления позиций на рынке связи и достижения синергии доходов и расходов. Сделка открывала возможности перекрестных продаж и расширения клиентской базы, а также

сокращения капитальных затрат за счет совместного использования инфраструктуры. Холдинг Khan Tengri Holding B.V. (Нидерланды) стал управляющей структурой с долями 51% у «Казахтелекома» и 49% у Tele2. Проект способствовал развитию сетей, повышению эффективности и ускорению цифровой трансформации компании.

Казахстанский опыт M&A в телеком-секторе, особенно объединение АО «Алтел» (ALTEL) и ТОО «МТ-С» (Tele2 Kazakhstan) под управлением АО «Казахтелеком», стал примером успешной стратегической интеграции. Сделка укрепила позиции национального оператора, расширила клиентскую базу и ускорила развитие сетей 4G и 5G. Благодаря синергии ресурсов удалось повысить эффективность, сократить издержки и стимулировать цифровизацию в рамках программы «Цифровой Казахстан». Этот пример показал, что сделки M&A способны не только усиливать конкуренцию, но и служить драйвером технологического и экономического роста отрасли.

В таблице 2 представлены основные практические выводы из казахстанского опыта M&A в телеком-секторе.

Таблица 2

Основные практические выводы из казахстанского опыта M&A в телеком-секторе

Направление	Практическая значимость
Интеграция операторов связи	Повышена эффективность работы и позволила снизить издержки за счет объединения сетей и персонала
Финансовая устойчивость	Разработаны инструменты контроля долговой нагрузки и управления рисками для крупных телеком-компаний
Международное сотрудничество (Tele2 SVERIGE AB)	Внедрены современные бизнес-модели, клиентский сервис и стандарты корпоративного управления
Развитие цифровой инфраструктуры	Обеспечены предпосылки для внедрения 5G, развития IoT и Smart City-проектов.
Регуляторный и инвестиционный эффект	Опыт может быть использован при разработке национальной стратегии M&A и привлечении зарубежных инвесторов

Примечание: составлено автором на основе анализа деятельности АО «Казахтелеком» и материалов Tele2 SVERIGE AB

Заключение

Практическая значимость этого опыта заключается и в его использовании на уровне государственного управления. Для регуляторов сделка стала источником аналитических данных и практических выводов, которые необходимы при разработке новых правил антимонопольного регулирования, оценке экономических эффектов консолидации и планировании мер по стимулированию цифровой трансформации. Государственные органы получили возможность анализировать влияние M&A на конкуренцию и пересматривать цены на услуги и качество обслуживания.

Объединение Altel и Tele2 стало ключевым событием в развитии телеком-рынка Казахстана.

Сделка была обусловлена структурными, технологическими и экономическими факторами, характерными для периода 2013–2016 годов. Консолидация обеспечила повышение инвестиционной ёмкости, технологическую модернизацию, укрепление конкуренции и создание платформы для будущего внедрения 5G.

Анализ показывает, что данная консолидация полностью соответствует международным тенденциям и является примером успешного отраслевого развития.

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Цифровая трансформация бизнеса. Переход на self-service

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Аннотация

В исследовании рассматриваются особенности и эффективность цифровой трансформации бизнеса в банковском и телекоммуникационном секторах Республики Казахстан с акцентом на внедрение моделей самообслуживания (self-service). Целью является формирование устойчивой, инновационной и клиентоориентированной модели функционирования компаний, основанной на цифровых технологиях и инструментах искусственного интеллекта. В работе анализируются теоретико-методологические основы цифровой трансформации, текущее состояние внедрения self-service сервисов, а также их влияние на клиентский опыт, операционную эффективность и финансовые результаты организаций.

В работе раскрывается сущность цифровой трансформации, анализируются ее этапы, инструменты и влияние на конкурентоспособность компаний. Рассматриваются преимущества внедрения систем самообслуживания для бизнеса и потребителей, а также выявляются основные риски и барьеры перехода на self-service.

Научная новизна исследования состоит в формировании интегрированной модели цифрового самообслуживания, ориентированной на специфику казахстанского рынка и предназначенной для применения в деятельности организациях по оказанию услуг, в т.ч. банков и АО «Казахтелеком». В рамках модели предлагается объединить ключевые корпоративные системы (ERP и CRM), внедрить интеллектуальные модули на основе искусственного интеллекта и создать единую цифровую платформу self-service для клиентов (ERP+CRM+AI+Self-service). Такой подход позволяет по-новому выстроить процессы цифрового взаимодействия с абонентами, обеспечивая более высокую прозрачность, автоматизацию и персонализацию сервисов, а также формируя критерии оценки эффективности цифровых трансформаций в телекоммуникационной и банковской отрасли.

Практическая значимость работы заключается в определении эффективных механизмов цифровой адаптации организаций, позволяющих повысить качество клиентского опыта, ускорить процессы обслуживания и укрепить рыночные позиции предприятия в условиях цифровой экономики. Полученные выводы и рекомендации направлены на повышение уровня автоматизации бизнес-процессов, сокращение издержек, совершенствование клиентского сервиса и укрепление конкурентоспособности на рынке цифровых услуг.

Ключевые слова: цифровая трансформация, self-service, банковский сектор, телекоммуникационный сектор, цифровая экономика, искусственный интеллект, автоматизация, клиентский опыт

Введение

Современный этап развития мировой экономики характеризуется стремительным ростом цифровых технологий, которые оказывают значительное влияние на все сферы бизнеса. Цифровая трансформация становится неотъемлемой частью стратегического развития организаций, обеспечивая им конкурентные преимущества и открывая новые возможности для взаимодействия с клиентами.

Одним из ключевых направлений цифровизации является внедрение концепции self-service - систем самообслуживания, позволяющих пользователям самостоятельно выполнять различные операции без участия сотрудников компании. Такой подход способствует повышению эффективности бизнес-процессов, снижению затрат, ускорению обслуживания и росту удовлетворенности клиентов.

Переход на self-service тесно связан с изменением бизнес-моделей, формированием новых каналов коммуникации и автоматизацией процессов. Для успешной реализации цифровой трансформации необходима комплексная стратегия, включающая технологические, организационные и культурные изменения.

Актуальность выбранной темы обусловлена тем, что в условиях цифровой экономики способность компаний адаптироваться к новым технологиям становится решающим фактором их устойчивого развития. Изучение опыта внедрения self-service и его влияния на эффективность бизнеса представляет значительный интерес как с теоретической, так и с практической точки зрения.

Цель исследования – проанализировать процессы цифровой трансформации бизнеса и определить роль self-service как инструмента повышения эффективности и конкурентоспособности организации.

Цифровая трансформация выступает не просто внедрением технологий, а фундаментальным изменением подходов к управлению, обслуживанию и взаимодействию с клиентами. Внедрение self-service позволяет компаниям оперативно реагировать на изменения рыночных условий, предоставлять клиентам больший контроль над процессами и повышать качество сервиса. Кроме того, самообслуживание способствует развитию цифровой культуры как внутри организации, так и среди потребителей.

Обзор литературы

В современных научных исследованиях цифровизация рассматривается как ключевое направление эффективного развития цифровой экономики. Она выступает фундаментом цифровой трансформации и определяет переход от традиционных форм предоставления информации к цифровым, направленным на повышение эффективности бизнес-процессов, ускорение обмена данными и повышение уровня автоматизации (Чен, 2018).

Большое внимание данному процессу уделяется в исследованиях зарубежных, российских и казахстанских авторов, которые рассматривают трансформацию бизнес-моделей банков, внедрение инновационных решений и адаптацию традиционных финансовых инструментов к цифровой среде. По

мнению многих зарубежных исследователей, использование цифровых технологий способствует улучшению взаимодействия между банками, государством и клиентами. При этом сокращается количество отделений, а услуги, включая кредитование и инвестирование, становятся доступны онлайн. Инновационное развитие рассматривается как ключевой фактор устойчивого роста и эффективности банков (Galazova и Magomaeva, 2020).

Казахстанские ученые уделяют особое внимание развитию цифрового банкинга, который представляет собой предоставление банковских услуг через интернет, мобильные приложения, банкоматы и другие цифровые каналы. Цифровой банкинг позволяет снизить издержки и повысить качество обслуживания клиентов, обеспечивая удобство и точность операций (Мартыненко, Ащеулова и Малик, 2023).

Д.Н. Кулумбетова, Н.Х. Маулина и А.Б. Асанова отмечают, что цифровая трансформация банковского сектора — неизбежный процесс, оказывающий влияние на методы предоставления финансовых услуг. Внедрение онлайн-банкинга, мобильных приложений и других цифровых инструментов значительно повышает доступность банковских услуг и эффективность финансовых операций (Кулумбетова, Маулина и Асанова, 2021).

Ю.Б. Бубнова подчеркивает, что цифровая трансформация требует не только внедрения технологий, но и глубокого пересмотра бизнес-процессов, стратегического планирования и подходов к клиентскому сервису. Внедрение искусственного интеллекта, чат-ботов и анализа больших данных позволяет повысить операционную эффективность и удовлетворенность клиентов (Бубнова, 2022).

Анализ литературы показывает, что цифровизация оказывает комплексное воздействие на банковскую сферу, затрагивая как технологические, так и управленческие аспекты. Она требует развития цифровых компетенций, внедрения инноваций и обеспечения безопасности данных. В будущем банки, по мнению большинства исследователей, продолжат интеграцию цифровых решений, ориентируясь на потребности клиентов и обеспечивая устойчивое развитие финансового сектора.

Методология исследования

В исследовании использовалась совокупность методов, направленных на комплексное изучение цифровой трансформации и внедрения self-service технологий в банковском и телекоммуникационном секторах Казахстана. Применялись вторичные источники данных - официальная статистика, аналитические отчеты и корпоративные документы компаний. Основными методами стали контент-анализ, позволивший выявить направления внедрения цифровых решений и уровень зрелости компаний; сравнительный анализ, использованный для определения сходств и различий процессов цифровизации в разных отраслях; а также экономико-аналитический метод, примененный для оценки влияния цифровых изменений на финансовые

результаты и клиентскую активность. Комплексное использование этих методов обеспечило достоверность и объективность выводов исследования.

Результаты и обсуждения

В условиях цифровой экономики self-service становится ключевым элементом бизнес-трансформации, позволяя клиентам самостоятельно получать услуги через удобные цифровые каналы. Суть этого подхода заключается в предоставлении пользователям простых инструментов для решения аналитических и операционных задач без участия специалистов. Основные формы self-service включают мобильные приложения, веб-порталы, терминалы и интерактивные голосовые системы, обеспечивающие доступ к услугам в любое время.

Внедрение self-service способствует оптимизации бизнес-процессов, снижению затрат и повышению удовлетворенности клиентов. Компании, использующие этот подход, формируют клиент-ориентированные цифровые платформы, где пользователь становится активным участником создания ценности. Таким образом, self-service выступает важным драйвером цифровой трансформации, повышая эффективность, гибкость и конкурентоспособность бизнеса.

Банковский сектор Казахстана активно переходит от традиционной модели с обслуживанием в отделениях к цифровому формату, основанному на онлайн-каналах, мобильных приложениях и self-service решениях. Рост цифровизации связан с распространением смартфонов, ожиданиями клиентов и государственной поддержкой. Все больше операций проводится онлайн, а банки создают «супер-приложения», объединяющие финансовые, государственные и сервисные функции.

Важную роль играют технологии искусственного интеллекта, большие данные и автоматизация, которые повышают эффективность и удобство обслуживания. Self-service становится не просто цифровым инструментом, а новой моделью взаимодействия, где клиент самостоятельно управляет услугами. Ярким примером цифровой трансформации в Казахстане является АО «Народный банк Казахстана», успешно внедривший передовые технологии самообслуживания в мобильном приложении.

АО «Народный Банк Казахстана» активно развивает цифровые сервисы, позволяя клиентам выполнять все операции онлайн через приложение Halyk (Homebank) — от открытия карты и получения кредита до оплаты услуг. Банк предлагает экосистему цифровых решений: Kino.kz, Halyk Market, Halyk Travel и др., а для бизнеса — Onlinebank, Halyk Leasing, Kazteleport.

У банка более 8 млн пользователей и 150 млн посещений в месяц, доступно 56 видов онлайн-сервисов и госуслуг. Среди инноваций — детская карта Halyk Easy, система самоэмбоссеров для самостоятельного выпуска карт, переводы Alias по номеру телефона и биометрическое подтверждение операций (FaceID/TouchID).

Особое внимание уделяется цифровым документам клиенты могут использовать 18 видов документов из egov.kz прямо в приложении. Внедрение искусственного интеллекта повысило персонализацию и скорость обслуживания, сделав Halyk одним из лидеров цифрового банкинга Казахстана наряду с Kaspi.kz, в Мобильном приложении которого порядка 14.2 млн пользователей, а в Kaspi Pay порядка 700 тыс партнеров.

Kaspi Bank превратился из традиционного банка в цифровую экосистему с супераппом, объединяющим платежи, кредиты, маркетплейс и lifestyle-сервисы. Клиенты могут самостоятельно открывать счета, оформлять продукты и управлять финансами через мобильное приложение без обращения в отделение. Искусственный интеллект используется для скоринга, персональных предложений и автоматизации процессов, что обеспечивает мгновенные решения и высокую точность оценки рисков.

АО «Jusan Bank» (ныне Alatau City Bank) также активно развивает цифровую экосистему. В его приложении объединены услуги дочерних компаний - Jusan Garant, Jýsan Invest и маркетплейс Jmart. Банк инвестирует в развитие мобильного и интернет-банкинга, предоставляя клиентам полный набор финансовых и нефинансовых сервисов в онлайн-формате.

Анализ цифровых услуг АО «Jusan Bank» за 2021–2023 годы, представленный в работе, показывает устойчивый рост пользователей и активное развитие онлайн-сервисов. Повышается популярность мобильного банкинга, увеличиваются объемы безналичных и бесконтактных платежей, снижается использование наличных. Банк модернизировал IT-инфраструктуру, сократил время проведения операций и усилил меры кибербезопасности. Внедрение технологий AI, Big Data и блокчейна улучшило качество обслуживания и удобство интерфейса. Jusan Bank стал одним из лидеров цифровой трансформации в Казахстане, предлагая клиентам широкие self-service решения для физических и юридических лиц.

Цифровизация телеком-отрасли Казахстана развивается в рамках национальной программы «Цифровой Казахстан» и стратегии «Национальное развитие – 2030». Ведущие операторы АО «Казахтелеком», Kcell и Tele2 активно внедряют мобильные платформы, личные кабинеты и интеллектуальные системы самообслуживания, направленные на повышение качества клиентского опыта и эффективности бизнес-процессов.

АО «Казахтелеком» реализует масштабные проекты по модернизации сетей, внедрению 5G и технологии виртуализации NFV, а также развивает направления Big Data, AI и IoT. Компания активно использует Scrum-методологию, создает цифровые сервисы, чат-боты и платформы для обработки больших данных, что улучшает обслуживание клиентов и снижает издержки. Особое внимание уделяется развитию решений Smart City и корпоративных IoT-платформ.

Kcell делает ставку на развитие self-service решений, мобильного приложения и корпоративных кабинетов, позволяющих управлять услугами онлайн. Компания внедряет цифровую идентификацию,

электронную подпись и омниканальные каналы обслуживания, что повышает удобство для пользователей и снижает нагрузку на офисную инфраструктуру.

Tele2 также активно развивает мобильные сервисы, чат-боты и личные кабинеты, стремясь к повышению цифровизации клиентских каналов и оптимизации затрат. В целом, телеком-компания Казахстана демонстрируют устойчивый тренд к цифровой трансформации и переходу на модели дистанционного самообслуживания таблица 1.

Таблица 1

Сравнительный анализ цифровой трансформации операторов телекоммуникационного сектора Казахстана

Оператор	Цифровые сервисы	Внедренные /автоматизационные инструменты	ИИ-	Публичные метрики (2022-2024)
АО «Казахтелеком» (ar2024.telecom.kz)	Личный кабинет / мобильное приложение, онлайн-чат («live-chat») на сайте и в приложении, платформа ismet.kz (B2B и B2G сервисы, самообслуживание)	Чат-боты и робот Omilia (обработку запросов, в том числе голосовых); Big Data / аналитика / автоматизация документов и поведенческих моделей		В розничном сегменте выручка 2023: KZT 144.5 млрд, рост ARPU +13.8% Доля продаж через цифровые каналы 2024: 16% от общего объема продаж KZT 1 565 млн В 2023 г: агентский показатель (AP) 97% и tNPS 84%
Kcell JSC (KASE)	Мобильное приложение и личные кабинеты (B2C и B2B), омниканальные каналы обслуживания, цифровая платформа с биллинг-системой Nexign (унифицированная)	Корпоративные решения с цифровой идентификацией, чат-боты, сервисы онлайн-подключения услуг, аналитика данных клиентов; 5G-покрытие как база цифровых сервисов		Выручка за 2024: KZT 241.3 млрд (+6% год к году) 5G-устройства среди пользователей достигли 27.4%
Tele2 Kazakhstan (Тадвизор)	Онлайн-каналы коммуникации с клиентами через WhatsApp Business, цифровые запросы, чат-боты для обработки типовых обращений	Разработка ИИ-решений на базе суперкомпьютера (партнерство с NITEC) для распознавания речи, обработки данных, аналитики клиентов (анонсирован 2025, но подготовительная работа 2024)		Цифровые каналы составляют 15% всех клиентских запросов (проект WhatsApp)

Практические кейсы цифровизации телеком-операторов Казахстана включают внедрение чат-ботов в мессенджерах и интеграцию self-service функций в мобильные приложения - пополнение баланса,

активацию тарифов, диагностику сети и обращение в поддержку. Это ускоряет решение типовых задач и снижает нагрузку на офисы и колл-центры.

Во всех компаниях ИИ применяется для автоматизации, персонализации и предиктивного анализа. Чат-боты, интегрированные с CRM и биллингом, позволяют клиентам совершать операции прямо в диалоге, а предиктивная аналитика помогает прогнозировать сбои и потребности клиентов.

С 2022 по 2024 годы отмечается рост доли цифровых обращений, активности в приложениях и снижение операционных затрат. Однако цифровизация сопровождается рисками необходимостью защиты персональных данных, соответствия нормативам, обеспечения кибербезопасности и устранения цифрового неравенства.

Для развития цифровой трансформации финансового сектора в Казахстане Национальный Банк совместно с профильными агентствами утвердил Концепцию развития Open API и Open Banking на 2023–2025 годы. Open Banking позволяет клиентам, с их согласия, предоставлять третьим сторонам доступ к банковским данным для удобного управления счетами, платежами и финансовым анализом. Основой выступает технология Open API международный стандарт обмена данными. Развитие FinTech и цифровых сервисов направлено на повышение эффективности банков, улучшение клиентского опыта и соблюдение регуляторных требований таблица 2.

Таблица 2

Взаимосвязь между основными проблемами банковского обслуживания и перспективами развития цифровых каналов и сервисов в банковском обслуживании клиентов

Проблемы		
Специфические риски	Недостаток финансирования	Перспективы
создание Единой биометрической системы (идентификация банковских клиентов), Цифрового профиля и сервиса «Знай своего клиента», высокотехнологичное управление рисками на основе SupTech и RegTech	создание базовых цифровых платформ и сервисов для использования всеми банками, вне зависимости от возможностей финансирования (Система быстрых платежей, Маркетплейс, Мастерчейн)	меры государственной поддержки цифровизации банковского рынка
повышение уровня финансовой грамотности банковских клиентов, развитие инструментов удаленной идентификации клиента, в том числе на основе биометрических параметров и цифровой электронной подписи	последовательная цифровизация банковского обслуживания: от использования платформ и сервисов НацБанка РК, повышения функциональности	востребованность цифровых каналов обслуживания среди клиентов

минимизация убытков от цифровизации на основе отбора наиболее востребованных сервисов	официального сайта банка до создания собственных каналов продвижения продуктов и услуг (мобильное приложение, цифровые платформы)	заинтересованность банков в сокращении операционных расходов
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Примечание: составлена автором на основе данных источника Обзорный доклад «Развитие Open API, Open Banking и экосистемы цифровых финансовых сервисов в РК» [Электронный ресурс]. — URL: <https://nationalbank.kz/ru/page/Digital-Financial-Infrastructure>.

Принимая во внимание клиентоориентированный подход в современном банковском обслуживании, необходимо увязать перспективные направления цифровизации банковских услуг с потребностями реальных и потенциальных клиентов. По данным исследования, проведенного Национальным банком Республики Казахстан, клиенты банков предпочитают использовать мобильные приложения при получении большинства продуктов и услуг.

Ключевым направлением модернизации банковской сферы является развитие цифровых экосистем и внедрение open banking, что обеспечивает интеграцию с FinTech-компаниями и создание персонализированных продуктов. Использование ИИ, машинного обучения и Big Data повышает эффективность и качество обслуживания. Развитие блокчейн-технологий и цифровых валют усиливает прозрачность и доступность финансовых операций. Особое внимание уделяется кибербезопасности и защите данных, требующим современных методов защиты и нормативной адаптации.

Взаимосвязь вопросов и ожиданий, связанных с цифровизацией банковских услуг, определяет вектор развития цифровых услуг в банковской сфере. Приоритетные направления развития цифровых сервисов обслуживания банковских клиентов также отражены в работе.



Рисунок 1

Модель цифровой платформы в архитектуре системы банковского обслуживания

Примечание: составлено автором на основе источника Магомаева, 2023)

Интенсификация и отбор банковских продуктов и услуг на базе цифровых платформ позволяет внедрять модели цифровых платформ в архитектуру банковской системы и гарантирует повышение качества банковских услуг (рисунок 1).

Модель цифровой платформы в архитектуре систем банковского обслуживания отражает важность бизнес-процессов на всех уровнях при организации и реализации банковских услуг. Цифровой фронт-офис — это витрина банковских продуктов и услуг, а обеспечение стабильности и надежности операций клиентов банка базируется на среднем и бэк-офисе.

Сравнительная таблица 4 демонстрирует ожидаемые направления влияния self-service на ключевые бизнес-показатели в двух отраслях. Числа примерные оценки улучшений после успешной реализации комплексного проекта.

Таблица 3

Сравнительное влияние внедрения self-service на банки и телеком-операторов (условные KPI изменения)

KPI / Показатель	Банки (Kaspi, Halyk и др.) — ожидаемое изменение	Телеком (Kcell, Tele2, Казахтелеком) — ожидаемое изменение	Комментарий
Доля digital-операций (pp)	+30...+40 п.п.	+20...+30 п.п.	Банки чаще переводят платежи/кредиты в приложение; телеком — поддержку и тарифные операции
Снижение OPEX	−30...−40%	−20...−30%	Банки получают более высокий мультипликативный эффект от digital-кредитования/маркетплейсов
Рост ARPU / дохода от клиента	+5...+12%	+4...+8%	Персонализация и cross-sell дают доход в обеих отраслях, но банки — больший потенциал продуктов
Изменение churn rate	−5...−12 п.п.	−3...−8 п.п.	Увеличение удобства снижает отток; эффект сильнее в банковском сегменте при качественной персонализации
NPS / удовлетворенность	+8...+15 пунктов	+4...+10 пунктов	Самообслуживание и скорость оказывают прямое влияние на лояльность
Время обработки типового запроса	−50...−80%	−30...−60%	Автоматизация сложнее в телеком (сеть/инфраструктура), но эффект все равно значительный

Примечание: составлено автором на основе обобщения открытых отчетов компаний и отраслевых оценок

Таблица 4

Ожидаемый эффект внедрения self-service и цифровой трансформации в банковском и телекоммуникационном секторах Республики Казахстан

Показатель	До внедрения	После внедрения
Скорость обработки заявки	2–24 часа	1–5 секунд
Доля online операций	40–55%	80–90%
Операционные издержки	100%	-30-40%
NPS (уровень лояльности)	40–55	65–80
Доля клиентов в mobile-эко	50–60%	80–95%

Интеграция ERP, CRM, AI и self-service в банковском и телеком-секторах Казахстана снижает операционные затраты, повышает автономность клиентов и усиливает конкурентоспособность компаний. Перенос большинства операций в цифровые каналы уменьшает расходы на филиалы и поддержку, ускоряет обслуживание и повышает доходы за счет персонализации. Для МСП такие решения упрощают доступ к финансам и услугам, способствуя развитию бизнеса и цифровой экономики страны.

В результате исследования установлено, что цифровизация с интеграцией ERP, CRM, AI и self-service значительно повышает эффективность, устойчивость и конкурентоспособность компаний. Такие технологии позволяют оптимизировать ресурсы, ускорять обслуживание и формировать клиентские экосистемы. Внедрение систем самообслуживания снижает расходы и повышает лояльность клиентов, а использование искусственного интеллекта улучшает аналитику, прогнозирование и персонализацию.

Практическая значимость работы состоит в разработке модели цифровой трансформации, адаптированной к реалиям Казахстана, которая может служить ориентиром для бизнеса при переходе к цифровым экосистемам. Рекомендовано развивать инфраструктуру, повышать цифровую грамотность населения, стимулировать внедрение инноваций и обеспечивать кибербезопасность.

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Покупка действующего оператора связи как стратегия развития АО «Казахтелеком»

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Аннотация

Телекоммуникационная отрасль Республики Казахстан является одним из ключевых стратегических секторов национальной экономики, формируя основу для внедрения инновационных технологий и интеграции страны в глобальное информационное пространство. В условиях усиления конкуренции и стремительного развития технологий 5G, IoT и Big Data перед отечественными телекоммуникационными компаниями встают новые вызовы, требующие адаптации бизнес-моделей и совершенствования стратегий.

Особое место в отрасли занимает АО «Казахтелеком», рассматривающее возможность расширения своей рыночной позиции посредством приобретения действующего оператора связи. Такой шаг, с экономической точки зрения, может способствовать укреплению конкурентных преимуществ компании, расширению абонентской базы и ускоренному внедрению цифровых технологий в деятельность предприятия.

В ходе исследования проведен комплексный анализ текущего состояния телекоммуникационного рынка Казахстана с использованием инструментов SWOT- анализа, а также анкетирование респондентов для выявления потребительских ожиданий. Результаты показали, что консолидация операторов способна оказать позитивное влияние на динамику развития отрасли, обеспечив рост рыночной доли, повышение уровня цифровизации и оптимизацию инвестиционной политики.

Таким образом, приобретение оператора связи представляется целесообразным направлением стратегического развития АО «Казахтелеком». Выводы исследования могут быть использованы при формировании долгосрочной стратегии компании и разработке отраслевых программ, направленных на укрепление позиций Казахстана в глобальном телекоммуникационном пространстве.

Ключевые слова: АО «Казахтелеком», телекоммуникационная отрасль, стратегия развития, оператор связи, цифровизация, цифровой Казахстан

Введение

Телекоммуникационная отрасль Республики Казахстан играет ключевую роль в развитии национальной экономики и цифровой трансформации общества. Она обеспечивает базовую инфраструктуру для предоставления качественной связи и служит фундаментом для функционирования новых сервисов, охватывающих широкий спектр сфер — от дистанционного образования и электронной коммерции до цифровых государственных услуг. В этом контексте стратегическое развитие телекоммуникационных компаний рассматривается не только как корпоративная, но и как

общенациональная задача, определяющая конкурентоспособность страны в глобальном информационном пространстве.

Исторически значимую позицию в Казахстане занимала фиксированная связь. По данным официальной статистики, число абонентов стационарной телефонии составляет порядка 2,5 млн человек. Однако динамика последних лет демонстрирует устойчивое сокращение ее доли в структуре рынка. На первый план выходит мобильная связь, которая становится основным драйвером отрасли.

1.1 Актуальность темы данной работы. Актуальность исследования обусловлена возрастающей ролью телекоммуникационной отрасли в социально-экономическом развитии Республики Казахстан и формировании цифровой экономики. Современные тенденции свидетельствуют о том, что телекоммуникации перестали быть исключительно сферой предоставления услуг связи: они становятся системообразующим фактором, обеспечивающим эффективное функционирование ключевых отраслей — от образования и здравоохранения до финансового сектора и государственного управления.

Дополнительным фактором актуальности является трансформация потребительского поведения. Снижение доли фиксированной связи и рост мобильных сервисов, сопровождающийся увеличением количества абонентов и их цифровых запросов, формирует новые требования к качеству услуг и уровню технологической модернизации. В этих условиях стратегическое развитие ведущих игроков отрасли, таких как АО «Казахтелеком», приобретает ключевое значение для обеспечения национальной конкурентоспособности, а также для устойчивого социально-экономического роста страны.

Целью настоящей статьи является комплексное обоснование экономической и стратегической целесообразности приобретения действующего оператора связи в качестве одного из приоритетных направлений дальнейшего развития АО «Казахтелеком».

Обзор литературы

Вопросы стратегического развития телекоммуникационных компаний и предприятий в целом находят широкое отражение в научной и учебной литературе. Анализ трудов ведущих исследователей в данной области позволил сформировать теоретико-методологическую основу для настоящего исследования.

Так, в работе (Голубицкой Е. А. и Кухаренко Е. Г. 2005) «Основы маркетинга в телекоммуникациях» подробно рассматриваются специфические особенности применения маркетинговых инструментов в телекоммуникационной отрасли. Авторы акцентируют внимание на том, что телекоммуникационный рынок имеет собственные закономерности развития, связанные с высокой технологичностью, необходимостью постоянного обновления инфраструктуры и ориентацией на долгосрочные отношения с потребителями. Данное исследование стало важным источником при анализе стратегий АО «Казахтелеком», так как позволило выявить, каким образом маркетинговые подходы могут быть интегрированы в процессы консолидации операторов связи и расширения абонентской базы.

Монография (Гончарука В. А. 2014) «Развитие предприятия» раскрывает закономерности организационного роста и трансформации предприятий в условиях изменяющейся внешней среды. Особое внимание уделено вопросам модернизации, адаптации бизнес-моделей и управления изменениями.

Работа (Кечеджиян М. 2018) «Разработка стратегии развития производственного предприятия» представляет собой фундаментальное исследование в области стратегического менеджмента. Автор рассматривает методологию формирования стратегии с использованием комплексного анализа внешней и внутренней среды, включая SWOT- и PESTEL-подходы. Кроме того, акцент сделан на долгосрочном планировании и необходимости гибкой адаптации стратегий к меняющимся рыночным условиям. Данный труд оказал значительное влияние на структуру настоящего исследования, поскольку именно в нем были обозначены подходы к разработке стратегических направлений развития, применимые и к сфере телекоммуникаций.

Методология исследования

В ходе исследования был использован комплекс теоретических и эмпирических методов, направленных на всестороннее изучение стратегических перспектив развития АО «Казахтелеком». Применение анализа и синтеза позволило систематизировать теоретические подходы к развитию телекоммуникационной отрасли и сопоставить их с практикой функционирования национального рынка. С помощью SWOT-анализа были выявлены ключевые сильные и слабые стороны компании, а также определены возможности и угрозы, возникающие в процессе возможного приобретения действующего оператора связи. Важным элементом методологической базы стал социологический подход, реализованный посредством опроса респондентов, позволивший выявить особенности потребительского поведения, ожидания и предпочтения пользователей услуг связи. Использование указанных методов в совокупности обеспечило объективность и достоверность полученных результатов, а также позволило сформулировать практические рекомендации по выбору оптимальной стратегии дальнейшего развития АО «Казахтелеком».

Результаты и обсуждения

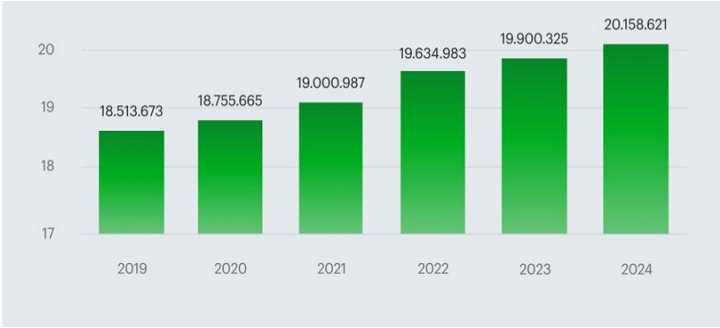
Телекоммуникационный рынок Республики Казахстан в последние годы демонстрирует устойчивый рост, что связано с активным внедрением цифровых технологий во все сферы жизни — от государственного управления и бизнеса до повседневных коммуникаций. Данный процесс поддерживается модернизацией телекоммуникационной инфраструктуры, направленной на повышение качества связи, скорости передачи данных и развитие инновационных услуг на основе технологий пятого поколения (5G). Появление 5G открывает новые перспективы для формирования цифровой экономики и повышения конкурентоспособности страны на международном уровне. Для АО «Казахтелеком» внедрение 5G рассматривается как стратегическое направление долгосрочного развития, требующее обновления

инфраструктуры и трансформации бизнес-модели (Мельников, 2017). Приобретение действующего оператора связи в этом контексте может способствовать ускоренной адаптации компании к новым технологическим условиям и укреплению ее лидирующих позиций на рынке. На рисунке 1 представлена динамика среднегодовой численности населения Республики Казахстан.

Рисунок 1

Среднегодовая численность населения Республики Казахстан

Примечание: составлено на основе источника (Nexign.com, 2025)



В 2024 году объем рынка телекоммуникационных услуг в Республике Казахстан достиг 1 362 млрд тенге, что на 11% превышает показатель предыдущего года. Рост доходов в значительной степени обусловлен повышением тарифов примерно на 20% в отчетном периоде. Основными драйверами выручки остаются услуги мобильной связи и доступ в интернет, тогда как сегмент фиксированной телефонии продемонстрировал спад на 10%. На рисунке 2 представлена динамика доходов телекоммуникационного рынка Казахстана за последние семь лет с учетом прогнозных показателей.

Рисунок 2

Динамика выручки телеком-рынка РК в 2020-2027 гг., млрд тенге

Примечание: составлено на основе источника (Nexign.com, 2025)



Динамика развития телекоммуникационного сектора указывает на переход операторов от традиционных услуг к модернизации сетевой инфраструктуры и внедрению инновационных решений. Ключевыми приоритетами выступают расширение пропускной способности сетей, повышение качества обслуживания и внедрение стандартов 5G. В частности, фиксированный беспроводной доступ на базе 5G рассматривается как более экономичная альтернатива оптоволоконным сетям, особенно в условиях ограниченной инфраструктуры за пределами крупных городов. Такой подход позволяет операторам оптимизировать капитальные затраты, а пользователям получать доступ к высокоскоростному интернету без значительных расходов.

Казахстан стал одной из первых стран Центральной Азии, где был реализован коммерческий запуск сетей пятого поколения. Массовое внедрение технологии началось в 2023 году в соответствии с поручением правительства, обязывающим операторов обеспечить покрытие 5G во всех областных центрах к концу 2025 года. Ключевыми участниками данного процесса выступают операторы Altel/Tele2 и Kcell, реализующие модель совместного использования инфраструктуры (сетевой шеринг). Уже к концу 2024 года ими было введено в эксплуатацию более 300 совместных базовых станций, а к апрелю 2025 года их общее количество в стране превысило 3 тысячи.

В условиях цифровой трансформации мировой экономики телекоммуникационные компании проходят этап глубокой перестройки своих бизнес-моделей. Казахстанская отрасль связи в этом отношении не является исключением. Наиболее ярким примером таких изменений выступает АО «Казахтелеком», которое в последние годы активно движется в сторону преобразования из классического телекоммуникационного оператора в высокотехнологичную IT-корпорацию.

АО «Казахтелеком» демонстрирует, что переход к цифровой модели приносит ощутимые результаты уже на практике. За последние годы компания значительно увеличила долю онлайн-обслуживания. Так, количество заявок, поступающих через цифровые каналы, выросло на четверть по сравнению с обращениями в традиционные абонентские отделы. Данный факт подтверждает, что пользователи готовы переходить в онлайн-среду, а оператор способен обеспечить им удобные и доступные сервисы.

Главная тенденция развития телекоммуникационного рынка Казахстана заключается в постепенном смещении акцента от традиционных услуг к цифровым и IT-решениям. Для АО «Казахтелеком» это означает необходимость постоянной модернизации бизнес-модели, поиска новых источников дохода и инвестиций в цифровую инфраструктуру. Диверсификация деятельности и формирование цифровой экосистемы позволяют компании не только сохранять устойчивые позиции на национальном рынке, но и соответствовать мировым трендам в сфере телекоммуникаций.

АО «Казахтелеком» на данный момент реализует около 60 инвестиционных проектов, направленных на модернизацию инфраструктуры, развитие сетей и участие в национальных инициативах. Для

координации создана Дирекция по управлению проектами, отвечающая за строительство новых сетей и работу с подрядчиками.

С 2023 года компания начала внедрение 5G: строятся оптические каналы связи для базовых станций в Астане, Алматы и Шымкенте, а также развивается сеть GPON. Одновременно осуществляется подключение десятков тысяч абонентов, корпоративных клиентов и госучреждений. В числе стратегических планов — перевод абонентов на оптические линии, реализация проекта «Доступный интернет» и подключение около 3 тыс. сельских населенных пунктов.

В 2019–2021 гг. активизировались меры антимонопольного регулирования: максимального уровня достигло количество уведомлений, а число проектов комплаенса выросло с 1 до 236. Одновременно проводилась ревизия законодательства: изменено более 50 актов, устранена часть барьеров для конкуренции. Однако сохраняются системные вызовы: институциональная неопределенность между Kazakh Invest и СПК, предоставление земель под непроизводственные проекты, расширение роли квазигосударственных структур, а также формальный характер согласования сделок (98% одобряются без углубленного анализа).

В таблице 1 представлен SWOT-анализ для АО «Казахтелеком» с оценками (по шкале 1–5, где 1 – низкая значимость/слабый фактор, 5 – высокая значимость/сильный фактор).

Таблица 1

SWOT-анализ стратегии АО «Казахтелеком»

Сильные стороны	Оценка (1-5)	Слабые стороны	Оценка (1-5)
Доминирующее положение на рынке телекоммуникаций	5	Высокая бюрократичность и медленный процесс принятия решений.	4
Развитая инфраструктура (оптоволоконные сети, дата-центры и собственное оборудование)	5	Высокая стоимость услуг, для части населения тарифы кажутся завышенными по сравнению с конкурентами	3
Поддержка государства, где оно является акционером	4	Сложности с обслуживанием клиентов и частые жалобы на долгие сроки подключения	4
Широкий спектр услуг (фиксированная и мобильная связь, интернет, телевидение, облачные технологии)	4	Зависимость от импортного оборудования, поскольку многие телекоммуникационные решения и комплектующие закупаются за рубежом	3
Инвестиции в цифровизацию (5G, «Умный город», облачные сервисы)	5	Недостаточная гибкость в инновациях, так как конкуренты более активно запускают новые сервисы	3
Итого	23	Итого	17
Возможности	Оценка (1-5)	Угрозы	Оценка (1-5)

Развитие цифровой экономики в РК и государственные программы цифровизации	5	Рост числа частных операторов мобильной связи и интернета (Beeline, Tele2, Altel) снижает долю рынка	4
Внедрение 5G и IoT в стране	5	Киберугрозы и информационная безопасность	5
Рост спроса на онлайн-услуги и облачные технологии	4	Технологическая зависимость от зарубежных поставщиков (санкции, валютные колебания и перебои с поставками)	4
Сотрудничество с международными компаниями	3	Социальное недовольство качеством услуг, массовые жалобы клиентов в соцсетях	3
Развитие e-government и «умных городов» (камеры, датчики и другие сервисы для госструктур и бизнеса)	4	Регуляторные риски	3
Итого	21	Итого	19

Примечание: составлено автором.

Сильные стороны и возможности у АО «Казахтелеком» достаточно выражены и составляют 4–5 баллов. При этом слабые стороны и угрозы связаны в основном с сервисом, конкуренцией и внешними факторами (технологии, импорт, кибербезопасность).

Практическое значение исследования заключается в комплексной оценке стратегических перспектив АО «Казахтелеком». Анализ показал, что фиксированная связь теряет прибыльность, а мобильные сервисы и цифровые решения становятся ключевыми направлениями развития. Стратегия приобретения мобильного оператора позволила компании сохранить лидерство, при этом внутренний опрос сотрудников подтвердил поддержку данного решения, хотя и выявил риски интеграции и роста нагрузки на персонал. SWOT-анализ показал сильные стороны компании: развитая инфраструктура, государственная поддержка, диверсификация услуг и инвестиции в цифровизацию. К слабым сторонам отнесены бюрократия и высокая стоимость услуг.

Основные направления дальнейшего развития:

1. Создание цифровых экосистем и комплексных решений для бизнеса и населения;
2. Ориентация на клиента через гибкие тарифы и улучшение сервиса;
3. Инвестиции в 5G и оптоволоконные сети;
4. Развитие кибербезопасности и национальных решений в сфере защиты данных;
5. Сотрудничество с государством в проектах цифровизации;
6. Диверсификация доходов за счет смежных рынков;
7. Развитие персонала и корпоративной культуры инноваций;
8. Внедрение ESG-подходов и «зеленых» технологий.

АО «Казахтелеком» располагает ресурсами и стратегией для долгосрочного укрепления позиций на рынке и успешной адаптации к вызовам цифровой экономики.

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Партнёрство как драйвер роста рынка ШПД В2С

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Аннотация

На сегодняшний день развитие цифровой экономики занимает важную роль в Казахстане. Она требует развития волоконно-оптических линий связи со значительными инвестициями и новых подходов к управлению инфраструктурой. Основная цель исследования- сравнительный анализ эффективности действующих партнерских бизнес-моделей АО «Казахтелеком» (60/40, Радиомост, BI, RevShare, Новая аренда), а также разработка новых вариантов оптимизации. В данной работе рассмотрены такие ключевые моменты как привлекательность для инвестиций, распределение рисков и доходности между оператором и партнерами. Основой для методологии послужил качественный и количественный анализ. Качественная часть основана на контент-анализе внутренней документации (шаблоны договоров, регламенты и др.) В данной работе приведены модели PESTEL, SWOT, «Пять сил Портера», также расчеты основных финансовых показателей таких как ROI, IRR, NPV, период окупаемости на основе данных внутренней отчетности системы Qlik Sense за 2023–2025 годы. Анализ показал, что текущая модель 60/40 представляет наиболее сбалансированное соотношение доходности и инвестиционной нагрузки, а модель Радиомост демонстрирует высокую окупаемость при минимальных вложениях; при этом RevShare и BI-модель требуют адаптации для повышения эффективности. Результаты позволили обнаружить слабые и сильные стороны каждого вида партнерства и найти направление для дальнейшего усовершенствования инвестиционной политики компании. Проведенное исследование имеет практическое значение для отрасли, так как способствует улучшению механизмов взаимодействия между оператором и частными инвесторами.

Ключевые слова: телекоммуникации, волоконно-оптические линии связи (ВОЛС), партнерство, бизнес-модель, инвестиции, эффективность, показатели

Введение

Развитие цифровой экономики требует масштабирования оптической инфраструктуры, которая является основой высокоскоростного доступа к сети интернет. Для АО «Казахтелеком» как крупнейшего оператора связи Казахстана, расширение сетей в сегменте В2С является приоритетом, определяющим конкурентоспособность на фоне растущей активности сторонних операторов.

Строительство оптической инфраструктуры требует значительных капитальных затрат, что ограничивает темпы расширения сети при использовании только собственных инвестиций. К тому же, нарастание конкуренции, обусловленное появлением новых участников и развитием мобильных технологий, привело к снижению доли рынка ШПД: с 64% в 2022 году до 57% в 2025 году. В этой связи бизнес-модели партнерства стали ключевым инструментом, позволяющим компании распределять

финансовые риски, повышать скорость строительства, обеспечивать устойчивое лидерство на рынке B2C и стимулировать развитие цифровых сервисов.

Цель исследования заключается в анализе эффективности существующих партнерских моделей АО «Казахтелеком» и разработке рекомендаций по их оптимизации для усиления позиций компании на рынке ШПД B2C. Задачи включают изучение теоретических основ бизнес-моделей, анализ макро и микроокружения отрасли, сравнительную оценку реализуемых партнерских программ и подготовку рекомендаций по усовершенствованию инвестиционной политики.

Обзор литературы

2.1 Теоретические основы бизнес-моделей партнерства в телекоммуникациях.

2.1.1 Понятие и виды бизнес-моделей в телеком-отрасли. В телекоммуникационной индустрии бизнес-модель определяет способ создания, доставки и монетизации ценности телеком-оператором. Ключевыми типами моделей являются:

- Интегрированная бизнес-модель, также известная как классическая модель оператора связи, является наиболее ранней и традиционной в сфере телекоммуникаций. В ее основе лежит контроль компании над всей цепочкой создания ценности: от владения инфраструктурой (сети, вышки, каналы передачи данных) до предоставления конечных услуг абонентам. Такая модель характерна для монополий и олигополий. [1];
- Модель открытого доступа предполагает разделение инфраструктуры и сервисов, когда оператор инфраструктуры предоставляет одинаковые условия для использования сетей различным вендорам услуг. В такой системе одна компания может владеть сетью самой по себе, но не имеет исключительного права на предоставление конечных услуг;
- Модель аренды и совместного использования инфраструктуры основана на разделении затрат между операторами на строительство и эксплуатацию сетей. Это может включать аренду каналов передачи данных, совместное использование базовых станций, магистральных линий или вышек. Подобный подход позволяет ощутимо снизить капитальные затраты, ускорить развертывание сетей и обеспечить покрытие в регионах, где строительство дублирующей инфраструктуры экономически нецелесообразно.
- Модель государственно-частного партнерства предполагает сотрудничество операторов связи с государственными структурами при создании и развитии телекоммуникационной инфраструктуры. Как правило, государство заинтересовано в расширении цифрового охвата, обеспечении связи в удаленных или социально значимых регионах, где коммерческим операторам невыгодно инвестировать самостоятельно [2].

- Современная бизнес-модель в телекоммуникациях все чаще опирается на формирование цифровых экосистем и развитие ОТТ-сервисов, которые предоставляют потребителям доступ к контенту и сервисам поверх существующей сетевой инфраструктуры. Классическими примерами являются стриминговые платформы, мессенджеры и облачные сервисы, которые активно конкурируют с традиционными услугами операторов [3]. Для телеком-компаний эта модель означает необходимость не только предоставлять соединение, но и создавать собственные экосистемы цифровых сервисов. Такая стратегия позволяет диверсифицировать доходы, снизить зависимость от классической абонентской платы и укрепить долгосрочные отношения с клиентами [4].

Таким образом, понимание эволюции бизнес-моделей и специфика применения в телекоммуникационной отрасли имеет важное значение для анализа деятельности АО «Казахтелеком». Для национального оператора особенно важно учитывать высокую капиталоемкость отрасли, технологическую динамику и жесткое регулирование так как эти факторы влияют на скорость развития сети и уровень конкурентоспособности.

2.2. Механизмы стратегического партнерства: цели, формы, риски. Стратегическое партнерство представляет собой долгосрочную форму взаимодействия компаний, основанную не только на обмене ресурсами или услугами, но и на совместном достижении стратегически важных целей. Стратегическое партнерство отличается от обычного тем, что предполагает более глубокую интеграцию - координацию бизнес-моделей, совместные инвестиции, обмен технологиями и синергию в развитии [5].

Цели партнерства: ускорение строительства оптической сети; сокращение первоначальных инвестиций; повышение покрытия и проникновения услуг; минимизация рисков.

Таблица 1

Формы стратегического партнерства.

Форма партнерства	Цель	Преимущества	Риски	Примеры в телеком-сфере
Совместное предприятие (Joint Venture)	Реализация масштабных проектов с объединением ресурсов	Высокая степень интеграции, разделение затрат и рисков	Конфликты интересов, сложность управления	Совместное строительство национальных сетей 5G
Лицензионное соглашение	Доступ к патентам, технологиям и ноу-хау	Экономия на разработке, быстрый доступ к инновациям	Утечка интеллектуальной собственности	Лицензирование стандартов 4G/5G

Технологический альянс	Совместные исследования и стандартизация	Ускоренное внедрение инноваций, совместимость оборудования	Эффект «lock-in» (зависимость от партнера)	Кооперация производителей и операторов при разработке оптики
Долгосрочные договоры (sharing agreements)	Снижение капитальных затрат за счет совместного использования инфраструктуры	Экономия ресурсов, равномерное покрытие территории	Потеря гибкости, сложность изменения условий	Совместное использование базовых станций 4G/5G
Консорциумы и альянсы	Реализация дорогостоящих транснациональных проектов	Распределение финансовых рисков, расширение географии услуг	Сложная координация множества участников	Прокладка подводных оптоволоконных кабелей
Исследовательские кластеры	Совместные НИОКР, разработка стандартов	Доступ к знаниям, грантам и инновациям	Трудности в защите результатов и интересов	Европейские телеком-кластеры при университетах

Стратегические партнерства обладают значительным потенциалом, однако их реализация сопровождается рядом ключевых рисков [6]:

1. Расхождение стратегических интересов. Партнеры могут иметь разные темпы развития, приоритеты инвестиций или распределение доходов, что приводит к конфликтам и снижению эффективности совместной работы.
2. Риск утечки интеллектуальной собственности. Обмен технологиями и доступ к внутренним процессам повышает вероятность утраты конкурентных преимуществ, если партнер использует полученные знания в собственных интересах.
3. Зависимость от партнера (risk of lock-in). Глубокая интеграция может привести к критической зависимости от решений, качества работы или финансовой стабильности партнерской стороны.
4. Культурные и организационные различия. Несовпадение управленческих подходов, корпоративной культуры и процедур принятия решений затрудняет коммуникацию и координацию проектов.
5. Регуляторные риски. Государственные органы могут ограничить сотрудничество, считать его угрозой конкуренции или предъявить дополнительные требования к проекту (например, сговор).
6. Операционные риски. Задержки в строительстве, различия в стандартах качества, несоблюдение сроков и ошибок в документации могут повлиять на сроки и итоговую стоимость проекта.

2.3. Мировой, региональный и национальный опыт. Мировая практика демонстрирует, что развитие оптических сетей практически везде опирается на механизмы стратегического партнерства. В Европе доминируют модели совместного инвестирования и открытого доступа (open access), которые

позволяют операторам снижать капитальные затраты и ускорять покрытие территорий [7]. В США распространены формы ГЧП, при которых муниципалитеты обеспечивают доступ к инфраструктуре, а компании обеспечивают технологическую часть проектов [8]. Страны Азии (Япония, Южная Корея, Китай) показывают наиболее высокие темпы внедрения оптики благодаря глубокой координации государства, операторов и производителей оборудования, что обеспечивает масштабируемость и технологическое лидерство [9].

В странах СНГ также широко применяются партнерские модели. В России операторы сотрудничают в строительстве магистральных сетей и совместном использовании инфраструктуры, а государства Центральной Азии развивают транзитные волоконно-оптические коридоры через международные консорциумы [10] [11]. Казахстан реализует широкий спектр проектов ГЧП и инфраструктурных партнерств начиная от сельских программ («Цифровой Казахстан», проект 250+, eQoldau) до международного коридора «Digital Silk Way» [12; 13, 14]. Эти инициативы демонстрируют, что партнерство позволяет ускорить цифровизацию, снизить инвестиционную нагрузку и обеспечить равный доступ к высокоскоростному интернету даже в труднодоступных регионах.

Методология и данные исследования

Методологическая основа исследования включает сочетание качественного и количественного анализа.

Качественный анализ основан на:

- изучении внутренней документации АО «Казахтелеком» (договоры партнерства, регламенты, описания моделей 60/40, «Радиомост», BI, RevShare, «Новая аренда»);
- применении PESTEL-анализа для оценки политических, экономических, социальных, технологических, экологических и правовых факторов развития телеком-рынка Казахстана;
- использование модели «Пяти сил Портера» для анализа отраслевой конкуренции;
- проведении SWOT-анализа для выявления сильных и слабых сторон, возможностей и угроз для АО «Казахтелеком».

Количественный анализ опирается на внутреннюю отчетность системы Qlik Sense за 2023-2025 гг.

По выбранной выборке партнеров по каждой модели были рассчитаны:

- уровень проникновения (доля подключенных абонентов к потенциальному фонду квартир/домохозяйств);
- доходы АО «Казахтелеком» от услуг на партнерских сетях;
- выплаты партнерам (вознаграждение по доли комиссионного вознаграждения, аренда);
- инвестиции компании (магистральные сети, оборудование доступа, ONT модемы, подключение).

Дополнительно для каждой модели рассчитаны показатели инвестиционной эффективности при горизонте 15 лет и трех сценариях проникновения (28%, 50% и 70%): NPV - чистая приведенная стоимость; IRR - внутренняя норма доходности; PP - простой срок окупаемости; DPP - дисконтированный срок окупаемости (ставка дисконтирования 20,4%).

Все денежные потоки приведены в номинальном выражении, без учета НДС. Для моделей 60/40 и Радиомост доступны полные данные за 2023-2025 годы, включая прогнозные значения на конец 2025 года. Для моделей BI и RevShare информация представлена с 2-го полугодия 2024 года, так как данные программы начали действовать позднее. Модель «Новая аренда» находится на стадии активного внедрения, поэтому анализ проводится на основе прогнозных показателей.

Результаты

4.1. Проникновение, доходность и распределение выручки. Анализ уровня проникновения и доходности показали, что:

- модель 60/40 демонстрирует один из самых высоких средних уровней проникновения, что связано с ориентацией на городские ЖК с высокой плотностью застройки и хорошими темпами заселения. Доля партнера в доходе составляет около 35%, что обеспечивает баланс между мотивацией партнера и устойчивой маржой оператора;
- «Радиомост» обеспечивает умеренное проникновение в сельских населенных пунктах так как ограничена техническими возможностями радиоканала. Доля партнера составляет 50% от выручки за интернет, но абсолютные значения дохода от одного проекта ниже из-за ограниченного трафика;
- RevShare показывает самый низкий уровень проникновения, что объясняется поздним запуском (со 2-го полугодия 2024 г.). А финансовая суммарная нагрузка на Казахтелеком высока из-за совмещения доли партнера и арендных платежей. При низком проникновении модель может быть убыточной для компании;
- BI-модель демонстрирует проникновение на уровне «среднее» с заметным улучшением динамики после увеличения доли партнера до 40% с 1 августа 2025 г., что повысило его мотивацию (ранее было 15-30%). Доля выплат относительно невысока, а также модель требует длительного горизонта для раскрытия потенциала;
- по «Новой аренде» анализ носит прогнозный характер, ожидается стабильное проникновение в проектах надежных застройщиков с высокой заселенностью. Арендная ставка фиксирована и не зависит от фактической загрузки сети, что увеличивает риски при низкой заселенности, но дает высокий эффект при выходе на целевой уровень проникновения

4.2. Инвестиционная привлекательность (NPV, IRR, окупаемость). Расчёт NPV, IRR, PP и DPP

при горизонте 15 лет показал, что:

- 60/40 имеет положительный NPV во всех сценариях проникновения, IRR находится в диапазоне 24-34%, простой срок окупаемости около 4 лет, дисконтированный - до 6-9 лет. Это делает модель устойчивой и масштабируемой даже при консервативных предположениях.
- «Радиомост» демонстрирует экстремально высокие значения IRR (более 160%) и сверхбыструю окупаемость (приблизительно 1 год) при минимальных инвестициях компании, однако общий вклад в NPV ограничен небольшими объёмами дохода по сравнению с городскими проектами.
- RevShare при низком проникновении (28%) показывает отрицательный NPV и отсутствие дисконтированной окупаемости, но при росте проникновения до 50-70% NPV становится положительным, а IRR достигает 30-40%. Это подчеркивает высокую чувствительность модели к выбору объектов и скорости заселения.
- BI-модель при низком проникновении также не окупается, но при сценариях 50-70% демонстрирует положительный NPV и IRR на уровне 25-29%, что делает её умеренно привлекательной при условии плотной застройки и хорошей динамики подключений.
- «Новая аренда» характеризуется наибольшим объёмом инвестиций компании и отрицательным NPV при проникновении 28%. При достижении 50-70% проникновения NPV становится наибольшим среди всех моделей, а IRR возрастает до 29%. То есть модель рискованна в стартовой фазе, но при высокой загрузке сети превращается в одну из наиболее прибыльных в долгосрочной перспективе.

В совокупности результаты показывают, что 60/40 обеспечивает наиболее предсказуемый баланс доходности и риска, Радиомост - максимальную отдачу на минимальные вложения в нишевых проектах, а RevShare, BI и «Новая аренда» требуют более строгого отбора объектов и учета сценариев проникновения.

Общее обсуждение

5.1 Проблемы и направления оптимизации партнерских моделей

Проведенный анализ позволил выявить ряд проблем и ограничений существующего подхода: 1. Операционные задержки при сдаче сети и оформлении документов, что приводит к отсрочке выплат партнерам и снижению их мотивации; 2. Риски качества сети, особенно в моделях, где строительство и эксплуатация полностью на стороне партнера (Радиомост, RevShare, BI). Длительное устранение аварий ведут к снижению лояльности абонентов; 3. Высокая зависимость результатов от проникновения и заселенности, особенно для RevShare и «Новой аренды», где фиксированные выплаты или высокая доля партнера делают проекты рискованными при низкой загрузке; 4. Неоднородность практик выбора объектов,

отсутствие единой скоринговой модели оценки ЖК и сёл по ключевым параметрам (плотность, конкуренция, платежеспособность).

В качестве направлений оптимизации можно предложить: 1. Внедрение типовых скоринговых критериев отбора объектов для каждой модели; 2. Корректировка параметров RevShare и «Новой аренды» (доли, арендные ставки, минимальные уровни проникновения) с учетом результатов расчетов NPV/IRR; 3. Усиление технического контроля за партнерскими сетями и по срокам устранения неисправностей; 4. Цифровизация документооборота и статуса сдачи проектов для снижения задержек по выплатам.

Заключение

В статье проведен комплексный анализ партнерских бизнес-моделей развития оптических сетей в АО «Казахтелеком» как ключевого инструмента стратегии захвата рынка ШПД В2С. На основе сочетания качественных методов (PESTEL, «Пять сил Портера», SWOT, анализ договорных условий) и количественных расчетов по данным Qlik Sense оценена эффективность моделей 60/40, «Радиомост», BI, RevShare и «Новая аренда».

Полученные результаты показывают, что: 1. Модель 60/40 является наиболее устойчивой и сбалансированной по соотношению доходности, и инвестиционной нагрузки; 2. «Радиомост» обеспечивает максимальную доходность на единицу вложений, но остается нишевым инструментом для труднодоступных территорий; 3. RevShare и BI-модель демонстрируют приемлемую эффективность при высокой заселенности и требуют тщательного отбора объектов; 4. «Новая аренда» сочетает высокий риск на старте с потенциально максимальной прибыльностью в долгосрочном периоде при условии высокого проникновения.

Таким образом, партнерские модели действительно выступают ключевым элементом расширения рыночной доли и поддержания устойчивого лидерства АО «Казахтелеком» на рынке В2С. Они позволяют ускорить развитие оптической инфраструктуры при ограниченном собственном инвестиционном капитале. Оптимизация параметров моделей и процедур отбора объектов, основанная на результатах данного исследования, может стать основой для дальнейшего повышения эффективности инвестиционной политики компании.

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Разработка и внедрение инструментов повышения лояльности клиентов

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Аннотация

Развитие клиентской лояльности является одним из ключевых направлений современного маркетинга и важным фактором устойчивого развития компаний в условиях высокой конкуренции. Современные предприятия сталкиваются не только с необходимостью привлечения новых потребителей, но и с задачей удержания существующих клиентов, что требует внедрения эффективных инструментов управления взаимоотношениями с ними.

В статье рассмотрены теоретические основы понятия «лояльность клиентов» и механизмы формирования приверженности бренду. Проведен анализ существующих подходов к управлению лояльностью, а также исследована действующая система взаимодействия компании с клиентами. Для оценки уровня удовлетворенности и вовлеченности потребителей применены методы SWOT- и PEST-анализ, а также анкетирование.

На основе полученных результатов предложены практические меры по повышению клиентской лояльности, включающие совершенствование программы лояльности, персонализацию коммуникаций, развитие системы обратной связи и цифровизацию клиентского опыта. Реализация указанных инструментов способствует укреплению конкурентных позиций компании, росту удовлетворенности клиентов и обеспечению долгосрочной устойчивости бизнеса.

Ключевые слова: клиентская лояльность, управление взаимоотношениями с клиентами, программа лояльности, удержание клиентов, маркетинговые коммуникации, цифровизация, SWOT-анализ, PEST-анализ

Введение

В современных условиях глобальных изменений во взаимоотношениях между организациями и клиентами особое значение приобретает системный и клиенто-ориентированный подход к управлению взаимодействием с потребителями. Конкурентная среда становится все более динамичной, а ожидания клиентов — все более высокими. Современные потребители требуют не только качественного продукта или услуги, но и индивидуального подхода, удобства взаимодействия, прозрачности и внимания со стороны компании. В этих условиях удержание клиентов и формирование их лояльности становятся ключевыми направлениями маркетинговой и управленческой политики предприятий.

Для телекоммуникационных компаний, работающих в условиях высокой рыночной насыщенности и технологических преобразований, повышение клиентской лояльности является стратегическим приоритетом. Оно обеспечивает не только стабильный доход, но и долгосрочное развитие бизнеса за счет

укрепления доверия, повышения уровня удовлетворенности и формирования позитивного восприятия бренда.

1.1 Актуальность исследования. В условиях растущей конкуренции на рынке телекоммуникаций удержание клиентов становится более важным, чем их привлечение. Современные компании осознают, что стоимость привлечения нового потребителя значительно превышает расходы на сохранение существующего. Поэтому ключевым фактором успеха становится способность предприятия выстраивать доверительные, долговременные отношения с клиентами, обеспечивая высокий уровень удовлетворенности и лояльности.

Для АО «Казахтелеком» данная проблема имеет особое значение, поскольку компания занимает лидирующие позиции на телекоммуникационном рынке Казахстана и активно реализует стратегию цифровой трансформации. Тем не менее, рост конкуренции со стороны мобильных операторов и интернет-провайдеров, а также быстрое развитие технологий требует постоянного совершенствования системы взаимодействия с клиентами. Повышение клиентской лояльности становится не только задачей маркетинга, но и элементом общей стратегии устойчивого развития бизнеса.

Кроме того, современные тенденции, такие как персонализация обслуживания, внедрение омниканальных коммуникаций, использование аналитики данных и искусственного интеллекта, открывают новые возможности для повышения качества клиентского опыта. Внедрение таких инструментов позволяет не только удерживать клиентов, но и стимулировать их активность, увеличивать количество повторных покупок и снижать уровень оттока.

1.2 Цель исследования. Исследование нацелено на разработку, обоснование и внедрение системы эффективных инструментов, направленных на повышение уровня лояльности клиентов телекоммуникационной компании на примере АО «Казахтелеком», с учетом особенностей современного конкурентного рынка, цифровизации бизнеса и изменений в потребительском поведении.

Реализация данной цели предполагает не только создание комплекса мероприятий, способствующих укреплению доверия и приверженности клиентов бренду, но и формирование устойчивой стратегии взаимодействия с потребителями, основанной на персонализации, цифровых технологиях и постоянном повышении качества обслуживания.

Казахстанский рынок телекоммуникаций характеризуется высокой конкуренцией, технологическими инновациями и повышенной требовательностью потребителей к качеству обслуживания. В таких условиях для компаний, в частности для АО «Казахтелеком», крайне важно не только предлагать качественные услуги связи, но и формировать эмоциональную привязанность клиентов к бренду. Это требует внедрения современных инструментов взаимодействия, цифровизации клиентского опыта и постоянного совершенствования программ лояльности.

Развитие и внедрение эффективных инструментов повышения клиентской лояльности становится одной из ключевых задач современного менеджмента. Комплексный подход к формированию устойчивых отношений с клиентами способствует росту конкурентоспособности компании, укреплению ее рыночных позиций и обеспечению устойчивого развития в долгосрочной перспективе.

Обзор литературы

Формирование клиентской лояльности представляет собой системный процесс, основанный на сочетании качественного обслуживания, прозрачных коммуникаций и устойчивой корпоративной культуры. По мнению Спивака (2023), ключевым фактором в укреплении доверия является открытость бизнеса и внимание к клиентам, а не только рекламная активность компании.

Музыкант (2024) отмечает, что лояльность крайне хрупкое явление: одно неудачное взаимодействие или неэтичное поведение сотрудника может разрушить доверие клиента и спровоцировать распространение негативных отзывов. Уровень лояльности, по ее мнению, напрямую зависит от корпоративных ценностей, отношения руководства к персоналу и общего качества клиентского опыта.

Жильцова (2024) подчеркивает важность согласованности миссии компании с общественными ценностями. Позитивный имидж бренда способствует экономии ресурсов и росту продаж, тогда как утрата доверия клиентов ведет к снижению прибыльности и репутационным рискам.

Согласно Голубковой (2024), лояльность представляет собой не просто повторное потребление, а устойчивую эмоциональную связь и доверие, формирующиеся на основе положительного опыта взаимодействия с брендом. Такие клиенты остаются с компанией даже при наличии альтернативных предложений, что обеспечивает стабильность и рост бизнеса.

Хуссейн (2024) выделяет разные уровни лояльности и подчеркивает необходимость перевода клиентов из состояния поверхностной привязанности в истинную, основанную на доверии и высоком качестве обслуживания.

Рожков (2024) рассматривает лояльность как стратегический показатель успеха компании, отражающий степень приверженности клиентов бренду и их готовность рекомендовать его другим.

Тульчинский (2024) делает акцент на том, что лояльные клиенты обеспечивают компании устойчивый доход, снижают затраты на привлечение новых потребителей и укрепляют ее рыночную репутацию.

В целом, проанализированные источники показывают, что клиентская лояльность является стратегическим ресурсом организации, формирующимся на основе доверия, удовлетворенности и эмоциональной связи клиента с брендом. Ее развитие требует комплексного подхода, постоянного повышения качества обслуживания и укрепления ценностей компании.

Методология исследования

Для достижения цели исследования и решения поставленных задач был применен комплекс методов, сочетающих теоретические и эмпирические подходы.

Теоретическая основа исследования включает анализ и обобщение научных трудов отечественных и зарубежных авторов в области маркетинга, управления клиентскими отношениями и формирования лояльности. Изучены концепции клиенто-ориентированного управления, модели поведения потребителей и современные подходы к построению программ лояльности.

Для системного анализа внешней и внутренней среды использованы методы SWOT-анализа и PEST-анализа, позволившие выявить сильные и слабые стороны компании, а также возможности и угрозы, определяемые внешними факторами. Дополнительно применены методы сравнительного анализа и экспертной оценки, что обеспечило объективность полученных результатов.

Результаты и обсуждения

В современных условиях рынок характеризуется высокой конкуренцией, и для того чтобы занять устойчивые позиции в своей отрасли, компаниям необходимо не только привлекать новых потребителей, но и удерживать уже существующих. Основным инструментом в достижении этой цели становится развитие клиентской лояльности, которая обеспечивает долгосрочные отношения между брендом и его покупателями.

Система управления лояльностью клиентов представляет собой комплексный механизм, объединяющий инструменты маркетинга, продаж, сервиса и аналитики. Она направлена на создание прочной эмоциональной и рациональной связи клиента с брендом. Благодаря таким системам компания получает возможность анализировать поведение покупателей, их предпочтения и удовлетворенность, а также формировать индивидуальные предложения и персонализированные коммуникации.

Формирование и укрепление лояльности требует системного подхода. Прежде чем внедрять программы лояльности, необходимо провести глубокий анализ клиентской базы, определить уровень удовлетворенности потребителей и сформулировать стратегические цели. Без этих предварительных шагов эффективность проекта будет минимальной, а сама программа может не только не укрепить доверие, но и вызвать обратный эффект.

Четкое определение целей лояльности клиентов позволяет выстроить долгосрочную стратегию взаимодействия с потребителями. На первом этапе целесообразно ставить краткосрочные задачи: увеличение повторных покупок, рост среднего чека, повышение активности клиентов. В дальнейшем акцент смещается на формирование эмоциональной привязанности и устойчивого доверия, что обеспечивает стабильный рост клиентской базы и укрепление имиджа бренда.

Успешное развитие клиентской лояльности невозможно без вовлечения всех подразделений компании. Каждый сотрудник должен осознавать, что удержание клиента это не разовая акция, а непрерывный процесс, требующий внимания, заботы и высокого уровня обслуживания. Только комплексное повышение качества взаимодействия с потребителем от первой покупки до последующих коммуникаций способно обеспечить прочную и долгосрочную лояльность к бренду.

Для выявления стратегических направлений развития и определения эффективных инструментов повышения клиентской лояльности компании был проведен SWOT-анализ, который позволил комплексно оценить внутренние и внешние факторы, влияющие на результаты маркетинговой политики и уровень удовлетворенности потребителей. Анализ помог выявить сильные и слабые стороны компании, а также определить внешние возможности и угрозы, оказывающие влияние на формирование долгосрочных отношений с клиентами.

Таблица 1

SWOT-анализ факторов, влияющих на лояльность клиентов АО «Казахтелеком»

Сильные стороны (Strengths)	Слабые стороны (Weaknesses)
1. Лидерство на телекоммуникационном рынке Казахстана и высокая узнаваемость бренда.	1. Недостаточная гибкость в работе с индивидуальными клиентами и малым бизнесом.
2. Развитая инфраструктура и широкое покрытие (включая удаленные регионы).	2. Замедленная реакция службы поддержки на запросы клиентов.
3. Поддержка со стороны государства и участие в программах цифровизации.	3. Недостаточная персонализация тарифов и программ лояльности.
4. Наличие собственного дата-центра и внедрение цифровых технологий (CRM, Big Data).	4. Бюрократизированная структура управления, затрудняющая внедрение инноваций в обслуживании.
5. Доверие клиентов к стабильности и надежности оператора.	5. Сложная система обратной связи и низкая скорость обработки жалоб.
Возможности (Opportunities)	Угрозы (Threats)
1. Рост цифровой грамотности населения и спроса на онлайн-сервисы.	1. Усиление конкуренции со стороны частных и международных операторов связи.
2. Внедрение технологий 5G и IoT, расширяющих спектр услуг.	2. Повышение ожиданий клиентов к качеству обслуживания и скорости реакции.
3. Развитие омниканальных коммуникаций и онлайн-поддержки.	3. Увеличение рисков утечки персональных данных и кибератак.
4. Расширение корпоративных программ лояльности и бонусных предложений.	4. Макроэкономическая нестабильность и инфляционное давление.
5. Использование искусственного интеллекта для анализа клиентского опыта.	5. Снижение доверия при сбоях сети или технических неисправностях.

Примечание: составлено автором на основе результатов анализа деятельности АО «Казахтелеком»

Результаты проведенного SWOT-анализа свидетельствуют о том, что АО «Казахтелеком» обладает значительными внутренними конкурентными преимуществами, обеспечивающими устойчивость на рынке.

К числу ключевых сильных сторон относятся развитая инфраструктура, высокий уровень технической оснащенности, надежность предоставляемых услуг, государственная поддержка и высокий уровень доверия со стороны клиентов. Эти факторы формируют прочную основу для укрепления позиций компании в условиях усиливающейся рыночной конкуренции.

В то же время анализ выявил ряд слабых сторон, непосредственно влияющих на уровень клиентской лояльности. Среди них недостаточная персонализация обслуживания, замедленная обработка обращений и жалоб, а также ограниченная гибкость тарифной и бонусной политики. Наличие данных проблем снижает эффективность коммуникаций и препятствует формированию прочной эмоциональной связи между брендом и клиентом.

Среди внешних факторов особое значение имеют возможности, связанные с цифровой трансформацией: внедрение сетей 5G, развитие технологий Big Data и искусственного интеллекта, а также расширение омниканальных коммуникаций. Эти направления открывают новые перспективы для повышения клиентского опыта, персонализации услуг и создания эффективных программ удержания потребителей.

Однако при этом усиливается конкурентное давление со стороны частных операторов и новых участников рынка, активно применяющих гибкие тарифные стратегии и цифровые платформы самообслуживания. В таких условиях АО «Казахтелеком» необходимо уделить особое внимание совершенствованию клиентской политики, развитию обратной связи, повышению скорости реагирования на запросы и внедрению инновационных технологий обслуживания.

Комплексное использование внутренних преимуществ в сочетании с реализацией возможностей внешней среды позволит компании повысить лояльность клиентов, укрепить доверие к бренду и обеспечить долгосрочную устойчивость на рынке телекоммуникационных услуг.

Для всестороннего анализа факторов, влияющих на формирование и развитие клиентской лояльности к бренду АО «Казахтелеком», необходимо рассмотреть воздействие внешней среды на деятельность компании. С этой целью в исследовании применен метод PESTEL-анализа, который позволяет комплексно оценить политические, экономические, социальные, технологические, экологические и правовые факторы, определяющие стратегическое направление работы с клиентами.

Использование данного метода обеспечивает глубокое понимание макроэкономических условий, в которых функционирует компания, и помогает выявить ключевые тенденции, влияющие на поведение потребителей и их отношение к бренду. Результаты анализа позволяют не только определить риски, но и обнаружить потенциальные возможности для совершенствования клиентской политики, укрепления доверия и повышения уровня лояльности абонентов к услугам компании.

PESTEL-анализ служит инструментом стратегической диагностики, направленным на формирование долгосрочных конкурентных преимуществ и развитие устойчивых взаимоотношений с клиентами АО «Казахтелеком» таблица 2.

Таблица 2

PESTEL–анализ внешней среды АО «Казахтелеком» в контексте лояльности клиентов

Фактор	Наименование	Влияние на лояльность клиентов
Политические Экономические	Государственная поддержка цифровизации и связи	Укрепляет доверие клиентов к национальному оператору, повышает доступность услуг
	Политическая стабильность и госрегулирование тарифов	Создает предсказуемость и уверенность пользователей в надежности компании
	Программы по развитию «умных городов» и e-gov	Стимулируют использование цифровых сервисов, что повышает приверженность клиентов
	Региональная интеграция в рамках ЕАЭС	Упрощает международную связь и роуминг, увеличивая удобство для пользователей
	Государственный контроль качества связи	Повышает доверие клиентов к бренду и снижает число жалоб
	Рост доходов населения и развитие цифрового рынка	Расширяет клиентскую базу и платежеспособный спрос
	Государственные инвестиции в инфраструктуру	Улучшают качество и стабильность услуг, укрепляя лояльность
	Курсовые колебания и инфляция	Могут снижать удовлетворенность клиентов при росте тарифов
	Развитие конкуренции на телеком–рынке	Повышает требования к качеству обслуживания и стимулирует программы лояльности
	Введение гибких тарифных планов и скидок	Формирует долгосрочную приверженность абонентов
Социальные	Рост цифровой грамотности населения	Повышает готовность клиентов использовать дополнительные услуги
	Изменение ожиданий клиентов (скорость, сервис, персонализация)	Требуеет повышения стандартов обслуживания
	Разрыв между городом и селом по качеству связи	Может снижать удовлетворенность региональных клиентов
	Молодая аудитория с высокой мобильностью	Ориентирована на цифровые и гибкие каналы обслуживания
	Рост значимости репутации и рекомендаций	Усиливает влияние качества обслуживания на имидж компании
Технологические	Развитие 4G и внедрение 5G	Повышает качество и скорость услуг, улучшая пользовательский опыт
	Внедрение CRM и аналитических систем	Позволяет персонализировать коммуникацию и укреплять доверие
	Киберугрозы и утечки данных	Могут подорвать лояльность при недостаточной защите информации

Экологические	Расширение онлайн–каналов обслуживания	Упрощает взаимодействие и повышает удобство клиентов
	Использование Big Data и ИИ для анализа поведения клиентов	Повышает точность программ удержания
	Внедрение энергоэффективных технологий	Формирует позитивный имидж социально ответственной компании
	Переход на «зеленые» дата–центры	Повышает доверие корпоративных клиентов
	Осведомленность общества об экологии	Влияет на восприятие бренда как ответственного участника рынка
	Минимизация бумажного документооборота	Поддерживает устойчивый имидж
Юридические	Экологические инициативы в CSR–проектах	Повышают эмоциональную привязанность клиентов
	Закон о защите персональных данных	Требует строгого соблюдения стандартов конфиденциальности
	Антимонопольное регулирование	Создает условия для честной конкуренции и выбора
	Законодательство о качестве и доступности услуг	Гарантирует клиентам прозрачность и защиту прав
	Правила лицензирования и частотного распределения	Влияют на стабильность и охват сети
	Этические стандарты цифровых коммуникаций	Формируют доверие пользователей к оператору

Примечание: составлено автором

Результаты проведенного PESTEL-анализа свидетельствуют о том, что внешняя среда в целом способствует развитию и укреплению клиентской лояльности к бренду АО «Казахтелеком». Активная государственная политика в области цифровизации, внедрение сетей нового поколения 5G и повышение уровня цифровой грамотности населения создают благоприятные условия для формирования положительного клиентского опыта и повышения доверия со стороны пользователей.

В то же время сохраняются определенные вызовы, требующие внимания со стороны компании. Среди них риски, связанные с обеспечением кибербезопасности и защитой персональных данных, инфляционные колебания, влияющие на покупательскую способность, а также региональные различия в уровне качества и доступности услуг. Эти факторы требуют адаптации стратегий взаимодействия с клиентами и постоянного совершенствования сервисных процессов.

В условиях усиливающейся конкуренции на телекоммуникационном рынке ключевое значение приобретает ориентация на индивидуальные потребности клиентов, развитие персонализированных решений и внедрение цифровых инструментов, повышающих удобство и прозрачность обслуживания. Кроме того, формирование «зеленого» имиджа компании и акцент на социальной ответственности могут стать дополнительным фактором укрепления эмоциональной привязанности абонентов к бренду.

Системное использование внутренних ресурсов и возможностей внешней среды, интеграция инноваций и персонализированных подходов в стратегию обслуживания создают предпосылки для повышения уровня клиентской лояльности, укрепления конкурентных позиций и обеспечения устойчивого развития АО «Казахтелеком» в долгосрочной перспективе.

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Эффекты от внедрения ERP системы в крупном бизнесе

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Аннотация

В статье рассматриваются теоретические и практические аспекты внедрения ERP-систем в условиях цифровой трансформации крупного бизнеса на примере АО «Казахтелеком». Актуальность исследования обусловлена возрастающей ролью цифровизации в повышении эффективности управления, интеграции бизнес-процессов и обеспечении конкурентоспособности компаний в условиях глобальной конкуренции. Целью работы является оценка организационно-экономических эффектов внедрения ERP-системы и определение ее влияния на структуру управления и стратегическое развитие предприятия. Научная новизна заключается в уточнении факторов успешности внедрения ERP с учетом специфики казахстанского телекоммуникационного рынка. Теоретическая значимость состоит в развитии подходов к оценке влияния цифровых технологий на эффективность управления, а практическая в возможности применения полученных результатов при реализации аналогичных проектов в других крупных организациях.

Ключевые слова: ERP-система, цифровая трансформация, автоматизация бизнес-процессов, эффективность управления, АО «Казахтелеком», корпоративное управление, цифровая экономика

Введение

Современный этап развития мировой экономики характеризуется глубокой цифровой трансформацией, которая охватывает все сферы общественной и предпринимательской деятельности. Одним из ключевых инструментов цифровой трансформации крупных предприятий выступают ERP (Enterprise Resource Planning) системы, предназначенные для комплексной автоматизации и управления корпоративными ресурсами. Внедрение ERP-системы позволяет объединить финансовые, логистические, производственные, кадровые и аналитические функции компании в единую цифровую среду, что обеспечивает синергетический эффект и способствует повышению конкурентоспособности бизнеса в условиях глобализации.

Для крупного бизнеса, особенно функционирующего в высокотехнологичных отраслях, ERP-системы становятся основой устойчивого развития и цифровой зрелости. Они позволяют оптимизировать процессы планирования, повысить точность управленческих решений и снизить издержки за счет автоматизации рутинных операций. Вместе с тем внедрение ERP представляет собой сложный, многоэтапный процесс, связанный с изменением организационной структуры, корпоративной культуры и бизнес-практик. Успешная реализация ERP-проектов требует комплексного подхода, включающего стратегическое планирование, участие руководства, адаптацию персонала и оценку экономической эффективности.

АО «Казахтелеком» крупнейшая телекоммуникационная компания Республики Казахстан — является ярким примером организации, активно реализующей стратегию цифровой трансформации. Масштаб деятельности компании, широкий спектр услуг и высокий уровень технологической нагрузки требуют создания устойчивой, интегрированной и управляемой информационной среды. В этих условиях внедрение ERP-системы рассматривается как инструмент оптимизации бизнес-процессов, повышения прозрачности управления и эффективности использования ресурсов. С учетом того, что «Казахтелеком» играет ключевую роль в развитии цифровой инфраструктуры страны, исследование эффектов внедрения ERP-системы в деятельности компании имеет важное практическое и научное значение.

Актуальность темы определяется необходимостью комплексного анализа влияния ERP-систем на эффективность корпоративного управления, структуру бизнес-процессов и уровень интеграции данных. В условиях растущей конкуренции, цифровизации экономики и внедрения инновационных технологий предприятия стремятся не только к автоматизации процессов, но и к формированию адаптивной цифровой экосистемы. Внедрение ERP-системы позволяет компаниям перейти от фрагментарного управления к сквозной модели, обеспечивающей прозрачность операций, стратегическую гибкость и повышение устойчивости бизнеса.

Целью настоящей статьи является всесторонняя оценка эффектов от внедрения ERP-системы в деятельности АО «Казахтелеком» и определение степени влияния цифровой трансформации бизнес-процессов на эффективность управления, организационную структуру и конкурентоспособность компании. Несмотря на значительное количество научных и практических исследований, посвященных ERP-системам, многие аспекты их внедрения и эксплуатации в условиях казахстанского рынка остаются недостаточно изученными. Это связано с особенностями организационной структуры отечественных компаний, уровнем цифровой зрелости, культурными и управленческими факторами, влияющими на восприятие изменений. В связи с этим актуальным представляется исследование влияния ERP на эффективность деятельности именно крупной телекоммуникационной компании, где масштаб и сложность процессов требуют интеграции финансовых, операционных и управленческих функций в единую систему.

Обзор литературы

Современные исследования в области цифровой трансформации подчеркивают, что внедрение ERP-систем является стратегическим инструментом повышения эффективности бизнеса и интеграции управленческих процессов. ERP обеспечивает единую цифровую среду, объединяющую функции финансов, закупок, логистики, кадров и производства, что способствует прозрачности и оперативности управленческих решений.

В научной литературе проблема внедрения и развития ERP-систем рассматривается с разных позиций от организационно-управленческих аспектов до вопросов информационной безопасности и

стратегической трансформации бизнеса. Ряд авторов уделяют внимание ключевым этапам, рискам и преимуществам использования ERP в условиях цифровой экономики.

Так, Э.А. Бобровников (2021) подробно анализирует структуру и последовательность внедрения ERP-систем, подчеркивая важность комплексного подхода, включающего этапы предварительной диагностики, проектирования, адаптации, обучения персонала и постпроектной поддержки. Автор отмечает, что успешность внедрения напрямую зависит от корректного планирования и управления изменениями на всех уровнях организации. В его работах акцентируется внимание на необходимости стратегического видения проекта и вовлеченности руководства, что позволяет минимизировать риски несогласованности и обеспечить интеграцию ERP во все ключевые бизнес-направления.

М.В. Гневанов и Р.Г. Баранов (2021) рассматривают ERP-системы с точки зрения обеспечения информационной безопасности и устойчивости цифровой инфраструктуры предприятия. Исследователи подчеркивают, что внедрение ERP требует создания защищенной среды для хранения и обработки данных, так как централизованный характер системы делает ее уязвимой для киберугроз. Авторы предлагают концепцию интеграции ERP с системами кибербезопасности и внутреннего аудита, что обеспечивает не только эффективность, но и доверие к цифровым процессам. Кроме того, Гневанов и Баранов отмечают необходимость регулярного мониторинга и обновления ERP-платформ, чтобы соответствовать современным требованиям безопасности и законодательства в области защиты информации.

В свою очередь, А.И. Яковчук (2022) рассматривает внедрение ERP как часть широкого процесса цифровой трансформации, направленного на повышение конкурентоспособности и устойчивости предприятий. Автор подчеркивает, что ERP-система не должна рассматриваться исключительно как ИТ-инструмент — она является катализатором организационных изменений, влияя на корпоративную культуру, управленческую модель и стратегию развития. В его исследованиях ERP описывается как ключевой элемент перехода компаний к цифровой экономике, обеспечивающий прозрачность, адаптивность и ускорение процессов принятия решений.

Анализ трудов указанных авторов позволяет заключить, что ERP-системы рассматриваются в научной среде как многофункциональный инструмент управленческой и технологической трансформации, способствующий не только повышению эффективности внутренних процессов, но и укреплению стратегических позиций компании на рынке. Бобровников делает акцент на методологии и этапности внедрения, Гневанов и Баранов — на вопросах безопасности и надежности, а Яковчук — на стратегическом и трансформационном потенциале ERP-систем в контексте цифровой экономики.

Методология исследования

Методологическая основа настоящего исследования определяется спецификой изучаемого объекта процессом внедрения и функционирования ERP-систем в крупном бизнесе, на примере АО «Казахтелеком».

Комплексный характер предмета исследования требует сочетания теоретического, аналитического и эмпирического подходов, направленных на всестороннее раскрытие влияния ERP на эффективность бизнес-процессов, финансово-экономические показатели и организационную структуру предприятия.

Информационную базу исследования составили как внутренние, так и внешние источники данных. К внутренним источникам относятся корпоративная отчетность АО «Казахтелеком», внутренние аналитические документы, статистика по ключевым показателям эффективности (KPI) до и после внедрения ERP, а также проектная документация по этапам реализации системы. Эти материалы позволили объективно оценить динамику изменений, связанных с цифровой трансформацией. Внешние источники включали официальные публикации компании, научные статьи, аналитические отчеты международных консалтинговых агентств, таких как Deloitte и PwC, а также материалы поставщиков ERP-решений (SAP, Oracle). Использование разнотипных источников обеспечило достоверность, репрезентативность и полноту анализа.

Для системной оценки влияния ERP-системы на стратегическое развитие предприятия использовался инструмент SWOT-анализа, позволивший выявить внутренние сильные и слабые стороны компании, а также внешние возможности и угрозы. На стратегическом уровне анализ позволил определить позицию АО «Казахтелеком» в отрасли, степень зрелости его цифровой инфраструктуры и потенциал для дальнейшего роста. На операционном уровне исследование показало, насколько эффективно ERP-система интегрируется в существующую управленческую и производственную среду, а также как она влияет на оптимизацию бизнес-процессов, контроль издержек и повышение производительности.

Обработка собранных данных осуществлялась с применением экономико-статистических методов анализа, включая расчет относительных и абсолютных отклонений, анализ динамики показателей, оценку рентабельности и производительности труда. Кроме того, использовались методы контент-анализа для обработки текстовой информации из открытых источников, что позволило выявить доминирующие тенденции и оценить восприятие цифровых изменений сотрудниками компании.

В целом, использованная методология обеспечила объективность, достоверность и комплексность исследования. Она позволила определить, каким образом внедрение ERP-системы способствует повышению управленческой прозрачности, сокращению операционных затрат, ускорению принятия решений и укреплению конкурентных позиций АО «Казахтелеком» на рынке телекоммуникационных услуг Казахстана.

Результаты и обсуждения

Одним из ключевых аспектов успешного внедрения ERP-системы в деятельность крупной компании является выбор подхода к управлению данным проектом. От методологии реализации напрямую зависит эффективность цифровой трансформации, сроки и устойчивость результатов. В условиях динамичной

внешней среды, в которой функционирует АО «Казахтелеком», вопрос адаптации методов внедрения ERP становится особенно актуальным.

Выбор методологического подхода определяется концепцией «проектного треугольника», где соотносятся время, стоимость и качество. На практике наиболее распространены два подхода классический (waterfall) и гибкий (agile). Классическая модель ориентирована на поэтапное выполнение всех стадий проекта — от проектирования и документирования до тестирования и ввода в эксплуатацию. Ее преимущество заключается в строгом контроле сроков и бюджета, а также в документальной прозрачности, что особенно важно для квазигосударственного сектора. Однако главным недостатком данного подхода является длительность реализации: пользователи получают готовую систему лишь через значительный промежуток времени, что снижает оперативность обратной связи и увеличивает риски обнаружения ошибок на поздних этапах.

Внедрение ERP-системы в АО «Казахтелеком» представляет собой не просто автоматизацию процессов, а глубокую трансформацию корпоративной архитектуры, способствующую повышению эффективности, управляемости и конкурентоспособности компании в условиях цифровой экономики.

В условиях цифровой трансформации современного бизнеса внедрение ERP-системы становится ключевым инструментом повышения эффективности управления и оптимизации всех внутренних процессов предприятия. Для крупного бизнеса особенно важно создать целостную модель, обеспечивающую единые стандарты планирования, учета и контроля. Целевая модель автоматизации и стандартизации бизнес-процессов направлена на формирование прозрачной, управляемой и интегрированной структуры деятельности компании, где все подразделения взаимодействуют в едином цифровом пространстве (Раисова Г.Б. 2020).

Основная цель построения такой модели - обеспечить сквозную автоматизацию бизнес-процессов, начиная от закупок и производства до продаж, логистики и финансового учета. ERP-система позволяет унифицировать данные, устранить дублирование функций, минимизировать человеческий фактор и обеспечить актуальность информации в режиме реального времени. В результате повышается точность управленческих решений, снижаются операционные издержки и ускоряется выполнение ключевых бизнес-операций.

В рамках целевой модели также особое внимание уделяется стандартизации процедур. Это необходимо для того, чтобы каждый процесс будь то согласование договора, оформление закупки или формирование финансового отчета выполнялся по четко определенному алгоритму. Такая унификация обеспечивает сопоставимость показателей между филиалами и подразделениями, а также создает условия для масштабирования бизнеса.

Автоматизация процессов с использованием ERP-платформы способствует интеграции всех информационных потоков компании, повышению ответственности сотрудников и прозрачности действий

на каждом уровне управления. Это особенно важно для крупных компаний, где взаимодействие между отделами может быть сложным и многоуровневым. Кроме того, стандартизированная модель облегчает аудит, внутренний контроль и соответствие корпоративным регламентам.

Целевая модель автоматизации и стандартизации бизнес-процессов - это стратегическая основа устойчивого развития крупной компании. Она обеспечивает единую цифровую экосистему, объединяющую все направления деятельности, и создает фундамент для дальнейшего совершенствования управленческих решений, внедрения инноваций и повышения конкурентоспособности на рынке.

Ниже представлена таблица 1, отражающая ключевые элементы и эффекты реализации целевой модели автоматизации и стандартизации бизнес-процессов.

Таблица 1

Целевая модель автоматизации и стандартизации бизнес-процессов

Компоненты модели	Содержание
1	2
Цель модели	Обеспечение единого цифрового управления ресурсами компании
Основной инструмент	ERP система (SAP S/4HANA)
Базовый подход	Процессно-ориентированная автоматизация с последующей стандартизацией процессов
Интеграция с другими системами	Биллинг/CRM, BI, системы мониторинга сети и обслуживания клиентов
Метод управления проектом внедрения	Agile/Waterfall (в зависимости от модуля), PMBOK
Формат внедрения	Этапный (модульно-функциональный или по бизнес-единицам)
Уровень стандартизации процессов	Единые регламенты, цифровые шаблоны, маршруты согласования
Целевая архитектура данных	Централизованная база

Целевая модель направлена на создание единой цифровой системы управления, основанной на процессно-ориентированном подходе и ценностных потоках. Автоматизация и стандартизация обеспечивают единые регламенты, прозрачность процессов и устранение дублирования.

Модель интегрирует ERP с CRM, BI, Big Data и другими корпоративными платформами, формируя единое информационное пространство. Внедрение осуществляется поэтапно с применением гибридных методологий (Agile и Waterfall), что снижает риски и повышает управляемость.

Архитектура данных основана на принципах MDM, обеспечивая достоверность и согласованность информации. Модель способствует цифровой зрелости и устойчивому развитию АО «Казахтелеком»

рисунок 1.

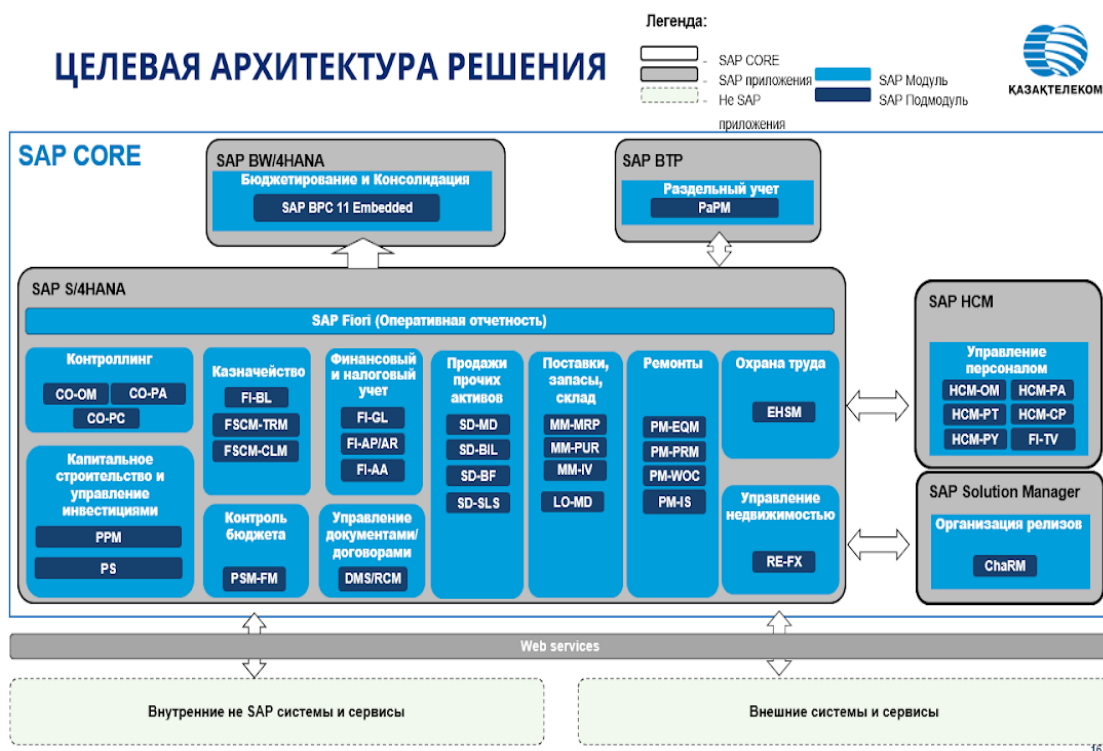


Рисунок 1

Схема верхне-уровневой архитектуры

Внедрение модели автоматизации бизнес-процессов в АО «Казакхтелеком» представляет собой стратегический проект цифровой трансформации, направленный на формирование единой управленческой экосистемы предприятия. Реализация модели предполагает поэтапную интеграцию функциональных модулей ERP-системы, охватывающих все ключевые направления деятельности компании от финансов и закупок до логистики, кадрового учета, технического обслуживания и аналитики.

Каждый бизнес-процесс проходит тщательную диагностику и анализ текущего состояния, что позволяет адаптировать типовые ERP-решения под специфику корпоративной структуры и технологической инфраструктуры АО «Казакхтелеком». Такой подход обеспечивает не механическое внедрение программного продукта, а глубокую реинжиниринг-перестройку бизнес-процессов, направленную на повышение эффективности, прозрачности и управляемости деятельности компании.

По мере реализации проекта ERP-система будет замещать разрозненные ИТ-инструменты, устаревшие программные решения и ручные операции, создавая единую цифровую среду управления. Все ключевые процессы компании будут объединены сквозными маршрутами данных и автоматизированными алгоритмами, что позволит обеспечить непрерывность бизнес-циклов, оперативность обмена информацией и согласованность действий между подразделениями.

Особое внимание уделяется централизации и автоматизации финансовых потоков, управлению закупками, материальными ресурсами и персоналом. Переход к цифровому формату позволит осуществлять мониторинг и контроль операций в режиме реального времени, минимизировать влияние человеческого фактора, повысить точность расчетов и оптимизировать использование ресурсов.

Интеграция ERP с другими корпоративными платформами - CRM, BI-аналитикой, Big Data и системами технического обслуживания - создает единое информационное пространство, доступное для всех уровней управления. Это обеспечит руководству компании возможность принимать решения на основе достоверных данных, проводить стратегическое планирование и быстро реагировать на изменения внешней среды.

Внедрение модели автоматизации бизнес-процессов в АО «Казахтелеком» станет фундаментом для перехода компании к новому уровню цифровой зрелости. Ожидается значительное повышение скорости и точности управленческих решений, прозрачности всех операций, устойчивости инфраструктуры и конкурентоспособности компании на рынке телекоммуникаций таблица 2.

Таблица 2

Этапы реализации модели

Этап	Содержание
Диагностика и анализ	Аудит текущих процессов, выявление узких мест и потребностей в автоматизации
Проектирование модели	Моделирование «целевого состояния» процессов в ERP, разработка спецификаций и регламентов
Настройка и адаптация ERP	Конфигурация системы под нужды компании, интеграция с существующими сервисами
Обучение персонала	Повышение квалификации пользователей, формирование устойчивых навыков работы в новой среде
Функциональное тестирование	Опытно-промышленная эксплуатация на ограниченном периметре компании (филиале или дивизионе)
Масштабирование	Расширение внедрения на все подразделения и филиалы
Поддержка и развитие	Постпроектное сопровождение, оценка эффективности, обновление и масштабирование новых функций

В АО «Казахтелеком» автоматизация реализуется поэтапно: сначала проводится диагностика бизнес-процессов для выявления неэффективных участков, затем разрабатывается проектная модель и технические требования. После этого система ERP настраивается под специфику компании и интегрируется с существующими решениями. Параллельно обучаются сотрудники. Далее проводится тестовая эксплуатация, по результатам которой система масштабируется на все подразделения. Завершается процесс постоянной технической поддержкой и развитием функций ERP.

Таблица 3*Плановая длительность проекта SAP 2.0.*

№	Этап	Длительность, мес
1	Внедрение SAP S/4HANA	25
2	Внедрение SAP BPC	15
3	Внедрение SAP EHSM	12

Таблица 3 отражает плановую длительность ключевых этапов реализации проекта SAP 2.0 на предприятии. Каждый из указанных этапов представляет собой отдельное направление цифровой трансформации, охватывающее внедрение специализированных модулей SAP, обеспечивающих модернизацию бизнес-процессов и повышение эффективности управления.

Инструментально модель реализуется через модули ERP системы, каждый из которых соответствует конкретной функциональной области. Интеграция модулей между собой формирует единую информационную платформу, позволяющую руководству компании видеть полную картину бизнеса в режиме реального времени.

Экономическая эффективность внедрения ERP системы в предпринимательскую деятельность АО «Казахтелеком» проявляется через целый ряд прямых и косвенных эффектов, влияющих на финансовые, операционные и стратегические показатели компании. Оценка эффективности проводится как в количественных, так и в качественных измерениях, включая снижение издержек, рост выручки за счет повышения клиентского сервиса, сокращение времени на выполнение операций, повышение прозрачности и управляемости бизнес-процессов.

Таблица 4*Ключевые экономические показатели до и после внедрения ERP в деятельность АО «Казахтелеком»*

Показатель	До внедрения	После внедрения (прогноз)	Изменение
Время обработки заявок на закупку	7 дней	2 дня	–71%
Уровень ошибок в бухгалтерской отчетности	5%	1%	–80%
Срок формирования управленческой отчетности	10 дней	2 дня	–80%
Уровень дублирования данных	Высокий	Низкий	Значительное сокращение
Операционные издержки на документооборот	100%	40%	–60%
Оборачиваемость складских запасов	4 оборота/год	6 оборотов/год	+50%
Производительность HR-службы	100%	130%	+30%
ROI (возврат инвестиций в ERP, прогноз)	-	15–25% в течение 3 лет	Положительный эффект

Представленные ключевые экономические показатели демонстрируют комплексное положительное влияние внедрения ERP системы на предпринимательскую деятельность АО «Казахтелеком». Анализируя данные таблицы, можно сделать вывод, что ERP-платформа не только повышает общую эффективность внутренних процессов, но и способствует существенной экономии ресурсов, улучшению качества управления и созданию предпосылок для стратегического роста.

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Совершенствование системы управления ИТ-услугами АО «Казахтелеком» с учетом долгосрочной стратегии цифровизации

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Аннотация

В работе рассматривается проблема совершенствования системы управления ИТ-услугами в контексте долгосрочной стратегии цифровизации на примере АО «Казахтелеком». В условиях цифровой трансформации экономики подразделения информационных технологий компаний сталкиваются с необходимостью соответствовать растущим требованиям бизнеса и международным стандартам качества. Работающая и постоянно развивающаяся система управления ИТ-услугами является важнейшим инструментом, позволяющим организации предоставлять качественные услуги, повышать доверие клиентов, снижать риски и оставаться конкурентноспособной на рынке.

Исследование основано на комплексном анализе текущего состояния ИТ-инфраструктуры и системы управления ИТ-услугами компании, выявлении сильных и слабых сторон действующей модели, а также определении факторов, влияющих на конкурентоспособность и устойчивость бизнеса. Представлены результаты анализа внешней и внутренней среды, позволившие обозначить ключевые направления развития и риски, связанные с цифровой трансформацией. Обоснована необходимость интеграции системы управления рисками и принципов ESG в корпоративную стратегию, что способствует формированию устойчивой цифровой экосистемы и повышению прозрачности бизнес-процессов.

В статье определены основные направления развития системы управления услугами ИТ, такие как оптимизация и улучшение бизнес-процессов, внедрение подходов DevOps и CI/CD, использование Big Data и AI. Подчеркивается важность внедрения международных стандартов качества ИТ-услуг и информационной безопасности (ISO/IEC 20000, ISO 27001).

Результаты исследования подтверждают, что совершенствование системы управления ИТ-услугами способствует повышению эффективности, снижению издержек и формированию новых цифровых экосистем. Разработанные рекомендации могут быть использованы казахстанскими компаниями, стремящимися повысить цифровую зрелость и устойчивость бизнеса в условиях глобальной цифровизации.

Ключевые слова: цифровизация, ИТ-услуги, Казахтелеком, бизнес-процессы, ISO/IEC 20000, цифровая трансформация

Введение

Современный этап развития экономики характеризуется стремительной цифровизацией, которая охватывает все сферы деятельности общества и государства. Информационные технологии (ИТ) становятся не только инструментом повышения эффективности управления, но и фактором конкурентоспособности

организаций. В условиях глобализации и перехода к экономике знаний именно уровень цифровой зрелости компании во многом определяет её устойчивость на рынке, способность к инновациям и быстрой адаптации к меняющейся внешней среде.

АО «Казахтелеком», являясь ведущим оператором телекоммуникационных услуг в Республике Казахстан, играет ключевую роль в обеспечении информационной инфраструктуры страны. Масштаб деятельности компании требует применения современных методов управления предоставляемыми услугами, способных обеспечить надежность, безопасность и высокое качество.

Исследование системы менеджмента услуг информационных технологий (СМУ) в АО «Казахтелеком» имеет особое значение, поскольку опыт компании может служить примером для других организаций, стремящихся повысить эффективность своих бизнес-процессов. Анализ существующих практик и определение перспектив дальнейшего развития системы менеджмента ИТ-услуг позволяют выявить факторы, способные повысить конкурентоспособность компании и поддержать цифровую трансформацию экономики Казахстана.

Актуальность исследования определяется возрастающей ролью цифровой трансформации в экономике Казахстана, где телекоммуникационные компании выступают ключевыми проводниками инноваций и технологий. Для АО «Казахтелеком» вопросы эффективного управления ИТ-услугами имеют стратегическое значение, так как именно от уровня зрелости ИТ в компании во многом зависит качество предоставляемых услуг, конкурентоспособность на национальном рынке и устойчивость бизнеса. Наличие современной и надежной ИТ-инфраструктуры, использование актуальных инструментов автоматизации, соответствие процессов управления услугами и информационной безопасностью международным стандартам, становятся важнейшими условиями успешного функционирования компании. При этом необходимость снижения издержек, повышения эффективности бизнес-процессов и формирования новых цифровых экосистем усиливает значимость исследования современных подходов к управлению ИТ-услугами. Таким образом, анализ системы управления информационными технологиями в АО «Казахтелеком» представляется актуальной задачей, имеющей как практическое, так и научное значение.

Цель работы заключается в комплексном исследовании системы управления услугами информационных технологий в АО «Казахтелеком» с позиции современных вызовов цифровизации экономики, включающем анализ существующей модели управления ИТ-услугами компании, оценку влияния внедряемых технологий на финансовые результаты и конкурентоспособность, выявление сильных и слабых сторон действующей модели управления, а также обоснование направлений её совершенствования. Особое внимание уделяется рассмотрению роли таких инструментов, как микросервисная архитектура, Big Data, DevOps и CI/CD, международные стандарты качества и информационной безопасности, а также исследованию влияния цифровых инноваций на формирование корпоративной системы управления рисками и внутреннего контроля. Таким образом, цель исследования

состоит не только в выявлении актуальных тенденций, но и в выработке практических рекомендаций, позволяющих АО «Казахтелеком» укрепить позиции национального лидера в сфере цифровых технологий и обеспечить долгосрочную устойчивость в условиях глобальной конкуренции.

Обзор литературы

Вопросы применения и развития информационных технологий в управлении, специфика функционирования телекоммуникационных систем и технологий, а также управление качеством, получили широкое отражение в научной литературе. Анализ трудов ведущих авторов позволил сформировать методологическую основу настоящего исследования.

Так, Лапшина С.Н. (2015) акцентирует внимание на том, что цифровизация и внедрение новых технологий меняют методы организации бизнеса, повышают прозрачность управленческих процедур и эффективность взаимодействия между подразделениями.

Работа Курицына С.А. (2017) посвящена вопросам функционирования и построения современных телекоммуникационных сетей. В книге подробно рассматриваются технологические решения и принципы организации систем передачи данных, что позволило глубже понять специфику инфраструктуры компании и определить ключевые направления её модернизации.

Работа Макарова С.Б., Певцова Н.В., Попова Е.А., Сиверса М.А. (2013) раскрывает особенности становления и развития систем мобильной связи, а также анализирует эволюцию технологий передачи данных. Авторы показывают закономерности развития телекоммуникационных технологий, акцентируя внимание на стандартах и особенностях построения сетей.

Демин и Исайченко (2019) фокусируются на целях в области управления ИТ и, в частности, на предоставлении качественных ИТ-услуг. Детально рассматривают вопросы измерения и оценки качества не только услуг, но и процессов и персонала, обеспечивающих предоставление услуг.

Тепман Л.Н. (2017) рассматривает основные принципы, подходы, теории и концепции управления качеством. Особое внимание уделено современным аспектам и зарубежному опыту управления качеством.

Проанализированные источники позволили сформировать целостное представление о применении информационных технологий в управлении, об особенностях построения телекоммуникационных систем и развитии технологий мобильной связи. Их использование обеспечило теоретическую и практическую обоснованность исследования, а также стало основой для анализа перспектив развития ИТ-систем и телекоммуникационной инфраструктуры АО «Казахтелеком».

Методология исследования

Методологической основой исследования являются современные теории управления услугами и цифровой трансформации. Основные концепции включают:

1. Теория управления качеством (TQM);
2. Концепция управления ИТ-услугами ITSM;
3. Концепция управления изменениями (Change Management) при цифровой трансформации;
4. Процессный и системный подход к управлению.

В процессе исследования были использованы анализ и синтез для системного рассмотрения теоретических основ управления информационными технологиями, индукция и дедукция для выявления общих закономерностей цифровой трансформации и их проекции на специфику деятельности АО «Казахтелеком». Проведенный SWOT и PESTEL-анализ позволили определить сильные и слабые стороны компании, а также оценить влияние политических, экономических, социальных, технологических и правовых факторов на её стратегию цифровизации. Сравнительный анализ применялся при сопоставлении мировых практик управления ИТ с подходами, реализуемыми в деятельности компании. Кроме того, статистический анализ был использован для обработки данных о качестве предоставляемых ИТ-услуг в АО «Казахтелеком». Применение указанных методов обеспечило комплексный и всесторонний характер исследования, что позволило обосновать направления совершенствования СМУ в условиях цифровизации экономики.

Результаты и обсуждения

На современном этапе цифровизации экономики телекоммуникационные компании вынуждены адаптировать свои ИТ-сервисы к растущим требованиям рынка и международным стандартам кибербезопасности. АО «Казахтелеком» выступает ключевым игроком и национальным лидером в данной сфере. При этом ИТ-подразделение компании выполняет одновременно стратегическую и функциональную роль: обеспечивает поддержку внутренней ИТ-инфраструктуры и формирует значительный объём доходов за счёт предоставления клиентам облачных и цифровых решений. Предоставляемые ИКТ-услуги компании показывают стабильную динамику роста и отличаются высокой маржинальностью в сравнении с традиционными услугами, что делает данное направление наиболее перспективным для развития, а растущий спрос на цифровые сервисы со стороны клиентов подтверждает стратегическую значимость ИТ-бизнеса для компании.

Цифровизация выступает ключевым стратегическим направлением развития компании. Высшее руководство и акционеры компании ясно осознают, что для сохранения конкурентных преимуществ и удержания лидерских позиций на рынке недостаточно ограничиваться совершенствованием продуктовой линейки и повышением качества клиентского сервиса. Необходимым условием становится параллельное развитие современной инфраструктуры, которая будет служить технологической основой для вывода на рынок новых цифровых сервисов, роста операционной эффективности и обеспечение устойчивого развития.

Для соответствия требованиям бизнеса и растущим ожиданиям рынка, АО «Казахтелеком» реализует масштабную программу развития ИТ, которая охватывает сразу несколько направлений. Во-первых, модернизация ИТ-инфраструктуры, направленная на создание отказоустойчивых и высокопроизводительных технологических площадок, которые станут основой для развертывания и внедрения современных цифровых решений. Впервые в Казахстане был реализован проект по созданию катастрофо- и отказоустойчивой геораспределенной вычислительной платформы на базе двух географически удаленных ЦОД (Астана, Акколь) с использованием технологии метрокластер. Последующий перенос на данную площадку наиболее критичных информационных систем позволил значительно повысить отказоустойчивость и надежность корпоративных сервисов, обеспечив непрерывность бизнес-процессов даже при критических отказах инфраструктуры. Компания также осуществляет модернизацию корпоративной сети передачи данных и обновление серверного оборудования.

Во-вторых, компания приняла стратегию обеспечения технологического лидерства в ИТ и перехода на современную ИТ-архитектуру. В рамках данного направления внедрен архитектурный подход к управлению ИТ, реализуется программа перехода на микросервисную архитектуру и создания единой backend платформы для цифровых продуктов компании. Собственными силами компания разработала и запустила платформу для работы микросервисов. На микросервисы переведены все основные системы, обеспечивающие автоматизацию предоставления услуг и взаимодействие с клиентами, биллинг, управление рабочим временем разъездного персонала и другие процессы. Данный переход создает основу для дальнейшей цифровой трансформации, а также формирования экосистемы для сотрудников компании на базе технологии Single Sign-On, обеспечивающей единый доступ ко всем внутренним сервисам. Внедрение новой ИТ-архитектуры также позволило повысить адаптивность приложений, ускорить запуск новых сервисов и облегчить интеграцию с внешними партнерами посредством открытых API.

Третьим направлением стал проект по приведению существующей системы менеджмента ИТ-услуг компании, основанной на концепции ITSM и методологии ITIL, к требованиям международного стандарта. Цель проекта - готовность ИТ работать с бизнесом на условиях SLA. Дивизионом информационных технологий компании разработана, внедрена и сертифицирована система менеджмента ИТ-услуг на основе стандарта СТ РК ISO/IES 20000-1-2016. Карта процессов системы менеджмента услуг приведена на рисунке 1.



Рисунок 1

Карта процессов управления ИТ-услугами

Примечание: составлено на основе источника (Дунаев Г., 2010)

Еще одним важным проектом в области развития систем управления является внедрение системы менеджмента информационной безопасности, как необходимого компонента в обеспечении кибербезопасности. Выполнено внедрение системы в Дивизионе информационных технологий и идет подготовка к сертификации на соответствие стандарту ISO 27000, которая должна состояться в 2026 году.

В компании реализуется программа интеграции корпоративной системы управления рисками и внутреннего контроля в кросс-функциональные процессы компании. На этапе стратегического планирования учитываются угрозы, способные негативно повлиять на достижение долгосрочных целей; в бюджетировании — финансовые риски; при реализации инвестиционных проектов — проектные и продуктовые риски. Каждый функционирующий процесс требует идентификации рисков, их анализа и управления, что делает управление рисками сквозной практикой в рамках систем менеджмента.

Управление рисками в АО «Казахтелеком» характеризуется как системный и многоуровневый процесс. Компания проводит ежегодную идентификацию и актуализацию рисков. По итогам 2023 года зафиксировано 23 ключевых риска, включая правовые, кадровые, технологические, инновационные и угрозы информационной безопасности. Особое внимание уделяется развивающимся рискам. Среди внутренних угроз выделяются отказы ИТ инфраструктуры, сбои в процессе закупок, риски потери частот, задержки в реализации проектов 5G. Внешние вызовы связаны с геополитической нестабильностью, нехваткой ресурсов и потенциальными негативными эффектами вследствие развития технологий искусственного интеллекта (Казахтелеком, 2023).

В результате реализации программ по развитию информационных технологий в компании было достигнуто значительное улучшение качества ИТ-услуг. Так, среднее время простоя ИТ систем в результате

аварий и повреждений сократилось в 2 раза, среднее время решения заявок по ИТ-услугам на основе обращений клиентов снизилось на 34%. Внедряемая в процессы разработки программного обеспечения методология DevOps с использованием инструментов непрерывной интеграции и непрерывного развертывания (CI/CD) позволила увеличить количество выпускаемых обновлений с одного-двух в неделю до 60-80 в сутки, что значительно ускоряет вывод новых продуктов на рынок.

Отдельно следует отметить направление по усилению позиций АО «Казахтелеком» на рынке существующих ИКТ услуг и разработке новых направлений развития бизнеса. За последние 2 года компания увеличила мощность своих ЦОД, введя в эксплуатацию вторую очередь ЦОД в городе Алматы и проведя модернизацию и расширение ЦОД в городе Акколь. Ввод данных объектов является важным фактором для стратегического развития компании - именно центры обработки данных выступают базой построения цифровой экосистемы, обеспечивая ее инженерную основу. В компании проведен комплексный анализ платформы предоставления услуги TV+ и разработана программа модернизации и развития данной услуги. Развиваются и ставшие уже традиционными ИКТ услуги - реализован проект по расширению платформы VDC для предоставления услуг виртуального дата-центра, что позволило значительно удовлетворить спрос в данной услуге на рынке.

В целях выявления предпочтений клиентов, прогнозирования спроса на услуги и выработки рекомендаций по развитию сервисов внедрена система анализа трафика и профилирования интересов абонентов на базе платформы BigData.

За последние два года компания вывела на рынок новые высокотехнологичные услуги, среди которых можно выделить такие, как облачная видеоаналитика с использованием искусственного интеллекта, сервис по киберзащите AntiDDos, Инфраструктура дронов под ключ, Смарт-видеожетоны, Цифровой сервис телемедицины.

Современные тенденции в сфере информационных технологий и телекоммуникаций определяются ускоренной цифровизацией, масштабным внедрением облачных решений, искусственного интеллекта и интернета вещей. Ключевым фактором развития становится трансформация интернета из вычислительной сети в основу коммуникационной и сервисной инфраструктуры.

Особое значение приобретает кастомизация цифровых сервисов, которая, как отмечают Макаров, Певцов, Попов и Сиверс (2013), достигает новых уровней гибкости, хотя имеет объективные технологические пределы. В то же время стремительное распространение носимых устройств, умных датчиков и экосистем «Интернета вещей» формирует новые стандарты взаимодействия человека с технологиями (Акперов, 2018). Эти процессы открывают возможности для индивидуализации услуг и совершенствования систем управления, но одновременно повышают значимость вопросов информационной безопасности и устойчивости цифровой инфраструктуры.

Интеграция ИТ и телекоммуникационных технологий формирует фундаментальные изменения в структуре цифровой экономики. Для АО «Казахтелеком» данные тенденции представляют собой как новые вызовы, так и новые возможности. С одной стороны, требуется глубокая модернизация сети, виртуализация сетевых функций и повышение уровня киберзащиты. С другой стороны, именно эти меры создают условия для укрепления лидерских позиций компании на рынке и формирования комплексной цифровой экосистемы.

В рамках реализуемой цифровой трансформации бизнеса, внедрение и применение ITSM подходов в организации выходит за рамки оптимизации ИТ-процессов и превращается в стратегический инструмент управления. Действующая и постоянно совершенствующаяся система менеджмента ИТ-услуг ускоряет вывод продуктов на рынок, повышает качество клиентского опыта, позволяет принимать решения на основе данных, обеспечивает масштабируемость и гибкость ИТ-инфраструктуры, снижает риски и повышает конкурентноспособность компании на рынке (Itglobal.com, 2024).

Проведенное исследование имеет высокую практическую значимость, поскольку его результаты позволяют выработать конкретные направления для совершенствования системы управления ИТ-услугами в АО «Казахтелеком». Полученные данные могут быть использованы для:

- повышения устойчивости компании к внутренним и внешним рискам;
- совершенствования механизмов внутреннего контроля и корпоративного управления;
- укрепления позиций компании на телекоммуникационном рынке Казахстана.

SWOT- и PESTEL-анализ выявили базовые факторы, оказывающие положительное или отрицательное влияние на деятельность компании, а также показали направления, в которых организации необходимо адаптировать свои процессы к меняющейся бизнес-среде.

Практическая значимость также заключается в том, что результаты исследования могут применяться в других телекоммуникационных и высокотехнологичных компаниях Казахстана, которые сталкиваются с аналогичными вызовами — цифровизацией, киберугрозами, кадровыми рисками и необходимостью соблюдения международных стандартов по устойчивому развитию. В таблице 1 представлены практические результаты проведенного анализа.

Таблица 1
Практическая значимость результатов исследования

Направление анализа	Основные результаты	Практическая значимость для АО «Казахтелеком»
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SWOT-анализ	Определены сильные стороны (лидерство на рынке, развитая инфраструктура), слабые стороны (износ оборудования, кадровые проблемы), возможности (развитие 5G, цифровизация услуг), угрозы (киберриски, конкуренция).	Использование сильных сторон и возможностей при минимизации угроз позволит компании повысить конкурентоспособность и обеспечить устойчивое развитие.
PESTEL-анализ	Политические факторы: поддержка цифровизации; Экономические: зависимость от инвестиций; Социальные: рост спроса на интернет; Технологические: внедрение AI, IoT и 5G; Экологические: энергопотребление и утилизация оборудования; Правовые: регулирование телекоммуникационного сектора.	Создание адаптивной стратегии развития, которая будет учитывать изменения во внешней среде, позволит компании эффективно реагировать на вызовы и минимизировать регуляторные и экологические риски.
Управление ИТ-услугами	Функционирует система менеджмента услуг, внедрены все процессы управления. Процессы системы реализуются с использованием различных методов и практик.	Непрерывное совершенствование процессов обеспечит повышение эффективности и производительности, снижение затрат и рисков, улучшение качества услуг, а также соблюдение принципов ESG.
Управление рисками и внутренними контролями	Сформирована КСУРиБК, которая функционирует на основе модели «трех линий защиты» и международных стандартов. Определены ключевые риски в области ИТ: киберугрозы, риски отказа ИТ-инфраструктуры, кадровые риски.	Усиление механизмов контроля и своевременная митигация рисков обеспечат повышение стабильности и предсказуемости бизнеса.

Примечание: составлено автором

По результатам исследования выработаны следующие рекомендации по дальнейшему совершенствованию системы управления ИТ услугами:

1. Совмещение ИТ-процессов с корпоративной системой управления рисками и внутренних контролей, внедрение единой платформы мониторинга рисков - снижение вероятности инцидентов, повышение устойчивости сервисов;
2. Применение практик DevOps, полная автоматизация процессов интеграции и развертывания программного обеспечения, реинжиниринг бизнес-процессов - сокращение времени вывода услуг на рынок, повышение прозрачности, качества и стандартизации услуг;
3. Внедрение ИИ, BigData и предиктивной аналитики для мониторинга и анализа инфраструктуры и поддержки клиентов - автоматизация процессов, принятие решений на основе данных, сокращение длительности инцидентов;

4. Обучение сотрудников, интеграция системы сертификации и мотивации - повышение квалификации персонала, снижение кадровых рисков;
5. Развитие системы омниканального взаимодействия (чат-боты, мессенджеры, мобильные приложения, онлайн-кабинеты) - повышение удовлетворенности и рост лояльности со стороны клиентов.

Таким образом, внедрение и применение современных моделей и практик управления ИТ-услугами в деятельности организации и развитие цифровых сервисов обеспечат компании стратегическое и ощутимое экономическое преимущество на рынке.

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Эффективность управления качеством сервиса через внедрение инструментов непрерывного мониторинга обслуживания с использованием искусственного интеллекта

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Аннотация

В условиях цифровой трансформации и усиления конкуренции в телекоммуникационной отрасли Республики Казахстан управление качеством сервиса становится ключевым фактором конкурентоспособности и устойчивости компаний. Проблема исследования заключается в необходимости перехода от традиционных методов контроля к интеллектуальным системам управления качеством обслуживания, основанным на непрерывном мониторинге и анализе больших данных. Цель работы выявить и обосновать эффективные подходы к повышению качества сервиса через внедрение инструментов непрерывного мониторинга с применением технологий искусственного интеллекта, обеспечивающих рост клиентской удовлетворенности и оптимизацию внутренних процессов. Методология исследования включает использование качественных и количественных методов: SWOT- и PESTEL-анализа, оценки ключевых показателей эффективности, анализа финансово-операционных данных, а также алгоритмов машинного обучения для прогнозирования и оптимизации сервисных процессов.

Ожидаемые результаты состоят в разработке модели интеллектуального мониторинга качества обслуживания, формировании системы предиктивных индикаторов и повышении уровня клиентского опыта. В ходе исследования установлено, что применение ИИ-инструментов позволило сократить время реакции на инциденты, улучшить показатели SLA, повысить удовлетворенность клиентов и снизить операционные издержки. Выявлены также ограничения, связанные с инфраструктурой, качеством данных и компетенциями персонала. Сделанные выводы подтверждают стратегическую значимость внедрения технологий искусственного интеллекта в управление качеством сервиса, обеспечивающих синергетический эффект в экономической, организационной и клиентской сферах телекоммуникационной отрасли Казахстана.

Ключевые слова: управление качеством сервиса, искусственный интеллект, АО «Казахтелеком», телекоммуникации, цифровая трансформация

Введение

Актуальность исследования определяется глубокими изменениями в телекоммуникационной отрасли, вызванными цифровой трансформацией, ростом объема данных и усложнением сервисных процессов. В условиях высокой конкуренции и стремительно растущих ожиданий пользователей ключевым фактором устойчивого развития телекоммуникационных компаний становится качество обслуживания. Традиционные методы контроля качества оказываются недостаточно эффективными, поскольку не

позволяют своевременно выявлять отклонения и прогнозировать возможные проблемы в работе сети и сервисов.

Особое значение приобретает интеграция технологий искусственного интеллекта в процессы непрерывного мониторинга, что позволяет формировать проактивную модель управления качеством, повышающую точность анализа, скорость реагирования и степень удовлетворенности клиентов. Для компаний Казахстана, включая АО «Казахтелеком», применение интеллектуальных инструментов становится стратегическим направлением, обеспечивающим цифровую зрелость, снижение издержек и повышение конкурентоспособности.

Цель исследования заключается в научном обосновании и выявлении эффективных подходов к управлению качеством сервиса в телекоммуникационной отрасли на основе внедрения технологий искусственного интеллекта и систем непрерывного мониторинга, направленных на повышение удовлетворенности клиентов и оптимизацию внутренних бизнес-процессов компании.

Обзор литературы

Применение искусственного интеллекта и машинного обучения в телекоммуникационной отрасли активно развивается в связи с усложнением сетевой инфраструктуры и необходимостью повышения качества обслуживания. Традиционные методы управления качеством оказываются недостаточно эффективными, что создает потребность во внедрении интеллектуальных систем мониторинга.

Бамбуров (2018) рассматривает ИИ как инструмент повышения прозрачности управления и автоматизации рутинных операций. Белова и Шевченко (2023) подчеркивают влияние цифровой трансформации на оптимизацию бизнес-процессов и качество услуг. Кротенко и Жернакова (2019) отмечают необходимость развития управленческих компетенций для работы с интеллектуальными инструментами, а Попова (2023) выделяет потенциал ИИ для улучшения клиентского опыта в малом и среднем бизнесе. Жапарова, Кусепова и Назырова (2024) подчеркивают, что ИИ должен интегрироваться в систему управления, а не функционировать отдельно.

Международные исследования показывают, что цифровизация оказывает большее влияние на сервисные организации, чем на производственные (Hee Lee, 2022; Rha & Lee, 2022), способствуя формированию сервисно-ориентированных бизнес-моделей и предпринимательской ориентации. Chin, Marasini и Lee (2022) отмечают переход сервисных компаний к интегрированным цифровым экосистемам с клиентским центром и управлением данными.

Методология исследования

В рамках исследования использовался комплекс методов, обеспечивающий всесторонний анализ управления качеством сервиса в АО «Казахтелеком» с использованием технологий искусственного

интеллекта. Применялся аналитический метод для изучения научной литературы, нормативных документов и отраслевых публикаций, посвященных цифровой трансформации, управлению качеством и внедрению ИИ в телекоммуникационной сфере, что позволило выявить тенденции развития интеллектуальных систем мониторинга и определить лучшие практики. Использовался системный подход для исследования процессов оказания услуг с точки зрения взаимодействия инфраструктуры, сетевых ресурсов, клиентского обслуживания и информационных систем, что обеспечило понимание взаимосвязей между технологическими и организационными аспектами управления качеством.

Для анализа применялись качественные и количественные методы, включая SWOT- и PESTEL-анализ, оценку ключевых показателей эффективности (KPI), анализ финансово-операционных данных, а также контент-анализ и статистическую обработку информации о работе сети, обращениях клиентов и времени реакции службы поддержки. Использовались методы моделирования и прогнозирования с применением алгоритмов машинного обучения для предиктивного анализа сети и оптимизации сервисных процессов. Практический опыт компании изучался с помощью кейс-анализа, включая модернизацию инфраструктуры, развертывание 5G и интеграцию платформ интеллектуального мониторинга, что позволило оценить влияние внедрения ИИ на качество обслуживания и удовлетворенность клиентов. Также применялись экспертные методы, включая опросы и интервью с менеджерами, инженерами и специалистами по работе с клиентами, для выявления проблемных зон и оценки эффективности используемых инструментов. Комплексное применение указанных методов обеспечило всестороннее изучение объекта исследования и формирование рекомендаций по повышению эффективности управления качеством обслуживания в АО «Казахтелеком», включая разработку системы предиктивных индикаторов и модели интеллектуального мониторинга, способной сокращать время реакции на инциденты, повышать показатели SLA, оптимизировать внутренние процессы и улучшать клиентский опыт.

Результаты и обсуждения

Система обслуживания АО «Казахтелеком» сталкивается с проблемами адаптации к цифровой трансформации и росту требований клиентов. Основные трудности включают недостаточную интеграцию цифровых инструментов, сложность обеспечения стабильного качества при увеличении объемов данных и усложнении инфраструктуры, а также нехватку квалифицированных специалистов и медленную адаптацию организационной культуры. Высокая конкуренция и растущие ожидания пользователей усиливают необходимость перехода к активному управлению качеством на основе прогнозных моделей, внедрения интеллектуальных технологий, повышения прозрачности процессов и развития цифровых компетенций персонала.

Одним из важнейших требований, предъявляемых к современным телекоммуникационным сетям, является обеспечение заданного уровня качества обслуживания. Качество телекоммуникационных услуг –

это совокупность свойств услуги, определенных качеством функционирования сети, которые характеризуют способность удовлетворять потребности пользователей (рисунок 1).



Рисунок 1
Качество телекоммуникационных услуг
Примечание: источник (Nexign.com, 2025)

В телекоммуникационной отрасли мониторинг качества обслуживания (Quality of Service, QoS) опирается на комплекс концепций и моделей, позволяющих не только фиксировать текущие показатели, но и прогнозировать и улучшать клиентский опыт.

В телекоммуникациях применяются следующие модели мониторинга качества сервиса: SLA-ориентированная, оценивающая показатели согласно договорным соглашениям; QoS-модели, использующие количественные метрики для анализа и прогнозирования; интегрированные Data-driven QoS-модели, объединяющие сетевые и пользовательские данные с аналитикой для автоматического выявления проблем (рисунок 2).

Соглашение об уровне обслуживания (SLA)

это контракт, который определяет ожидаемый уровень обслуживания, предоставляемого клиенту, включая такие показатели, как доступность, производительность и время решения проблем



Цели уровня обслуживания (SLO)

это конкретные измеримые цели в рамках SLA, которые определяют ожидаемые уровни производительности, такие как время безотказной работы сети или время реагирования на запросы клиентов



KPI (ключевые показатели эффективности)

это измеримые значения, показывающие, насколько эффективно телекоммуникационная компания выполняет свой KPI могут включать задержку в сети, потерю пакетов или время решения проблем, связанных со службой поддержки клиентов



Отчетность по SLA

включает в себя подготовку всесторонних отчетов о результатах работы компании с учетом SLA и KPI, которые обеспечивают прозрачность и повышают взаимодействие с клиентами и внутренними отделами

Мониторинг и отчетность по SLA

Рисунок 2

Модель SLA-ориентированного мониторинга

Примечание: источник (Telecom.kz, 2025)

Использование этих концепций и моделей дает телекоммуникационным компаниям возможность перейти от реактивного к проактивному и предиктивному управлению, что повышает качество клиентского обслуживания, сокращает количество инцидентов и улучшает эффективность внутренних процессов.

Для комплексного анализа эффективности системы управления качеством сервиса в АО «Казахтелеком» применялась комбинация SWOT- и PESTEL-анализа, что позволило оценить компанию как с внутренней, так и с внешней стороны. SWOT-анализ сосредоточен на внутренних сильных и слабых сторонах компании (Strengths, Weaknesses) и внешних возможностях и угрозах (Opportunities, Threats), формируя «снимок» текущего положения организации. В то время как PESTEL-анализ ориентирован на изучение макросреды, рассматривая политические, экономические, социальные и технологические факторы. Основное отличие этих инструментов заключается в том, что SWOT позволяет сопоставить внутренние ресурсы и возможности компании с условиями рынка, тогда как PESTEL систематически анализирует внешние силы, влияющие на деятельность организации.

Таблица 1

SWOT-анализ факторов управления качеством в АО «Казахтелеком»

SWOT	Описание
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Сильные стороны (Strengths)	- Высокий уровень выполнения SLA по большинству сегментов, особенно корпоративных и мобильной связи.- Современные системы мониторинга сети и инцидентов (МТТА, МТТР).- Развитая инфраструктура и широкая зона покрытия.- Стабильная и оперативная служба поддержки клиентов.
Слабые стороны (Weaknesses)	- Время реакции на инциденты для сегмента Интернет и ТВ выше среднего, что может снижать удовлетворенность пользователей.- Возможные узкие места в автоматизации процессов управления качеством.- Не всегда единые стандарты обслуживания для разных клиентских сегментов.
Возможности (Opportunities)	- Внедрение технологий искусственного интеллекта для прогнозирования сбоев и автоматизации реагирования.- Расширение аналитики клиентских данных для повышения качества обслуживания.- Оптимизация процессов и SLA через цифровизацию и интеграцию с новыми сервисами.- Развитие дополнительных сервисов для удержания клиентов.
Угрозы (Threats)	- Рост конкуренции на телеком-рынке с усилением требований к SLA.- Возможные технологические сбои и киберугрозы.- Изменения регуляторных норм и требований к качеству обслуживания.- Повышение ожиданий клиентов и необходимость постоянного улучшения стандартов.

Примечание: составлено автором

АО «Казахтелеком» обладает сильной инфраструктурой и высокой надежностью услуг, но имеет отдельные точки для улучшения (например, Интернет и ТВ). Использование современных технологий и аналитики может усилить конкурентные преимущества и минимизировать потенциальные угрозы.

Таблица 2

PESTEL-анализ факторов управления качеством сервиса АО «Казахтелеком»

Фактор PESTEL	Описание влияния на управление качеством сервиса
1	2
Политический (Political)	- Государственная поддержка цифровизации и телекоммуникационной инфраструктуры.- Политическая стабильность в стране способствует надежной работе сети.- Регулирование государственных стандартов обслуживания и обязательное соблюдение SLA.
Экономический (Economic)	- Рост экономики и доходов населения стимулирует спрос на качественные телеком-услуги.- Колебания тарифов и инфляция могут влиять на инвестиции в обновление оборудования и технологии.- Конкуренция на рынке телеком-услуг вынуждает поддерживать высокий уровень качества.
Социальный (Social)	- Повышение ожиданий клиентов по скорости и доступности услуг (особенно цифровых сервисов).- Увеличение числа корпоративных клиентов требует индивидуального подхода и высоких стандартов обслуживания.- Рост мобильной аудитории и интернет-пользователей влияет на нагрузку сети.
Технологический (Technological)	- Внедрение AI, Big Data и аналитических инструментов для прогнозирования и оптимизации SLA.- Развитие новых технологий связи (5G, оптика) позволяет улучшить надежность и скорость сети.- Автоматизация процессов обслуживания повышает эффективность реагирования на инциденты.
Экологический (Environmental)	- Энергоэффективность оборудования и снижение углеродного следа становятся частью стандартов корпоративной ответственности.- Снижение воздействия

	сетевой инфраструктуры на окружающую среду может повысить имидж компании.
Правовой / Законодательный (Legal)	- Соблюдение законодательства о защите персональных данных клиентов (GDPR и местные законы).- Обязательные стандарты качества обслуживания и SLA по нормативам регуляторов.- Лицензирование телеком-операторов и требования к обеспечению безопасности связи.

Примечание: составлено автором

PESTEL-анализ показал, что управление качеством сервиса в АО «Казахтелеком» зависит от внешних факторов — технологических инноваций, регуляторных требований, экономических и социальных ожиданий, создающих давление на поддержание стандартов SLA. SWOT-анализ выявил внутренние сильные и слабые стороны компании, внешние возможности цифрового развития и потенциальные риски. Совместное использование SWOT и PESTEL позволило определить ключевые внутренние барьеры (высокие затраты, сложность модернизации инфраструктуры) и внешние драйверы развития (государственная цифровая политика, технологические инновации), а также стало основой для выработки практических решений по повышению эффективности управления качеством сервиса через внедрение инструментов непрерывного мониторинга с использованием ИИ.

В АО «Казахтелеком» цифровизация сервисного менеджмента и внедрение инструментов мониторинга, включая WFM и систему видеонаблюдения, направлены на повышение клиентской удовлетворенности, сокращение времени реакции на инциденты и оптимизацию внутренних процессов, при этом Департамент контроля качества сервиса обеспечивает постоянный контроль и оценку эффективности обслуживания.

Программа внедрения модели оптимизации мониторинга в АО «Казахтелеком» предусматривает комплекс мероприятий, направленных на адаптацию технологической инфраструктуры, формирование компетенций и развитие управленческих механизмов. Основное внимание уделяется построению единой платформы интеллектуального анализа данных, которая объединяет все ключевые системы — от сетевого мониторинга до управления обращениями клиентов.

Таблица 3

Программа внедрения модели

Направление	Основные мероприятия	Ожидаемый эффект
Технологическая интеграция	Объединение ИТ-систем, настройка API, внедрение ИИ-платформы	Централизованный контроль данных и высокая скорость аналитики
Организационное развитие	Создание проектной группы, обучение персонала, разработка регламентов	Повышение компетенций и снижение ошибок человеческого фактора
Аналитическое развитие	Обучение моделей, настройка предиктивных сценариев	Превентивное устранение инцидентов и рост стабильности сети

Управление изменениями	Коммуникации с персоналом, оценка цифровой зрелости, контроль эффективности	Снижение сопротивления изменениям и повышение вовлеченности
Поддержка и сопровождение	Создание центра компетенций, обновление моделей	Устойчивость системы и ее адаптация к новым вызовам

Примечание: источник (Inform.kz. 2025)

Внедрение инструментов искусственного интеллекта в АО «Казахтелеком» позволило значительно повысить эффективность управления качеством сервисных процессов. Применение интеллектуальных систем мониторинга обеспечило сокращение времени реагирования на инциденты, предиктивное выявление проблем и автоматическое распределение задач, что снизило число сбоев и улучшило выполнение SLA. Одновременно ИИ способствовал оптимизации внутренних процессов и ресурсов, автоматизации рутинных операций, повышению прозрачности данных и управляемости процессами, что укрепило стратегические позиции компании.

Практическая значимость внедрения ИИ проявляется в улучшении клиентского опыта: персонализированные предложения, быстрый отклик на обращения и точный контроль качества услуг повышают удовлетворенность и лояльность абонентов, способствуя укреплению доверия к бренду. Для дальнейшего совершенствования системы мониторинга и управления качеством обслуживания необходимо развивать инфраструктуру, интегрируя все сервисные системы и обеспечивая единое информационное пространство для анализа данных в режиме реального времени. Также важно усиливать предиктивную аналитику, регулярно обновлять модели машинного обучения и внедрять механизмы самообучения, чтобы прогнозировать новые типы инцидентов и повышать точность реагирования.

Особое внимание требуется развитию кадрового потенциала и организационной культуры: обучение сотрудников работе с ИИ-инструментами, анализу данных и интерпретации отчетности позволит создавать команду экспертов, способных поддерживать и развивать систему цифрового контроля качества. Не менее важно внедрение стандартов и регламентов цифрового качества, использование обратной связи клиентов для корректировки процессов и периодический аудит эффективности системы.

Интеграция ИИ в управление качеством сервисов АО «Казахтелеком» обеспечивает комплексный эффект: технологический, организационный, экономический и клиентский. Комплекс мер по развитию инфраструктуры, аналитических возможностей, кадрового потенциала и стандартов процессов создает условия для устойчивого повышения качества сервиса, оптимизации затрат и укрепления конкурентных преимуществ компании на телекоммуникационном рынке.

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Comparing Grammar Progression in Beginner-Level Chinese (HSK 1) and CEFR A1

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Abstract

This study examines the extent to which beginner-level Chinese grammar, as defined in the HSK 3.0 Band 1 standards, aligns with the functional descriptors of CEFR A1. While both systems position learners as “basic users,” they conceptualise grammatical competence in fundamentally different ways. HSK Band 1 provides an explicit inventory of 48 grammar points, including features that are typologically unique to Mandarin such as aspect markers, classifiers, locality nouns, and sentence-final particles. CEFR A1, in contrast, outlines communicative functions rather than grammatical forms, describing what learners can do rather than which structures they must control (Council of Europe, 2001). A qualitative document analysis comparing the two frameworks revealed that many HSK structures do support core CEFR A1 functions, particularly in areas such as asking and answering simple questions, expressing ability and intention, and describing familiar people or places. However, several HSK grammar items have no direct CEFR equivalent, and some CEFR A1 functions – such as expressing preferences or producing short connected discourse – are not explicitly targeted in HSK’s grammar list. An initial attempt to quantify the degree of correspondence through a binary matrix proved methodologically unfeasible due to CEFR’s lack of form-specific descriptors. Overall, the findings suggest partial alignment at the functional level but significant divergence at the grammatical level, indicating that HSK and CEFR cannot be treated as directly interchangeable for curriculum design or assessment.

Keywords: HSK, CEFR, language assessment, Chinese language teaching

Introduction

Since the beginning of the current millenium, there has been a trending increase of students pursuing higher education in the People’s Republic of China. Donetskaya and Zhan (2019) state that China is the world’s third most popular destination for international students, preceded just by the United States and the United Kingdom. At the same time, Wen and Wang (2021) claim that the number of foreign students studying in China increased by 8.4 times from 2000 to 2016.

To regulate the enrolment to the country’s universities (among other purposes), a standardised Chinese proficiency test – HSK (汉语水平考试 *Hànyǔ Shuǐpíng Kǎoshì*) – was officially introduced in 1992 at Beijing Language and Culture University. It is regulated by the Center for Language Education and Cooperation (CLEC; colloquially referred to as 汉办 *Hànbàn*, also known as Confucius Institute Headquarters), an organisation under

the Ministry of Education of the PRC tasked to promote Chinese language and culture worldwide (Center for Language Education and Cooperation, n.d.).

Subsequently, the test has undergone several reforms, the major one being in 2010, introducing HSK 2.0. The second version of the test replaced the previous eleven levels with just six, allegedly corresponding to the six levels of the Common European Framework of Reference for Languages (CEFR). Despite its wide popularity in China and abroad, upon the introduction of HSK 2.0, some European scholars disagreed with its claimed correspondence with CEFR (Bellasen, 2011; Fachverband Chinesisch, 2010). To resolve the issue, Hanban has released the third update of HSK (3.0) in 2021 in an attempt to make it more compatible with CEFR standards. This research aims at finding out how similar the beginner levels of the two exams are and what implications this has for the teachers and learners of Mandarin.

Literature Review

2.1 Common European Framework of Reference for Languages (CEFR)

CEFR is an internationally recognised framework developed by the Council of Europe to describe and standardise language proficiency levels across different languages. It is a unified standard for describing language proficiency, outlining six reference levels defined by “*can do*” descriptors that integrate linguistic, sociolinguistic, and pragmatic competences. The document [hereinafter, “CEFR Descriptors Guide”] listing all the descriptors for each level of the framework, published by the Council of Europe (2001) with detailed topics needed to know at each stage of language learning progress will be used as the main source for the CEFR comparison in the present research.

Prajapati (2022) states that “CEFR is not language or context specific” and it is not aimed to provide a strict list of specific linguistic features (*e.g.*, grammar points, vocabulary units, *etc.*) for each level (p. 293). Instead, it describes language ability using so-called reference descriptors that give an idea of what skills the learner must obtain to be considered of certain level.

2.2 Chinese Proficiency Test – Hanyu Shuiping Kaoshi (HSK)

Hanyu Shuiping Kaoshi (HSK), or Chinese Proficiency Test is an international testing system designed to assess the Chinese language skills of non-native speakers, including foreigners and overseas Chinese. It is the most widely recognised and utilised Chinese language proficiency test globally, used for academic, professional, and personal purposes. (Jiang, 2020; K *et al.*, 2022; Peng *et al.*, 2020). As mentioned in the introduction, HSK has undergone several reforms: the last of which was announced in 2021 in a document titled “Chinese proficiency grading standards for international Chinese language education (国际中文教育中文水平等级标准 *guójì zhōngwén jiàoyù zhōngwén shuǐpíng děngjí biāozhǔn*)” [hereinafter, “New Grading Standards”] issued by the Ministry of Education of China (Ministry of Education, Department of Language Information Management, &

Center for Language Education and Cooperation, 2021). The document introduced new standards of the international testing, with detailed descriptors of every level, its content, levels and appropriate language knowledge.

The test is now comprised of three levels (Elementary, Intermediate, Advanced) that are divided into bands 1–3, 4–6, and 7–9 respectively. The latter is taken as one exam with inability to choose the band; rather the band is given to the participant based on the received scores. It assesses the learner’s ability to comprehend a variety of texts and audio materials, as well as to produce written materials on their own.

Although some researches, such as of Peng *et al.* (2020) and Li (2023), offer valuable insider information on the test’s structure and rationale, their objectivity appears limited. Both work’s authors acknowledge Chinese Testing International Ltd. (CTI) – HSK’s official developer and organiser – for verifying factual details, creating potential institutional bias. The articles’ tone is largely supportive of the test’s design and alignment claims, relying on developer communications rather than independent validation data. In this groundwork, the ultimate goal is set to decrease and fill the gap, providing unaffiliated findings and an objective analysis of those.

2.3 Difference between CEFR and HSK

According to the New Grading Standards (2021), the overall description of the HSK Band 1 is:

(1) “语言交际能力：具备初步的听、说、读、写能力。能够就最熟悉的话题进行简短或被动的交流，完成最基本的社会交际。(2) 话题任务内容：话题涉及个人信息、日常起居、饮食、交通、兴趣爱好等。能够完成与之相关的交际任务，例如：能够对不同交际对象使用最简单的礼貌用语；能够辨识公共环境中的某些简单信息并询问确认。(3) 语言量化指标：音节 269 个、汉字 300 个、词语 500 个、语法点 48 个。”

((1) Verbal Communication Ability: Possesses introductory abilities in listening, speaking, reading, and writing. Can conduct simple or basic exchanges on the most familiar topics, accomplishing the simplest social interactions. (2) Topics and Tasks: Includes topics and tasks involving personal information, daily routines, food and drink, transportation, hobbies and interests, etc. For example: Can use the simplest polite expressions with different communicative partners; Can identify and confirm simple public information in public environments. (3) Quantitative Indicators: 269 syllables, 300 characters, 500 words, 48 grammar points.”)

(Ministry of Education, Department of Language Information Management, & Center for Language Education and Cooperation, 2021, p. 2)

On the other hand, the CEFR A1 global scale descriptor is as follows:

“Can understand and use familiar everyday expressions and very basic phrases aimed at the satisfaction of needs of a concrete type. Can introduce him/herself and others and can ask and answer questions about personal

details such as where he/she lives, people he/she knows and things he/she has. Can interact in a simple way provided the other person talks slowly and clearly and is prepared to help.” (Council of Europe, 2001)

These two descriptions overlap in their general context and share the requirements for the learners to be considered a “basic” user (HSK 1/CEFR A1). Furthermore, HSK standards go as far as to add quantitative markers that include Chinese-specific items, such as syllables, characters, vocabulary units and grammar points. They constitute the “four-dimension benchmarks” (四维基准 *sìwéi jīzhǔn*) of Chinese-language proficiency (Ministry of Education, Department of Language Information Management, & Center for Language Education and Cooperation, 2021, p. 1).

Conversely, the European Framework operates with three major concepts: Understanding (divided into Listening and Reading), Speaking (divided into Spoken Interaction and Spoken Production), and Writing (Council of Europe, 2001, p. 26). Additionally, as was mentioned in Prajapati (2022), CEFR does not give specific grammar or vocabulary indicators, but rather leaves them to the curriculum designers as long as they correspond to the descriptors.

Methodology

This research is comprised of two main data sources and their comparison. The first source is the official list of all the grammar points that are to be taught and assessed for the HSK Elementary level Band 1. The list consists of 48 grammar points, and is taken from the New Grading Standards. The lacking descriptive information of the grammar points are taken from the Elementary Grammar Learning Manual (Ying *et al.*, 2022). For practical reasons, the 48 grammar points are revised and merged into 21 major categories. For example, modal verbs of ability and possibility (能 *néng*, 会 *huì*) and of desire and plan (想 *xiǎng*, 要 *yào*) were merged into one “Modal verbs” category). The second source is the CEFR descriptors for A1 level.

Results

Firstly, for the A1 level, CEFR describes the grammatical accuracy as: “Shows only limited control of a few grammatical structures and sentence patterns in a learnt repertoire” (The Council of Europe, 2001, p. 114). However, there is no detailed explanation of the “limitedness”, *i.e.*, to what extent the grammar knowledge and operation must reach to be considered limited. According to the same document, users of the framework may consider the different theories of grammar to be able to explore the scale of grammatical accuracy at each level.

When attempting to align HSK Level 1 grammar items with CEFR A1 functions, several patterns emerged. Firstly, many of the HSK Level 1 grammatical structures directly support CEFR A1 communicative purposes; for example, interrogative pronouns, sentence-final particle 吗, and basic word order can all be used to fulfil CEFR A1 requirements for asking and answering simple questions. Similarly, high-frequency modal verbs such as 会, 能, and

要 allow learners to express ability, possibility, and intentions, which aligns with CEFR microfunctions such as “expressing modality” and “expressing wants”.

Overall, the results indicate that: (1) HSK Band 1 covers a substantial portion of CEFR A1 functional needs, particularly in question formation, basic declarative structures, expressing ability, identifying objects/people, and stating simple facts; (2) several core areas of Chinese grammar have no parallel in CEFR, making the systems partially incompatible at the level of grammatical description; (3) CEFR A1 includes functional outcomes that are broader or more communicative than the HSK Band 1 grammar list explicitly supports, especially in areas like coherence, personal preferences, and more flexible use of connectors.

These findings reinforce the idea that while HSK and CEFR roughly correspond in terms of global proficiency levels, the internal structure of grammatical expectations differs significantly, calling for caution when establishing direct equivalence between the two systems.

Discussion

HSK Band 1, as defined in the New Grading Standards, is built around explicit grammatical content, including the mastery of 48 grammar points, several of which reflect uniquely Mandarin features such as aspect marking, sentence-final particles, and the obligatory use of classifiers. CEFR A1, on the other hand, is organised around functional “can do” descriptors that outline communicative outcomes rather than specifying linguistic forms. Because of this, any attempt at direct grammar-to-grammar alignment inevitably reveals gaps, not necessarily due to a lack of learner ability, but due to differences in how each system conceptualises language learning from the beginning stages.

One of the main observations in this comparison is that although both HSK and CEFR aim to place the learner at a “beginner” or “basic user” level, they emphasise different aspects of what constitutes beginner-level competence. HSK Band 1 expects control over essential Chinese grammatical mechanisms such as basic word order, negation, interrogative patterns, and aspectual distinctions, that are indispensable in Mandarin even at the simplest level of communication. CEFR A1, in contrast, does not mandate knowledge of specific grammatical structures; instead, it requires successful performance of basic communicative tasks such as introducing oneself, asking simple questions, and describing one’s environment. This means that a learner could meet CEFR A1 functional descriptors without necessarily acquiring the grammatical features that HSK Band 1 considers foundational.

A second point arising from the analysis is the extent to which Chinese-specific grammatical features challenge the universality of CEFR. While CEFR claims to be applicable across languages, its descriptors implicitly reflect the grammatical expectations of European languages, especially those with morphological marking. Mandarin, being an analytic and isolating language, packages grammatical meaning differently: aspect is marked through particles rather than tense inflections, syntactic relations may rely on word order rather than agreement, and certain relational meanings (such as location or quantity) must be expressed through grammaticalised forms

like locality nouns and classifiers. As shown in the Results section, many of these features have no direct representation in CEFR A1 descriptors, creating an asymmetry in what each system considers basic grammatical knowledge .

At the same time, the comparison shows that HSK Band 1 grammar does support a large portion of CEFR A1 functional abilities. Learners familiar with HSK Band 1 grammar would be able to perform most CEFR A1 communicative tasks, *e.g.*, asking questions, expressing simple preferences, identifying objects and people, describing basic facts, because many HSK structures naturally align with these functions. This suggests that CEFR emphasises communicative breadth at a slightly earlier stage, whereas HSK prioritises grammatical precision particular to Mandarin.

Finally, these observations also carry implications for teaching and assessment. For teachers of Chinese working in CEFR-oriented contexts, it becomes clear that HSK Band 1 grammar cannot be mapped directly onto CEFR A1 descriptors without adaptation. Learners following a CEFR-based curriculum may achieve communicative goals but still lack important Mandarin-specific grammatical functions expected at HSK Band 1. Conversely, learners preparing strictly for HSK may have strong form-based knowledge but may not automatically develop broader communicative skills valued in CEFR. This reinforces the need for curriculum designers to integrate both functional and form-based perspectives when designing beginner-level Mandarin courses, especially in international contexts.

Taken together, the comparison shows that while both systems aim to define what a beginner can do, they conceptualise “beginner grammar” in fundamentally different ways. Recognising these differences is essential for realistic benchmarking, appropriate curriculum alignment, and fair learner assessment across contexts.

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Distributed Leadership and Its Potential for Kazakhstan's State and Private Schools: A Theoretical Perspective

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Abstract

This study investigates the structural requirements for implementing Distributed leadership within Kazakhstan's state and private school systems. The purpose is to analyze DL theory against the realities of the national educational system to inform leadership strategy and policy. The research delivers two perspectives, first it delivers structural comparison of DL feasibility across Kazakhstan's state and private school systems, second it develops a Dual-Track conceptual framework offering a localized, phased solution to lessen the consequences of centralized or hierarchical state approach which resists the move towards more impactful leadership approaches and reforms in education. The research implies a document analysis and theoretical synthesis, integrating international DL literature with key national policy documents, the 2015 OECD review of School resources to assess the current operational autonomy. The results revealed that DL is structurally constrained in state schools due to insufficient autonomy and complicated by cultural barriers (low professional trust, high administrative compliance). In contrast, private schools are found to be more prone to immediate DL adoption. The Dual-Track framework needs to be implemented sustainably through a decentralization for the state sector. These findings have practical value for educational policymakers and school leaders.

Keywords: Distributed Leadership, school autonomy, centralized governance, structural barriers, conceptual framework, private schools, state schools, policy contradiction

Introduction

Educational leadership has increasingly been recognized as a central driver of school effectiveness, teachers' development and student learning outcomes. Globally, leadership frameworks have shifted away from principal centered models toward more collaborative, capacity building approaches that position leadership as a shared organizational function. Among these evolving frameworks DL has become a one of the most influential perspectives on education emphasizing collective responsibility, shared expertise, and coordinated action among multiple performers within the school. The model challenges traditional hierarchical forms of leadership and instead conceptualizes leadership as a practice stretched over individuals, tools, and organizational routines.

In Kazakhstan the question of effective school leadership is particularly important because of the country's ongoing educational modernization efforts and its dual system of state and private schools. Although Kazakhstan has made attempts towards decentralization, its educational governance system continues to reflect strong hierarchical traditions inherited from the Soviet era. This raises important questions about how global leadership models, especially collaborative and non-hierarchical frameworks like distributed leadership can be adapted to the

Kazakhstani context. The purpose of this paper is to examine the theoretical applicability and potential of distributed leadership in Kazakhstan's state and private schools. Specifically, it seeks to:

1. review key theoretical assumptions of DL,
2. analyze Kazakhstan's education governance structure and its implications for leadership practices
3. compare organizational cultures and autonomy levels between state and private schools
4. assess the contextual feasibility of adopting distributed leadership in Kazakhstan.

Literature Review

The concept of distributed leadership (DL) emerged as a response to traditional leader centric models that place disproportionate responsibility on school principals and overlook the leadership potential of teachers and middle level staff. The foundational work of Spillane (2006) defines distributed leadership as a practice arising from interactions among leaders, followers, and organizational tools. This perspective shifts the focus from individual traits toward social processes introduced within the school context. Gronn (2002) complements this view through the notion of "*concertive action*" highlighting that leadership frequently results from collective behaviors and joint problem solving rather than isolated actions of a single leader. Harris (2013) further develops the DL framework by emphasizing teacher leadership, professional trust, and the importance of collaborative structures for improving instructional quality. Across the literature, several core principles consistently characterize DL: leadership as a shared and socially distributed function, interdependence among actors within school organizations, recognition of distributed expertise rather than hierarchical knowledge, and collective capacity building aimed at school wide improvement. Thus, DL stands in contrast to hierarchical leadership models that rely on top-down authority and rigid control mechanisms.

International research highlights several theoretical and practical strengths of distributed leadership. DL is associated with enhanced teacher engagement, stronger professional communities, and increased innovation due to the participation of diverse actors in decision making. Schools adopting DL practices often demonstrate improved instructional coherence and greater organizational adaptability, particularly in rapidly changing educational environments. However, the empirical literature also presents important criticisms. One consistent concern is the ambiguity of roles and responsibilities, which can lead to confusion or inefficiency. DL also highly depends on organizational culture; without trust, transparency, and mutual respect, distributed structures risk becoming dysfunctional. Scholars also warn against false distribution where leadership is shared but meaningful decision making remains concentrated in the principal's hands. Power dynamics within schools may further limit genuine participation among teachers, diminishing the intended benefits of DL. These mixed findings underline the necessity of examining contextual and cultural readiness before implementing DL in any education system. A growing body of studies on post-Soviet and Central Asian education systems (Silova, 2009; Yakavets, 2014; Bridges, 2017) reveals that hierarchical, bureaucratic leadership continues to dominate due to long standing traditions of centralized

governance, compliance-oriented school management, and limited school autonomy. Despite ongoing reforms aimed at modernization, Kazakhstan's educational system still possesses structural constraints such as rigid administrative control, standardized reporting requirements, and relatively weak teacher agency.

While several studies examine teacher professionalism, autonomy, and leadership challenges in Kazakhstan, there is limited research specifically addressing distributed leadership. Most leadership focused literature concentrates on principal effectiveness or administrative functions rather than collective or teacher led leadership models. This lack of conceptual and empirical attention creates an important gap, especially given Kazakhstan's current reform agenda emphasizing school autonomy and collaborative professional cultures. The synthesis of international and regional literature highlights several gaps that justify the present study. First, the majority of DL research originates from Western or East Asian contexts, with minimal examination of how DL may function within centralized post-Soviet systems. Second, the contrast between state and private schools particularly regarding autonomy, organizational culture, and professional expectations remains largely unexplored through a distributed leadership lens. Third, existing studies in Kazakhstan rarely analyze how global leadership models may align with or contradict national governance structures and cultural assumptions. These conceptual and contextual gaps underscore the importance of theoretically exploring the applicability of DL within Kazakhstan's education system. Drawing on the reviewed literature, the following conceptual questions guide this study:

1. To what extent is distributed leadership compatible with Kazakhstan's centralized governance system?
2. How do organizational differences between state and private schools influence the feasibility of distributed leadership?
3. What cultural and policy conditions are necessary for implementing distributed leadership in Kazakhstan?

Addressing these questions allows the study to contribute to the theoretical understanding of how global leadership models can be localized in Kazakhstan's modern educational contexts.

Methodology

This study adopts a conceptual and document-based methodology suitable for theoretical research that does not involve human participants. The aim is to analyze how distributed leadership theory aligns with, or challenges, the educational governance structures of Kazakhstan's state and private schools. The research is structured as a theoretical and comparative inquiry.

A conceptual design was selected because the purpose of the study is not to measure causal effects, but to synthesize existing theoretical frameworks and evaluate their applicability to Kazakhstan's context. The study draws on two parallel strands:

1. International theoretical literature on distributed leadership, focusing on foundational and contemporary models.

2. Kazakhstan's education policy documents, including governance regulations, autonomy frameworks, and reform agendas.

This dual structure enables a systematic comparison between global leadership theory and the realities of Kazakhstan's education system. The study relies exclusively on secondary sources, including: International DL scholarship, focusing on Spillane (2006), Gronn (2002), Harris (2013), and Leithwood et al. (2009). National policy documents, such as the State Program for the Development of Education and Science and regulatory acts governing school administration. OECD Education Policy Reviews and OECD comparative reports on school autonomy. Scholarly literature on post-Soviet and Central Asian education systems, examining structural and cultural characteristics of school leadership. These sources provide both the theoretical foundation and the contextual data necessary for conceptual evaluation.

The analysis follows a thematic conceptual approach. First, key themes in distributed leadership theory were identified, including shared practice, collaboration, distributed expertise, and role of organizational culture. Second, these themes were compared with Kazakhstan's educational governance structures through a document-based policy analysis. A comparative conceptual analysis was also conducted to highlight differences between state and private schools in terms of: leadership capacity, organizational autonomy, professional culture, and structural barriers or enablers of DL. This approach allows the study to map potential areas of alignment and conflict between DL theory and Kazakhstan's school environments. No human subjects were involved, and no empirical data were collected, making ethical approval unnecessary.

Findings

This study, being conceptual, does not present empirical data but instead offers synthesized insights drawn from existing literature and theoretical reasoning. These insights illuminate the potential and challenges of implementing distributed leadership (DL) within Kazakhstan's education system.

Kazakhstan's education system remains highly centralized, with decision making largely concentrated at the Ministry and regional department levels. Such centralization naturally limits school autonomy and restricts opportunities for shared decision making. In addition, hierarchical cultural norms often discourage teachers from assuming leadership roles, and principals are frequently evaluated based on compliance rather than innovation. Nevertheless, recent reforms such as pilot programs introducing greater school autonomy and efforts to modernize the national curriculum signal emerging opportunities for distributed leadership to take root. The conceptual dual track reform, which seeks to balance centralized oversight with selective school autonomy, provides an additional avenue for fostering distributed leadership. By maintaining a level of centralized control while granting schools flexibility in management and instructional decisions, this reform could gradually create structured spaces for teacher participation and collaborative leadership. In state schools, such a dual track approach may help overcome

traditional hierarchical constraints, whereas in private schools it could complement existing flexibility, reinforcing innovative and team-based practices.

State schools, while constrained by structural and cultural barriers, still present several opportunities for DL. Subject associations and professional learning communities provide platforms where teachers can exercise leadership and collaborate on instructional practices. Younger educators may also be more receptive to participatory leadership approaches. However, broader adoption of distributed leadership in public schools would require substantial shifts in trust, autonomy, and accountability. Private schools, in contrast, generally operate with greater autonomy and more flexible organizational cultures. Many already emphasize innovation, interdisciplinary collaboration, and shared decision making, making them particularly conducive to distributed leadership. Yet, variability across private institutions means that collaborative practices cannot be assumed universally. Comparing the two sectors, distributed leadership appears more readily achievable in private schools, though both public and private institutions would benefit from capacity building and cultural adaptation. When thoughtfully contextualized, including consideration of reforms like the dual track approach, DL has the potential to enhance instructional quality, foster teacher engagement, and contribute to overall school improvement in Kazakhstan.

Discussion

The relevance of distributed leadership (DL) to Kazakhstan's schooling landscape becomes clearer when viewed through broader international debates about educational governance, professional agency, and post-Soviet institutional legacies. The literature consistently shows that DL is not simply a technical arrangement but a cultural and relational shift that requires trust, openness, and shared responsibility which are conditions often difficult to cultivate in traditionally centralized systems. Kazakhstan's hierarchical governance structure echoes patterns observed in other post-Soviet and East Asian contexts, where formal authority remains dominant and informal leadership is limited. Yet research also demonstrates that DL can emerge even in such systems when policy reforms create autonomy, enabling schools to practice choice within clear state defined reforms. This perspective helps explain why the dual track reform and school autonomy initiatives in Kazakhstan represent more than administrative adjustments, but they are structural innovations that could gradually reshape leadership norms.

Another important implication from the literature is that DL tends to evolve unevenly across sectors, with private schools typically becoming early adopters due to their flexibility and responsiveness to competitive pressures. Kazakhstan mirrors this pattern: private schools' capacity for innovation aligns with global evidence that DL thrives in environments where experimentation, teacher initiative, and collaborative structures are actively encouraged. Conversely, the literature warns that simply introducing DL terminology into centralized public systems rarely produces authentic shared leadership without parallel cultural change, leadership development, and shifts in accountability. This insight underscores a key tension identified in this study: while Kazakhstan's policy direction is beginning to align with DL friendly conditions, the deeper cultural patterns such as deference to

hierarchy, risk-avoidance, and compliance-based leadership may decrease the substantive change. Taken together, the analysis suggests that DL is neither fully attainable nor unrealistic; instead, its development in Kazakhstan is likely to be gradual, uneven, and contingent on sustained reform and capacity building, experiencing features documented in comparable international contexts.

Conclusion

In conclusion, although Kazakhstan's centralized education system presents structural and cultural barriers to distributed leadership, emerging reforms and the growing emphasis on collaboration indicate that DL could be meaningfully developed if adapted to local conditions. Private schools currently offer more favourable environments, but with targeted leadership development, increased autonomy, and gradual cultural shifts, DL can also take root within state schools. When thoughtfully contextualized, distributed leadership holds promise for enhancing professional agency, improving instruction, and contributing to sustainable school improvement across Kazakhstan.

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Analysis of Kazakhstan's Higher Education Internationalization Policy Using Actor-Network Theory (ANT)

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Abstract

This article examines how internationalisation in Kazakhstan's higher education is shaped and implemented across a network of actors. Using Actor–Network Theory (ANT), it follows how global scripts (e.g., Bologna communiqués, ESG standards) are translated into national rules and university practice.

The study conducts a documentary analysis of international agreements and national policy instruments and applies ANT to trace translation, enrolment among ministries, accreditation bodies, universities and non-human actors such as rankings and quality-assurance frameworks.

Kazakhstan has formally adopted European-style structures—three-cycle degrees, ECTS and strengthened quality assurance—signaling rapid structural convergence. Yet implementation is uneven: state steering remains strong, institutional autonomy and capacity are constrained, and pressure from rankings and external QA standards channels attention toward compliance. These dynamics can produce symbolic partnerships rather than deep academic collaboration, especially outside elite universities.

By granting analytical status to non-human actors (standards, rankings, metrics), the ANT lens clarifies why formal alignment with European norms can coexist with limited pedagogical and governance change and shows how policy effects emerge from negotiated networks rather than linear, top-down execution.

Reforms will travel further when state steering is paired with real autonomy and funded capability-building; KPI regimes should reward quality and substantive partnerships, not only counts, and QA expectations should be calibrated to institutional starting points.

Keywords: internationalization, Actor–Network Theory, Kazakhstan, Bologna Process, quality assurance, rankings, policy translation, university autonomy

Introduction and Literature Review

To improve academic quality, institutional prestige and international cooperation internationalisation has been a top priority for higher education institutions (HEIs) around the world (Altbach & Knight, 2007). Internationalisation implies the incorporation of global, multicultural and international standards into university operations, such as curriculum development, dual degree programs, staff and student mobility and research partnerships (de Wit, 2019).

Since participation in the Bologna Process in 2010 (Organisation for Economic Co-operation and Development [OECD], 2017) Kazakhstan, as part of its broader higher education modernisation initiatives, has actively pursued internationalisation. The government, through reform of Kazakhstan's higher education system, is

trying to align domestic educational standards with European ones by enhancing student and faculty mobility, ensuring degree comparability and promoting collaborative research initiatives (Bekbauova, Suy, & Islamjanova, 2017). Nonetheless, despite national-level initiatives, Kazakhstani universities continue to encounter difficulties in the effective implementation of internationalisation policies. Institutional barriers such as inadequate governance frameworks, insufficient monitoring of agreements, and limited faculty involvement are considered factors that limit the effective implementation of internationalisation strategies (Bekbauova et al., 2017).

1.1 Actor–Network Theory as an Analytical Framework. Actor-Network Theory (ANT) offers a valuable framework for analysing the internationalisation policy of higher education in Kazakhstan by showing the dynamic and expanding interactions among diverse actors, such as governmental institutions, international organisations, regulatory agencies, and policy frameworks. One of ANT's fundamental principles is that networks are diverse, meaning that participants in a policy system cooperate, negotiate and occasionally oppose one other's influence rather than acting independently (Callon, 1986).

This perspective means internationalisation policy is not dictated solely by the Ministry or universities; instead, it emerges from negotiations among many linked actors.

1.2 Applying ANT to Kazakhstan's Internationalization Policy.

1.2.1 Actors and Power Imbalances. In Kazakhstan's internationalisation network, various actors hold unequal power. International organisations set broad objectives and standards (e.g. Bologna communiqués, OECD recommendations), the government translates these into national laws and programs, and universities are expected to implement them. This creates an asymmetry: global bodies exert *normative* influence (defining what “internationalised” higher education should look like), the state wields legislative and financial authority, and universities—often with limited capacity after decades of centralized control—must comply with both. For example, international agreements call for university autonomy and student-centered learning, but the Kazakhstani state, holding funding and regulatory power, ultimately decides how much autonomy universities receive. ANT highlights that non-human actors also mediate these power dynamics. Global university rankings (like QS or THE) and external accreditation guidelines (e.g. the European Standards and Guidelines from ENQA) put significant pressure on policy-makers and institutions, even if they aren't formal laws. Rankings have effectively become “unofficial policy tools,” influencing university priorities (such as pushing for international partnerships or research visibility) despite not being codified in legislation (Knight, 2013). These non-human forces compel actors in the network to adjust their behavior to attain international recognition.

1.3 University Responses and Capacity Constraints. At the level of universities, the reforms introduced by the state enrolled them into an internationalisation network—but many institutions struggled to perform the roles expected of them, leading to gaps between policy intent and actual practice. In many cases, universities complied in form (e.g. restructuring degree programs, rewriting curricula, creating international offices) yet continued with business-as-usual in daily operations. As Yergebekov and Temirbekova (2012) observe, Bologna principles in

Kazakhstan have “too often become mere formalities without practical functions” (p. 1475). For example, all universities nominally shifted to the credit system, but the spirit of student choice and flexibility was largely lost. The OECD found a “substantial difference between the principles behind ECTS and the way it actually works in Kazakhstan” (OECD, 2017, p. 105). In theory, credits were meant to allow students to plan individualized study paths; in practice, strict state curriculum standards and university rules still dictated students’ course schedules, leaving little room for electives or true academic mobility between programs. Students accumulated credits, but not with the autonomy seen in Western systems – a compliance on paper but not in substance.

A core impediment was the limited capacity of many institutions – financial, human, and technical – to carry out meaningful internationalisation. Even the government’s own policy documents acknowledged these constraints. The SPESD 2020–2025 explicitly notes a “shortage of highly qualified teaching staff, especially in the regions,” hampering effective implementation of reforms like credit technology and mobility programs. It also highlights that the material and technical base of many universities (particularly outside major cities) remains weak. In other words, the government was aware that universities lacked enough English-proficient faculty, modern libraries/labs, and funding – yet the reforms forged ahead without fully addressing this capacity gap. There were no major funding initiatives to accompany the mandates (e.g. no significant new budget for faculty training or infrastructure upgrading came with the shift to ECTS and new quality standards). All universities, big or small, were legally obliged to meet the same high standards (such as offering programs in English and maintaining active international partnerships per licensing requirements), despite stark differences in resources. This “one-size-fits-all” approach meant regional and smaller institutions often found the internationalisation agenda unrealistic. Not surprisingly, many quietly fell short or delayed changes they could not support. For example, implementing English-medium programs proved especially difficult: an external review by IQAA (an independent Kazakhstani QA agency) found that out of 14 universities evaluated in 2022–23, only 4 had any programs taught in English, with most citing lack of qualified English-speaking staff and resources as the reason. Such findings underscore a two-tier reality – a few well-funded universities (e.g. Nazarbayev University in Astana, or flagship national universities in Almaty) can attract foreign faculty and develop international curricula, whereas many others cannot meet the new expectations and thus may engage in superficial compliance (translating documents into English, signing partnership MoUs that yield little activity, etc.).

1.4 Power Dynamics in the Network

The interplay of actors in Kazakhstan’s internationalisation illustrates shifting power dynamics within the actor-network. International bodies (the Bologna Follow-Up Group, OECD, European Commission, etc.) exercised influence through soft power: setting benchmarks, offering recognition, and providing integration into a “prestigious club” of modern education systems. Kazakhstan’s leadership was motivated by the prestige of being seen as adhering to European standards – as noted by Yergebekov & Temirbekova (2012), Bologna membership was in part a question of international image (p. 1476). The Kazakhstani government in turn occupied a central position of

authority in the network. It had the formal power to create laws, control funding, and approve or veto university actions. This allowed the state to enforce compliance (e.g. requiring universities to undergo accreditation to remain licensed). At times, the government used external commitments to justify tough reforms domestically (“we must do this because we pledged to Bologna”), which helped overcome internal resistance.

Meanwhile, universities initially appeared to be the weakest actors, largely following state directives. But they did exert agency in subtle ways. Collectively, rectors and academics signaled their desires by, for instance, signing the Magna Charta Universitatum (a declaration of university autonomy) and publicly discussing the need for more freedom. These actions put gentle pressure on the Ministry to consider loosening control. On a day-to-day level, university administrators negotiated implementation – if a certain accreditation criterion was too costly or unfeasible, they might lobby the Ministry for an extension or a modification. Individual faculty who quietly resisted new teaching methods effectively forced the government to provide additional training and clarification, rather than simply punishing non-compliance. Indeed, policy-makers acknowledged the need to “improve communication and understanding of the Bologna Process among all stakeholders” after early misunderstandings (Sarinzhipov, 2015). Thus, universities influenced the policy trajectory by revealing where adjustments or support were needed. Over time, the flow of influence in the network became more two-way or lateral: *bottom-up* feedback from universities led to alterations in state policy (e.g. more training programs, revised timelines), and *horizontal* peer learning took place as some universities innovated and shared practices. The government also used international forums to showcase its universities’ achievements or frankly discuss challenges, which in turn fed back into international guidance and cooperation.

Another aspect is the asymmetry of knowledge and expertise: much of the reform blueprint and “best practices” knowledge came from external experts and consultants (often via EU/OECD projects). This sometimes put local actors in a dependent position, as they relied on foreign models and advisors to tell them how to reform. It underscores that not all actors had equal capacity to define the terms of internationalisation; the agenda was often externally driven, even if willingly embraced. Through ANT, we also see that the *documents* and *metrics* themselves (non-human actors) carried power: the Bologna communiqués or ranking criteria acted almost as agents, structuring choices by saying “these are the objectives to achieve”. University managers would cite these texts to justify internal changes (e.g. “we must publish more papers because the rankings demand it”). In essence, abstract standards were made concrete and potent in the network.

In summary, power in Kazakhstan’s internationalisation network was distributed and negotiated rather than monopolized. International actors set the agenda but depended on the state’s implementation; the state commanded compliance but depended on universities to actually deliver educational outcomes; and universities, though constrained, found ways to adapt and gradually assert their interests. This dynamic aligns with ANT’s view that stability (or change) in the network comes from the continual negotiation among all actors. By the early 2020s, Kazakhstan’s actor-network for internationalisation had adjusted to some of its tensions: the government introduced

slight increases in university autonomy for select institutions, increased investment in capacity building, and continued to engage with international partners to improve standards. The network remains in flux, but the initial power asymmetries have been acknowledged and are being addressed incrementally as actors learn from the first decade of reforms.

Conclusion

Kazakhstan's experience of higher education internationalisation, viewed through Actor–Network Theory, demonstrates that policy change is not simply imposed from the top but is the result of interactions among global, national and local actors. Kazakhstan's reforms were enacted *through* the network of actors: success depended on aligning the goals of international organisations, the state's capacity and willingness to implement, and universities' ability to absorb and internalize changes. Where that alignment occurred, real progress was made (e.g. degrees and credits reform enabling student mobility). Where actors remained misaligned – for example, if universities lacked academic freedom or resources – the intended outcomes were only partially realized. The *empowerment* of all stakeholders in the network emerges as a key lesson: when students, faculty, and institutions are given the necessary autonomy, training, and resources, internationalisation can move beyond symbolic compliance to substantive improvement.

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Introducing Academic Integrity in Kazakhstani State Schools

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Abstract

This study assesses the introduction and institutionalization of an academic integrity policy in one Kazakhstani secondary school, addressing a significant gap in a national education, where formal integrity frameworks are typically limited to higher education. As digital tools and artificial intelligence (AI) maintain the students' academic behavior, secondary schools face new challenges in defining authorship, preventing misconduct, and encouraging an ethical learning practice. Using a qualitative case study design and Critical Discourse Analysis (CDA), the research analyzes the Academic Integrity Policy of Gymnasium No. 159 to identify how an academic integrity is constructed and communicated. The results show that the policy clearly defines misconduct, integrates ethical guidelines for the AI use, and assigns responsibilities among students, teachers, and parents, demonstrating an essential shift toward a collective accountability. The study contributes theoretically by extending an academic integrity discourse to the pre-university contexts and integrating digital ethics into the conceptual framework. Practically, it offers a replicable model for schools, which are seeking to formalize the integrity standards in Kazakhstan and similar educational settings. Limitations include a reliance on a single document and a lack of stakeholder perspectives, suggesting the need for more empirical research.

Keywords: academic integrity, secondary education, Kazakhstan, policy analysis, artificial intelligence, digital ethics

Introduction

Academic integrity has become one of the most discussible topics in contemporary education systems, because schools and universities worldwide confront the rising levels of plagiarism, cheating, and other forms of an academic misconduct (Bretag, 2019). In the recent years, these challenges have been intensified by a gradual expansion of digital technologies and artificial intelligence (AI), which have made it easier for students to generate, copy, or modify texts with the limited transparency and accountability (Cotton et al., 2023; Eaton, 2021). While many higher education institutions have responded by adopting some formal integrity policies and plagiarism-detection tools, secondary schools, especially those ones in the post-Soviet contexts, often have a lack of coherent frameworks to regulate an academic behavior and promote a quality of an ethical learning (Eaton & Khan, 2020). It should be noted that in Kazakhstan, this gap is especially visible in the state schools, where integrity is frequently treated as a disciplinary issue rather than a developmental educational goal. As a result, teachers rely on an individual judgement, students receive the limited instruction in both citation and authorship, and parents can unintentionally reinforce such issues as shortcuts and rule-bending. In this regard, the major objective of the following article is to explain properly and clearly that the introduction of structured academic integrity policies in

Kazakhstani secondary schools offers an important opportunity to move from fragmented practices toward a more consistent and values-based approach to teaching and learning.

Literature Review

Academic integrity has become an essential component of both educational quality and governance around the globe. It is interesting to highlight that the existing scholarship emphasize that integrity is about the absence of cheating and an effective system of such shared values as trust, honesty, fairness, respect, and responsibility, which could maintain how learning communities' functions (Bretag, 2019; McCabe, 2016). These values indicate both academic and professional competence, suggesting that schools play a formative role in establishing ethical habits much longer before students enter higher education or the workplace. Generally, scholars argue that integrity should be treated not just as a punitive mechanism but as a developmental construct, which requires continuous teaching, modelling, and reinforcement (Eaton, 2021).

A substantial body of research links academic integrity to an institutional governance. According to East (2022), institutions with clear guidelines, transparent procedures, and consistent enforcement demonstrate lower levels of misconduct and higher trust among stakeholders. Policies provide the structure by defining misconduct, clarifying rights and responsibilities, and outlining proportional sanctions. They also legitimize institutional decisions, reducing the ambiguity for teachers and ensuring that students are evaluated under equitable conditions. However, scholars emphasize that any policy effectiveness depends on an institutional culture and rules alone do not change behavior unless they are accompanied by a community-wide commitment, teacher capacity, and proactive instructional practices (Farnese & Livi, 2020).

Cultural factors are also influential in education systems, which are transitioning from the post-Soviet legacies. In these directions, research indicates that a collaborative cheating, an unauthorized peer assistance, and the exam-centered learning strategies remain as normalized, often perceiving as practical rather than unethical (Müller & Kazakh, 2020). Such behaviors are encouraged by competitive academic environments, high-stakes assessments, and the limited instruction on authorship or citation. Eaton and Khan (2020) argue that without an explicit teaching on ethical academic practices, students may misinterpret misconduct as socially acceptable. This perspective underlines the need for secondary schools to engage students early in an ethical reasoning, an academic writing, and a responsible digital behavior.

The recent literature is more focused on the ethical challenges, which are associated with an artificial intelligence. Such AI tools as ChatGPT, paraphrasers, and automated essay generators introduce new questions concerning authorship, intellectual property, and transparency in the learning process (Cotton et al., 2023). Scholars warn that the generative AI can undermine traditional assessments by allowing students to produce a high-quality text without demonstrating understanding (Holmes et al., 2022). Kier and Ives (2022) highlight that AI allow new forms of cheating as it reshapes the students' relationships with knowledge, potentially affecting both autonomy

and critical thinking. It means that the current research suggests that institutions must integrate the AI-specific guidelines into its academic integrity frameworks, emphasizing attribution, transparency, and ethical decision-making rather than outright prohibition (Leipzig, 2025).

Global best practices highlight several effective approaches to encouraging academic integrity in schools. These aspects include an explicit instruction in citation and paraphrasing, writing tasks, frequent formative assessments, and the use of contextualized or personalized assignments, which reduce the usefulness of AI-generated responses (Holmes et al., 2022). In addition, such international frameworks as those ones, which are used in the International Baccalaureate (IB), stress the importance of developing the principled learners, who understand the ethical dimensions of knowledge production. The IB-aligned schools embed integrity across the curriculum, link academic honesty to learner identity, and put teachers as models of an ethical behavior. The further research demonstrates that parents and community members should also be engaged, as integrity is reinforced through home environments as much as through school policies (Farnese & Livi, 2020).

Finally, literature on Kazakhstan indicates a growing recognition of the need for academic integrity at all educational levels. While significant achievements have been made in higher education, secondary schools are still underserved, having the limited policy documentation, teacher training, and digital ethics instruction (Müller & Kazakh, 2020). This gap specifies the importance of implementing more structured academic integrity policies, which define misconduct and cultivate an ethical behavior through instruction, community collaboration, and digital literacy.

Methodology

This study implies a qualitative research design to examine the introduction and meaning of an academic integrity policy within one specified Kazakhstani secondary school. Given that the purpose of the research was to explore how integrity is constructed and communicated in an institutional document, a qualitative approach was the most appropriate method for getting both explicit statements and underlying ideological assumptions. The analysis was focused on a single primary data source, such as the Academic Integrity Policy of Gymnasium No. 159, which represents an emerging institutional attempt to formalize ethical expectations at the secondary-school level.

The study utilized Critical Discourse Analysis (CDA) as the main analytical framework. CDA, as conceptualized by Fairclough (1995), examines discourse across three interconnected levels:

1. a textual analysis, which considers vocabulary, definitions, modality, and linguistic features.
2. a discursive practice, which focuses on how the text positions students, teachers, and parents, and how it reproduces or challenges institutional norms.
3. a social practice, which situates the policy within broader cultural, technological, and educational contexts.

CDA was selected as it has a nuanced interpretation of how institutional policies maintain a behavior, construct identities, and reflect power relations, especially concerning educational reforms.

Data analysis was followed an iterative coding process. First, the policy document was read multiple times to identify such key thematic categories as misconduct definitions, sanctions, digital ethics, and stakeholder responsibilities. These categories were examined through the CDA aspects to reveal deeper assumptions about accountability, surveillance, and ethical expectations. A special attention was given to sections, referencing artificial intelligence, digital literacy, and assessment practices, because of its growing relevance in contemporary academic integrity research.

Although it is based on a single case, the methodology provides rich interpretive insights into how academic integrity is institutionalized and how emerging policies respond to cultural and technological challenges within the Kazakhstan's secondary education system.

Results

The analysis of the Academic Integrity Policy of Gymnasium No. 159 has revealed some key themes, which are related to how academic integrity is maintained, managed, and communicated within a Kazakhstani secondary school context. Using Critical Discourse Analysis, the results demonstrate that the policy serves as a regulatory tool a mechanism for constructing ethical norms, defining acceptable behaviors, and getting institutional expectations in response to the emerging technological and cultural challenges.

4.1. Clear Definition and Categorization of Misconduct

One of the most obvious findings is the policy's explicit categorization of an academic misconduct. The document provides the detailed definitions of plagiarism, cheating, collusion, falsification, and an unauthorized use of artificial intelligence tools. This clarity is notable, because many Kazakhstani schools lack the standardized terminology for academic wrongdoing, resulting in inconsistent enforcement. The policy distinguishes between unintentional and deliberate violations, indicating an awareness that many students may lack sufficient academic writing or citation skills. It aligns with international research, suggesting that the students' misunderstandings often contribute to plagiarism (Bretag, 2019).

4.2. Framing Students as Principled and Responsible Learners

The textual analysis has revealed that the policy constructs students as "responsible," "principled", and capable of making informed ethical decisions. This discourse mirrors the International Baccalaureate (IB) learner profile and signals the school's intention to encourage a long-term ethical development. By taking the integrity as an expected personal trait rather than a behavioral requirement, the policy attempts to cultivate a moral identity, which extends beyond the compliance.

4.3. Focus on Teacher Authority and Accountability

The policy makes teachers as both evaluators and ethical role models. Teachers are explicitly responsible for enforcing procedures, reporting violations, and guiding students in proper academic practices. It specifies the teacher authority and highlights potential challenges that without an adequate training teachers may interpret and implement the policy improperly. It follows the literature sources above, which are emphasizing that policies require an institutional capacity-building to be more effective (East, 2022).

4.4. Inclusion of Digital and AI-Related Integrity Expectations

A significant result is the policy's treatment of artificial intelligence. Instead of banning the AI outright, the policy outlines some acceptable and unacceptable uses, requiring a proper attribution and restricting the AI assistance in formal assessments. It aligns with emerging global trends, advocating for an ethical AI literacy rather than a complete prohibition (Cotton et al., 2023). The school's approach recognizes the inevitability of AI in the students' academic lives and attempts to include it within an ethical framework.

4.5. Shared Responsibility Among Stakeholders

Parents, teachers, and administrators are all assigned specific responsibilities, illustrating a shift toward a collective accountability. Parents are expected to support an academic honesty at home, monitor a digital behavior, and understand the implications of the misconduct. This shared-responsibility model reflects the best practices, which are highlighted in the integrity literature, where a home environment influences on the students' ethical behaviors (Farnese & Livi, 2020).

4.6. Preventive and Developmental Orientation

The policy has such preventive strategies as instructions in citation skills, an access to the library resources, and teacher-led explanations of expectations. These elements indicate that the school seeks to punish the misconduct and support an effective skill development. This developmental orientation is essential in the Kazakhstan's context, where an academic integrity education is often introduced only in higher education.

Discussion

The findings of this study contribute to better understanding of how an academic integrity can be institutionalized in the secondary schools within such emerging educational systems as Kazakhstan. By assessing the Academic Integrity Policy of Gymnasium No. 159 by means of the Critical Discourse Analysis, the research highlights a nature of integrity as an educational, cultural, and technological construct.

5.1 Theoretical Contributions

The study analyzes theoretical discussions in two important ways. First, it demonstrates that an academic integrity in the secondary education is related to a behavioral or disciplinary concern as well as a discursive and identity-forming process. The policy makes students as the principled learners, who are capable of an ethical decision-making, reflecting such frameworks as the International Baccalaureate learner profile and theories, linking

the integrity to a moral development. Second, the inclusion of artificial intelligence within the policy extends existing theory by illustrating how digital ethics and AI literacy must now be integrated into academic integrity models. It reinforces the recent scholarship (such as Cotton et al., 2023), calling for the expanded conceptualizations of both authorship and ethical learning in the age of the generative AI.

5.2 Practical Contributions

The study provides insights for schools and policymakers, who are seeking to implement some qualified integrity frameworks. The policy's detailed definitions, clear sanctions, and shared-responsibility structures offer a replicable model for other Kazakhstani schools, which are lacking coherent guidelines. Its developmental orientation, emphasizing citation instructions, skill-building, and an ethical AI use, demonstrates a more supportive approach than punitive models, which are commonly found in the post-Soviet contexts. In addition, the findings underline the importance of teacher training and digital literacy, suggesting that institutions should invest in capacity-building to ensure both consistent interpretation and enforcement. The case also emphasizes the role of parents as partners in developing ethical norms. This consideration is relevant in cultures, where the family involvement in schooling is high.

5.3 Limitations and Further Research

Not depending on its contributions, the study has limitations. It is based on a single document from one school, which limits the generalizability of findings. While CDA provides rich interpretive insights, it does not get the stakeholders' lived experiences or the policy's real-world effectiveness. The future research should include interviews with students, teachers, and parents to understand how the policy is interpreted and experienced. Longitudinal studies could track changes in misconduct rates, digital behaviors, and an ethical awareness, following the policy implementation. Comparative analyses among many schools or regions would also clarify how cultural, administrative, and socioeconomic differences maintain the integrity practices. Finally, the further work is needed to explore how the AI literacy can be systematically integrated into the school curricula to prepare students for increasingly complicated digital environments.

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From Oil Revenues to Inflation: A Comparative Institutional Analysis of Azerbaijan and Kazakhstan

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Abstract

This study conducts a comparative institutional analysis to identify the primary short-term determinants of inflation in two major oil-exporting economies, Azerbaijan and Kazakhstan. Despite similar heavy reliance on hydrocarbon revenues, the two countries exhibit divergent institutional frameworks for fiscal management, particularly in their sovereign wealth funds (SOFAZ and NFRK). Employing parsimonious Ordinary Least Squares (OLS) regression models on annual data from 2000 to 2023, this research tests distinct transmission channels. The results reveal a fundamental divergence: Azerbaijan's inflation is predominantly driven by fiscal policy, with changes in SOFAZ assets being a significant positive determinant. In contrast, Kazakhstan's inflation is significantly influenced by global financial conditions and domestic monetary policy, with the USD/KZT exchange rate and broad money supply as key drivers. The findings underscore that the manifestation of the resource curse is critically mediated by the quality of fiscal and monetary institutions. Tailored policy recommendations are provided, suggesting Azerbaijan prioritize a rules-based fiscal framework, while Kazakhstan should focus on managing exchange rate volatility and strengthening its inflation-targeting regime.

Keywords: inflation, Azerbaijan, Kazakhstan, sovereign wealth funds, SOFAZ, NFRK, Dutch Disease, comparative institutional analysis, fiscal policy, monetary policy

Introduction

Inflation remains a critical macroeconomic challenge for policymakers, directly impacting economic stability, purchasing power, and sustainable growth. For resource-rich economies, the dynamics of inflation are particularly complex, intricately linked to volatile commodity prices, exchange rate stability, and fiscal policy management (IMF, 2023). Kazakhstan and Azerbaijan represent two key case studies in the Eurasian region, both heavily dependent on hydrocarbon exports. As of 2023, the energy sector contributes over 40% of GDP in Azerbaijan and around 30% in Kazakhstan (World Bank, 2023). Despite these similarities, their approaches to managing oil revenues differ significantly, offering a natural experiment for analyzing how institutions shape economic outcomes.

A substantial body of literature has examined inflation determinants in these countries individually. Studies on Azerbaijan highlight the significant role of fiscal policy and money supply (Rahimov, Adigozalov, & Mammadov, 2016; Aliyev, Humbatova, & Gadim-Oglu, 2023), while research on Kazakhstan points to the influence of oil prices and exchange rate fluctuations (Kelesbayev, Myrzabekkyzy, & Bolganbayev, 2022; Honjo, Impavido, & Mounir, 2023). A critical gap, however, exists in the direct comparative analysis of these drivers, particularly the

role of their sovereign wealth funds (SWFs)—the State Oil Fund of the Republic of Azerbaijan (SOFAZ) and the National Fund of the Republic of Kazakhstan (NFRK). Ibadoghlu (2022) notes that NFRK operates under stricter fiscal rules than SOFAZ, suggesting a potential institutional explanation for differing macroeconomic outcomes.

This study bridges this gap by asking: What are the primary short-term drivers of inflation in Azerbaijan and Kazakhstan, and how do their institutional frameworks explain the differences? We hypothesize that due to its more discretionary fiscal policy, Azerbaijan's inflation is primarily driven by fiscal channels (SOFAZ), whereas Kazakhstan's inflation, insulated by its rules-based fund, is more influenced by monetary and external factors. Employing a parsimonious OLS framework, this research provides clear, comparative empirical evidence on these distinct transmission mechanisms, offering tailored policy insights for each country and a broader lesson on the importance of institutional quality in managing the resource curse.

Methodology

2.1 Data and Variables

This study utilizes annual data from 2000 to 2023 for Azerbaijan and Kazakhstan. The primary dependent variable is the Consumer Price Index (CPI), used as a proxy for inflation. The independent variables were selected based on theoretical frameworks, including the Quantity Theory of Money, Dutch Disease theory, and the role of SWFs. The key variables include:

- Broad Money Supply (M2)
- Brent Crude Oil Prices
- Sovereign Wealth Fund Assets (SOFAZ for Azerbaijan, NFRK for Kazakhstan)
- Exchange Rates (USD/KZT and RUB/KZT for Kazakhstan; global factors were tested for Azerbaijan)
- Oil Production

Data were sourced from the World Bank, International Monetary Fund (IMF), national central banks, and the U.S. Energy Information Administration (EIA). All variables were transformed into their stationary forms—first or second differences—as confirmed by Augmented Dickey-Fuller (ADF) unit root tests to avoid spurious regression.

2.2 Model Specification

To identify the primary short-term drivers, separate parsimonious OLS regression models were specified for each country. The general form of the model is:

$$l_cpi_it = \beta_0 + \beta_1 X_1t + \beta_2 X_2t + \dots + \beta_k X_kt + \varepsilon_t$$

where l_cpi_it is the log of the consumer price index in country i at time t , and the independent variables X are included in their stationary forms.

The final estimated models were:

- For Azerbaijan: $l_cpi_az_t = \beta_0 + \beta_1 \cdot d2_swf_usd_az_t + \beta_2 \cdot d2_m2_usd_az_t + \beta_3 \cdot d_brent_t + \varepsilon_t$

- For Kazakhstan (Global Model): $l_cpi_kz_t = \beta_0 + \beta_1 \cdot d_exrate_lcuusd_kz_t + \beta_2 \cdot d_m2_usd_kz_t + \beta_3 \cdot d_oilprod_kz_t + \beta_4 \cdot d2_swf_usd_kz_t + \varepsilon_t$

A separate model testing the regional influence of the RUB/KZT exchange rate was also evaluated for Kazakhstan. Variance Inflation Factor (VIF) tests were conducted to ensure robustness against multicollinearity.

Findings

The empirical results reveal divergence in the inflationary mechanisms of the two countries, confirming the institutional hypothesis.

3.1 Determinants of Inflation in Azerbaijan

The model for Azerbaijan was jointly statistically significant (F-statistic p-value = 0.007) and explained approximately 48% of the variation in inflation. The key finding was the positive and statistically significant coefficient for the second difference of SOFAZ assets (p-value = 0.006). This indicates that fiscal policy, measured through changes in the sovereign wealth fund, is the primary short-term driver of inflation. In contrast, changes in the broad money supply and global oil prices were not statistically significant in the specified model. The mean VIF was 2.22, indicating no severe multicollinearity.

Table 1

Determinants of Inflation in Azerbaijan (Dependent Variable: l_cpi_az)

Variable	Coefficient	Std. Error	t-statistic	p-value
d2_swf_usd_az	1.156	0.374	3.09	0.006
d2_m2_usd_az	-0.367	0.459	-0.80	0.435
d_brent	0.061	0.074	0.82	0.423
_cons	6.475	0.933	6.94	0.000
R-squared = 0.479				

3.2 Determinants of Inflation in Kazakhstan

For Kazakhstan, the model focusing on regional influence (including the RUB/KZT rate) was not statistically significant (F-statistic p-value = 0.680), and none of its variables were significant determinants of inflation. This suggests successful insulation from direct regional volatility.

However, the global model was significant at the 10% level (F-statistic p-value = 0.054) and explained 42% of the variation in inflation. This model identified two significant drivers: the change in the USD/KZT exchange

rate (p-value = 0.009) and the growth of the broad money supply (p-value = 0.015). Changes in the NFRK assets were not a significant factor. The mean VIF was 2.63, with the highest individual VIF for the USD/KZT rate at 4.41, indicating a moderate but acceptable level of correlation that does not undermine the robustness of the results.

Table 2

Determinants of Inflation in Kazakhstan - Global Model (Dependent Variable: l_cpi_kz)

Variable	Coefficient	Std. Error	t-statistic	p-value
d_exrate_lcuusd_kz	0.140	0.047	2.99	0.009
d_m2_usd_kz	0.440	0.161	2.74	0.015
d_oilprod_kz	0.000	0.000	1.65	0.119
d2_swf_usd_kz	0.147	0.122	1.20	0.246
_cons	4.107	1.725	2.38	0.030
R-squared = 0.423				

Discussion

The empirical findings paint a clear picture of how institutional frameworks mediate the resource curse, specifically its inflation transmission mechanism.

4.1 Fiscal Dominance in Azerbaijan

The significant positive relationship between SOFAZ asset changes and inflation in Azerbaijan indicates a dominant fiscal transmission channel. This finding aligns with the demand-pull inflation theory. Periods of large withdrawals from SOFAZ to finance the budget inject substantial liquidity into the economy, stimulating aggregate demand and pushing prices upward. Contrary to its intended stabilization role, SOFAZ's discretionary use appears to exacerbate inflationary pressures. The insignificance of money supply suggests the central bank has a limited capacity to sterilize these fiscal injections, highlighting a subordination of monetary policy to fiscal decisions.

4.2 Monetary and Global Integration in Kazakhstan

Kazakhstan's results present a more nuanced and institutionally advanced scenario. The null result for the RUB/KZT exchange rate is a significant finding, suggesting that the country's institutional frameworks—including its rules-based management of the NFRK and an independent inflation-targeting regime, have successfully built resilience against regional volatility. However, this insulation is not absolute. The significance of the USD/KZT exchange rate and the domestic money supply reveal Kazakhstan's vulnerability to global financial conditions and the critical importance of its own monetary policy. A depreciation of the Tenge against the US Dollar leads to

imported inflation, while growth in the money supply confirms the ongoing relevance of the Quantity Theory of Money. The insignificance of the NFRK variable itself is a testament to the success of its rules-based framework, which effectively decouples fiscal oil revenues from short-term inflationary pressures.

4.3 Comparative Institutional Analysis

The comparative analysis underscores that the symptoms of the Dutch Disease are not predetermined but are shaped by institutional quality. Azerbaijan exemplifies a classic case where resource wealth translates directly into fiscal-driven inflation due to discretionary fiscal management. Kazakhstan demonstrates that stronger institutions can alter these transmission mechanisms, break the direct fiscal-inflation link but create a different set of challenges related to global financial integration and the need for robust monetary policy. The divergence in drivers is thus a story of divergent institutional maturity.

4.4 Policy Implications

The distinct findings necessitate tailored policy recommendations.

4.4.1 For Azerbaijan: Anchoring Fiscal Policy. The priority for Azerbaijan is to implement a strict, rules-based fiscal framework to curb pro-cyclical spending. This involves:

1. Legislating a fiscal rule for SOFAZ withdrawals based on a long-term oil price benchmark, delinking spending from short-term revenue fluctuations.
2. Reinforcing SOFAZ's mandate to prioritize macroeconomic stabilization over discretionary developmental spending.
3. Improving coordination between the Ministry of Finance and the Central Bank to account for the fiscal stance in monetary policy decisions.

4.4.2 For Kazakhstan: Fortifying Monetary and External Defenses. Kazakhstan should focus on strengthening its defenses against global shocks and enhancing its monetary policy effectiveness:

1. Managing exchange rate volatility through a continued managed float, deepening the FX market, and building reserve buffers.
2. Strengthening the credibility and transmission mechanism of its inflation-targeting regime to better anchor inflation expectations.
3. Resisting political pressure to loosen the successful fiscal rules governing the NFRK, which provide the foundation for monetary policy independence.

Conclusion

This study set out to resolve the puzzle of divergent inflationary outcomes in two similar resource-rich economies. The answer lies in their institutions. For Azerbaijan, inflation is a story of fiscal management, driven by the discretionary use of SOFAZ. For Kazakhstan, it is a story of managed global integration, driven by the USD exchange rate and domestic monetary policy. The research conclusively shows that while oil revenues set the stage,

it is the quality of a country's fiscal and monetary institutions that ultimately writes the script for its macroeconomic stability. The policy prescriptions are clear: Azerbaijan must prioritize fiscal anchoring, while Kazakhstan must fortify its monetary and external defenses. For both, the long-term goal of economic diversification remains the only sustainable path to mitigating the inherent volatility of resource dependence.

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State Ideology of Kazakhstan: Comparative Discourse of Nazarbayev and Tokayev

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Abstract

This paper analyzes the transformation of Kazakhstan's state ideology in the context of the political leadership transition from Nursultan Nazarbayev to Kassym-Jomart Tokayev. The objective of research is to understand how the ideological content of state policy is changing while formal continuity of power is maintained. The aim of the paper is to identify the characteristics and directions of the evolution of Kazakhstan's ideology by comparing the ideological discourses of the two presidents. The study addresses the following questions: what value orientations and political concepts shape the ideology of each leader, what are the mechanisms for adapting it to public demand, and to what extent is continuity maintained between them.

Methodologically, the paper relies on a qualitative discourse analysis of official speeches, strategic documents, and key initiatives of both leaders, which allows for the identification of rhetorical and conceptual differences. The expected results include the identification of a gradual shift in ideological emphasis from Nazarbayev's modernization and integration project to Tokayev's more socially oriented and institutionally open approach. Interpreting these changes allows us to conclude that Kazakhstan's state ideology maintains continuity in its core values, as national unity and stability while transforming the forms of their expression to be more responsive to public sentiment and the demands of the times.

Keywords: state ideology, Kazakhstan, political discourse, continuity, modernization, legitimacy

Introduction

Central Asia is a region that hides many opportunities, unique processes and the structure of society. Since gaining independence, the Republic of Kazakhstan has been actively engaged in the formation of its own national identity, focused on strengthening stability, legitimizing power and integrating into the world community - multipolar policy. The central element of this process has become ideological programming of the future - through strategic documents, state initiatives, educational reforms and presidential messages. Attention to the concepts of "tolerance", "spiritual renewal", "Mangilik El", "modernization of public consciousness" and other key narratives indicate systematic work on the formation of a controlled national identity. However, a key question arises: to what extent does the promoted state ideology really reflect the national interests of the people, and not the interests of the ruling elite or specific politicians?

Despite the existence of extensive strategies, from Kazakhstan 2030 to Rukhani Zhangyru, real socio-economic and political practice often demonstrates a gap with the declared ideals. Moreover, in some cases, ideology becomes an instrument for retaining power, rather than for developing civil nation-building.

The purpose of this study is to identify this discrepancy through an analysis of the content of events and a critical analysis of key ideological initiatives. The central hypothesis of the article is that Kazakhstan is dominated by a state ideology that does not coincide with national interests, and that this imbalance hinders the formation of a genuine civic identity and long-term sustainability.

Literature Review

Studies of national ideology in post-Soviet states identify several common stages: the formation of a legitimizing foundation for power, the construction of national identity, the development of a modernization agenda, and the transition to value-based and pragmatic governance models. For Kazakhstan, studies devoted to state-building, memory politics, and the formation of a national narrative are particularly significant (Dave, 2007; Abashin, 2015; Laruelle, 2019). These studies demonstrate that the Kazakh ideological model developed in a context of ethnic and institutional multilayeredness, which required the state to simultaneously maintain stability and promote modernization initiatives.

Literature devoted to the Nazarbayev era emphasizes the existence of a stable discursive core, including concepts of stability, unity, modernization, national identity, and economic growth. Scholarly works indicate that the ideology of this period was aimed at strengthening internal consensus and legitimizing a long-term development course. Despite numerous qualitative studies, quantitative linguistic analyses of Nazarbayev's rhetoric are almost nonexistent; only isolated works examine individual aspects of the modernization discourse (Laruelle, 2017; Schatz, 2019), highlighting the gap in the systematic empirical study of his ideological concepts.

In contrast to the earlier period, the literature on Tokayev's policies (2020–2025) documents a noticeable shift in the ideological framework toward technological advancement, digitalization, inclusiveness, social justice, and human capital development. Researchers note a gradual shift from a personalistic national narrative to a more institutionalized model of governance, in which reform and modernization of state institutions play a key role (Schatz, 2023). However, as with Nazarbayev, academic literature lacks quantitative studies analyzing Tokayev's speech vocabulary year after year, creating a significant research gap and highlighting the need for empirical verification of qualitative observations.

Based on the logic of existing research, the following model and hypotheses are proposed. The first hypothesis suggests that Nazarbayev's ideological core is built around the concepts of "stability-unity-modernization." The second hypothesis posits that Tokayev's ideological core is shifting toward "technological advancement-innovation-justice," reflecting a transition to modernization based on digital and institutional reforms. The third hypothesis suggests that there is not a sharp break between the two eras, but a gradual transition in which modernization serves as a connecting link, ensuring continuity while simultaneously updating the ideological agenda.

Methodology

The research methodology was developed to compare the ideological models of two political eras in Kazakhstan and identify differences in rhetoric, semantic emphases, and the frequency of ideological concepts. To address these objectives, a mixed-methods research strategy was employed, combining qualitative discourse analysis and quantitative lexical analysis. This combined approach allows for a simultaneous examination of the depth of meaning and empirical dynamics of key concepts, ensuring the representativeness of the findings.

The empirical base of the study consists of official speeches, addresses, policy documents, and public statements by Nursultan Nazarbayev and Kassym-Jomart Tokayev.

The Nazarbayev corpus includes 42 texts from 2010–2019, totaling 72,800 words. The Tokayev corpus consists of 27 texts from 2020–2025, including annual addresses and speeches at forums on technology and economics, totaling 68,400 words. All documents were selected based on official relevance: only texts of national and political significance were considered.

Data collection was carried out manually by systematizing archival materials from official government resources and analyzing our own transcripts of speeches. The corpus was then cleaned of technical elements (dates, references, and function phrases), after which lemmatization was performed to standardize word forms.

For quantitative analysis, frequency counting tools (AntConc, Voyant Tools) were used to identify the recurrence of key concepts and construct basic semantic sets for each corpus. Frequency analysis was supplemented by manual coding of semantic clusters, including the categories "stability," "unity," "modernization," "technologicality," "innovation," "digitalization," "justice," "human capital," and others.

The analytical procedure included three steps:

- initial data cleaning and creation of a dictionary of key concepts
- automatic calculation of absolute frequencies for each corpus
- a qualitative interpretation of the obtained results based on a contextual analysis of usage

Thus, the methodology allows us to simultaneously document both quantitative changes in the language of power and ideological transformations reflected in the semantic emphases of rhetoric.

Results and Discussion

The data obtained demonstrate significant differences between the two ideological eras and confirm the stated hypotheses. A quantitative analysis of the frequency of key concepts shows that Nazarbayev's rhetoric rests on a stable core, including the categories of stability, national unity, and modernization. These concepts appear with high regularity and form a coherent model in which the state serves as the primary guarantor of development. The high frequency of the words "stability," "unity," "strategy," and "modernization" reflects a focus on continuity, gradualism, and centralized management of modernization processes. These results are consistent with the

previously described qualitative characteristics of the independence-era ideology, where societal consolidation was viewed as a prerequisite for economic progress.

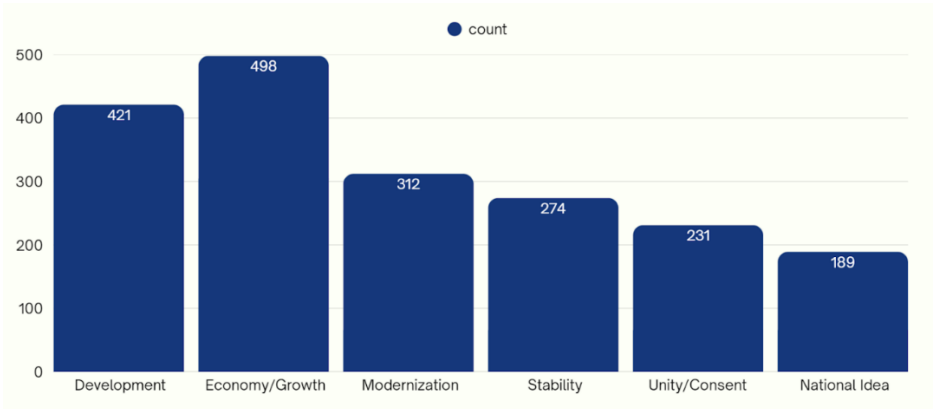


Figure 1
Keyword Frequency, Nazarbayev (2010–2019)

In contrast, an analysis of the Tokayev corpus revealed a sharp increase in the use of terms related to technology, reform, and innovation. The words "technology," "digitalization," "artificial intelligence," "innovation," and "efficiency" are found several times more frequently than in the Nazarbayev corpus. Particularly noteworthy is the term "artificial intelligence," which is completely absent from Nazarbayev's rhetoric but becomes a consistent element in Tokayev's speeches, indicating a shift in ideological priority and alignment with the global technological agenda.

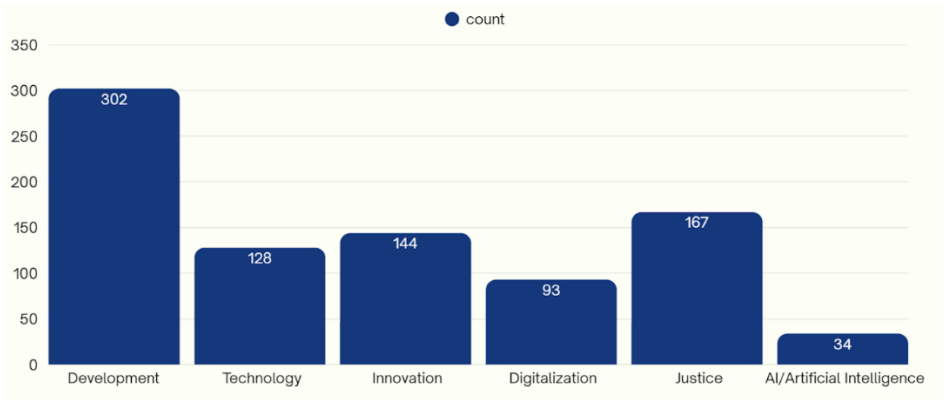


Figure 2
Keyword Frequency, Tokayev (2020–2025)

A substantive analysis of the context confirms that Tokayev is building an ideology based on technocratic pragmatism, where development is determined not so much by national consolidation as by the state's ability to adapt to global technological changes. His speeches contain significantly less of the symbolic rhetoric characteristic of Nazarbayev and more references to systemic reforms, institutional effectiveness, and human capital.

A comparison of the two corpora demonstrates the gradual, rather than revolutionary, nature of the ideological transformation. Modernization remains a common element of both eras, but its content changes: in one case, it functions as a tool for strengthening statehood, in the other, as an engine of technological growth. This transition confirms the hypothesis of the existence of a "modernization bridge" that ensures the continuity of ideological evolution.

Overall, the study's findings demonstrate that Kazakhstan's ideology is shifting from a model of national stability to a model of technological development. These findings have both theoretical and practical significance: they allow for a better understanding of the logic behind changes in public policy and forecasting Kazakhstan's future ideological emphases in the context of global challenges.

While this study demonstrates differences and continuities between the ideological contours of the Nazarbayev and Tokayev eras, it has a number of methodological limitations that should be considered when interpreting the results.

First, the analysis relies primarily on public speeches, official documents, and policy texts of the heads of state. While this approach is widely used in political discourse analysis, it inevitably limits the study to the "official" language of power. Such rhetoric often represents a carefully edited political product that may not reflect internal political debates, the influence of informal institutions, or the dynamics of decision-making. Future research could incorporate leaked materials, parliamentary transcripts, expert interviews, or survey data to provide a more comprehensive picture of the ideological process.

Second, due to the lack of publicly available annual corpora of speeches from both eras, the analysis is limited in terms of precise diachronicity. This is particularly true for the first decade of Nazarbayev's presidency, for which the availability of machine-processed sources is significantly lower. Further expansion of the time series, for example, the creation of a comprehensive digitized corpus of speeches since 1991 would allow for a more accurate dynamic model of ideological evolution, including vocabulary shifts, the emergence of new thematic clusters, and the demise of old ones.

Third, the quantitative methods used in the study (frequency analysis and thematic grouping) do not allow for a direct assessment of the pragmatic context, intonation, political intent, and tonality of statements. Ideology functions not only as a set of keywords but also as a system of meanings dependent on external events: economic crises, protest cycles, elections, and international relations. Expanding the study through contextual analysis, for example, the use of more complex NLP models (topic modeling, sentiment analysis by year, clustering based on word embeddings) would allow for the identification of deep semantic connections within the discourse.

Fourth, the study did not consider visual elements of political communication (symbols, media campaigns, television messages, and the design of strategic documents). Meanwhile, visual language plays a significant role in shaping the national ideology of post-Soviet states. Integrating multimodal analysis could significantly enrich our understanding of the ideological transition between eras.

Finally, the study focuses on the discourse of leaders, which creates the risk of an elite-oriented lens. Ideology in Kazakhstan is shaped not only from above, but also through societal reactions, local narratives, online discussions, online movements, and the practices of "everyday nationhood." A promising direction is to incorporate data from social media, media, public sentiment analysis, and local initiatives, which will allow us to understand the extent to which a declared ideology is actually absorbed and reproduced at the population level.

Therefore, future research could be significantly expanded empirically, methodologically, and conceptually. A comprehensive combination of quantitative discourse analysis, contextual research of political events, multimodal data, and public perception studies will allow for a more in-depth assessment of the nature of the ideological transformations between the Nazarbayev and Tokayev eras and their impact on Kazakhstan's state-building.

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Kazakhstan's Geopolitical Perceptions After the Ukraine War: Public Opinion on Russia, China, and the United States

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Abstract

Given its geopolitical significance, Central Asia has been the traditional battleground for global powers to compete for regional influence. This rivalry has recently been intensified by the U.S.-China-Russia strategic competition. While many Central Asian countries, such as Kazakhstan, were previously deemed part of the Russian sphere of influence, they have been subject to heavy U.S. influence since the end of the Cold War and, more recently, have become recipients of China's Belt and Road Initiative (BRI) projects and other types of aid. Recent developments such as the Ukraine war only further complicate the regional dynamics. How do Central Asians perceive the competing powers, especially against the backdrop of the Ukraine War? Will China replace Russia as the regional hegemon, or will the United States become more popular at the expense of China and Russia? Using recent survey data, this study investigates how the war in Ukraine has reshaped Kazakhstani public opinion toward these competing powers. Initial analysis reveals Russia's declining favorability, with China and the U.S. gaining ground. Moreover, China's rising appeal appears linked to Russian media consumption, while the U.S. benefits notably from the internet and social media usage.

Keywords: global powers competition, regional hegemony, public opinion, media influence

Introduction

On November 6, 2025, the Central Asian leaders for the first time visited the White House, where President Trump and his entourage hosted the C5+1 Summit. The event proved fruitful for all: Washington took a 70% in the world's largest undeveloped tungsten mines in Kazakhstan; Astana secured deals with Nvidia and OpenAI; and Uzbekistan expanded energy cooperation with the U.S. With the summit situating at the White House, the event signaled that Russia's influence in the region is eroding.

Following the summit, on November 12, President Tokayev made his first governmental visit to Moscow to meet President Putin. During this meeting, counterparts bound themselves together with a historic "comprehensive strategic partnership and alliance" and promised to continue cooperating on nuclear energy projects, to increase bilateral trade turnover to \$30 billion, and to improve integration through regional organizations.

The juxtaposition of two conflicting summits has bewildered the Kazakh public grappling with questions about the government's geopolitical orientation. To clarify these preferences, we ask: how has the war in Ukraine reshaped public opinion in Kazakhstan toward major global powers—Russia, China, and the United States—and

how do media consumption patterns mediate these shifts? Studying Kazakh public attitudes may unveil valuable insight into the country's true preferences behind multi-vectoral foreign policy.

Building on research question, we hypothesize that: (1) following the Ukraine war, Russian favorability has declined among the Kazakhstani public relative to China and the United States; (2) media consumption patterns mediate geopolitical attitudes.

1.1 Geopolitical Shocks and Public Opinion

Geopolitical shocks, such as war, significantly influence public opinion toward involved foreign nations, and in Kazakhstan, the effects of the war surfaced shortly after the attack. Following Russia's invasion of Ukraine, protests erupted within days (Sairambay & Kamza, 2024), when the government began subtly distancing itself from Moscow—likely due to Russia's eroding appeal (Jones, 2023). Public-elite opinion in Kazakhstan evidently aligned, challenging a long-standing assumption that in authoritarian regimes, public opinion is disconnected from policy-makers (Chapman & Zhandayeva, 2024).

1.2 Media Consumption and Attitudes Towards Foreign Powers

In times of international crises, media facilitates public opinion formation vis-à-vis foreign powers (Joseph, 2014; Zhang & Luther, 2020). Not only does media influence how individuals interpret events, but it also interacts with decision-makers, tapping into the opinion-foreign policy interplay (Joseph, 2014).

In the Kazakhstan's case, survey data indicate that respondents from Kazakhstan express higher pro-Russia sentiment compared to those in Kyrgyzstan (Chapman & Zhandayeva, 2024). Moreover, researchers found that respondents from Kazakhstan who consume war-related news via the internet are less likely to justify the conflict, while those exposed to other media types are less likely to attribute blame to the West (Chapman & Zhandayeva, 2024).

Russian's media strategies and "hybrid interferences" may mislead some to believe that Kremlin-backed media exudes strong influence on public in Kazakhstan, but polling data revealed that initial support for Russia gave way to growing sympathies for Ukraine (Sairambay & Kamza, 2024). Furthermore, sentiment analysis revealed that Kazakhstanis actively identify pro-Russian propagandistic bot accounts and even propose blocking them (Sairambay & Kamza, 2024). Those studies suggest that pro-Kremlin media channels are gradually losing credibility among the Kazakh public, especially in times of geopolitical turmoil (Chapman & Zhandayeva, 2024).

To sum up, following the war, the Kazakh public changed opinions not only about Russia but also about Russia-led regional organizations, reflecting broader public scepticism towards Kremlin (Jones & Smyth, 2022).

1.3 Russia's Standing in the Region Under Stress

Historically, Russia enjoyed an unprecedented influence over Central Asia, preserving its presence in the region through the CSTO and EAEU. However, the Ukraine war exposed Kremlin's vulnerabilities and thereby affected regional power distribution (Jones, 2023), where Kazakhs begun distrusting Russia-led regional organizations (Jones & Smyth, 2022).

Russia’s position in the CSTO faces challenges: strategic ambiguity leads to inconsistent behaviour and fear of abandonment (Arynov & Umirbekov, 2025), Chinese growing economic presence in the region, and the growing negative sentiment vis-a-vis the CSTO among general public in the member states (MacHaffie, 2024).

In sum, the Ukraine war eroded Russia’s regional presence. Once viewed as a reliable security guarantor for the region, Russia seems unpredictable and potentially aggressive, forcing both general public and political elite to reevaluate Kremlin’s position in the region. The power vacuum may invite other actors to enhance its presence in the region—President Trump confirmed that at the C5+1 Summit.

Data and Measurement

2.1 Measure of Attitude Change and Media Effects

An original survey conducted in December 2023 with 1,200 respondents asked respondents how their attitudes toward each country had changed since the Ukraine war began. This targeted measurement strengthens our causal inference by directly linking the respondents' reported shifts in opinion to the Ukraine conflict. Additionally, this survey explicitly measures media consumption patterns, enabling a more precise exploration of how different media types mediated attitude changes.

The dependent variables in this section reflect self-reported changes in public opinion after the Ukraine War. The responses were recoded into numeric values ranging from 1 (Significantly more unfavorable) to 5 (Significantly more favorable). Using these scores, we constructed three relative favorability measures to capture net changes in attitudes between country pairs, each calculated as the difference in post-war opinion scores. Calculated as the difference between the favorability scores, negative values indicate a more favorable view of first-mentioned compared to second-mentioned actor. These three variables are presented in Figure 1.

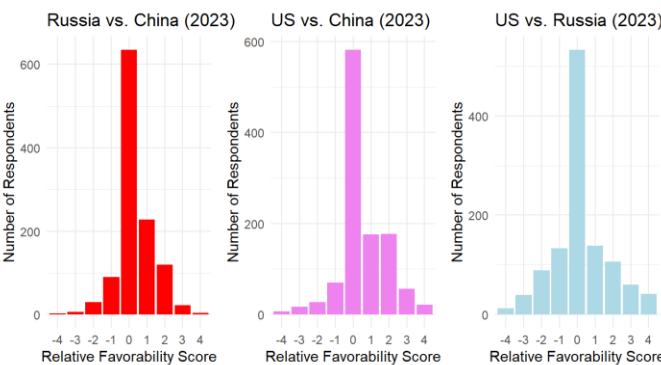


Figure 1
Distribution of Relative Favorability Scores Among Major Powers

Figure 1 confirms that Russia’s standing eroded in relative terms after the Ukraine War, while China gained favor, especially compared to Russia and to a lesser extent compared to the U.S. The U.S., while not seeing dramatic gains, still registers a net improvement in perception when paired against Russia.

To assess whether trust in Russian television predicts relative favorability of China and Russia over the United States—controlling for frequency of political TV news, attention to Ukraine, age, ethnicity, residence type, gender, education, and political interest—we estimated three ordinary least squares regression models. The key independent variable, Trust in Russian Television, ranges from 1 (Very untrustworthy) to 4 (Very trustworthy). The responses were recoded so that higher values indicate greater trust. As shown in the left panel of Figure 3, the distribution suggests that while most respondents fall in the middle of the scale, strong trust in Russian TV is relatively uncommon.

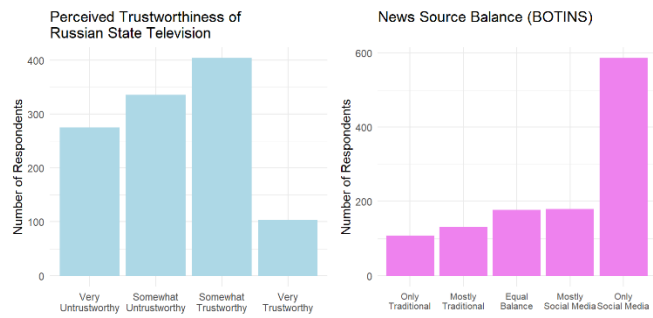


Figure 2
Distributions of Trust in Russian State Television and News Source Balance

To test whether reliance on social media vs. traditional media predicts more favorable views of China over Russia, we ran three additional regression models, where our main independent variable, BOTINS, captures respondents’ balance of news sources and is derived from the question: “Which sources do you get your news from?” Respondents chose one of five ordered categories ranging from exclusive reliance on traditional media (1) to exclusive reliance on social media (5). The distribution, shown in the right panel of Figure 2, is heavily skewed toward digital media.

Model Results

Table 1 presents six OLS regression models predicting relative favorability between major powers (Russia, China, and the United States) as a function of media trust, media use, and demographic factors. In Models 1–3, the key predictor is trust in Russian state television. As expected, greater trust in Russian TV is associated with more favorable views of Russia compared to both China and the United States (Models 1 and 3). According to our expectations, it also predicts greater favorability toward China over the U.S. (Model 2), potentially reflecting the

consistently positive portrayal of China in Russian media or a shared anti-U.S. framing across authoritarian-aligned outlets.

Models 4–6 shift the focus to BOTINS, a variable capturing respondents’ media consumption habits on a 5-point scale ranging from exclusive reliance on traditional media (1) to exclusive reliance on social media (5). Greater reliance on digital media is associated with more favorable views of the U.S. relative to both China and Russia (Models 5 and 6), suggesting that social media users are more likely to hold pro-Western geopolitical orientations, while traditional media users are more sympathetic to Russia and China. BOTINS has no statistically significant effect on relative favorability between Russia and China (Model 4), though the small positive coefficient may suggest a weak trend toward slightly greater favorability of China over Russia among more digitally oriented news consumers. Across all models, ethnicity and age are robust predictors.

	Russia vs. China (Rus. TV)	US vs. China (Rus. TV)	US vs. Russia (Rus. TV)	Russia vs. China (BOTINS)	US vs. China (BOTINS)	US vs. Russia (BOTINS)
Trust	-0.175***	0.148***	0.335***			
Russian TV	(0.035)	(0.042)	(0.048)			
BOTINS				0.022 (0.024)	-0.091** (0.028)	-0.119*** (0.033)
Political TV	-0.013 (0.016)	0.028 (0.019)	0.036 (0.022)			
Num.Obs.	1016	1012	1024	1055	1052	1069
R2 Adj.	0.065	0.151	0.221	0.045	0.145	0.198

*Note: + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$*

Table 1

Regression Models Predicting Relative Favorability Toward Major Powers

Conclusion and Discussion

Our paper confirms both hypotheses. First, the Ukraine war has reshaped how Kazakhstani public perceives global powers, with Russia’s favorability declining, and China and the U.S. gaining ground. Second, media type mediates public perception, with China’s rising appeal linked to Russian media consumption, while the U.S. benefits notably from the internet and social media usage.

Overall, our findings suggest that despite long-standing ties with Russia and Russian culture, the Ukraine war reshaped how Kazakhstanis perceive Russia, revealing that even historical ties can erode amidst geopolitical

shocks. Similarly, the Ukraine has reshaped how Kazakhstanis perceive China: Beijing's favorability has gained more grounds after the war erupted despite 2016 anxieties about Chinese land purchases. Lastly, the US has gained ground; Kazakhs likely perceive it as a distant nation and thereby the Ukraine war has only mild association with US favorability.

Our study has some limitations: survey data in semi- and authoritarian regimes often poses limitations because respondents might give socially desirable responses out of fear of repression. Furthermore, while our study establishes relationships between media and attitudes, we cannot claim causality despite robust controls.

Future research might deploy LLMs to analyze social media sentiment toward global powers during key events such as military escalations, peace negotiations, and strategies shifts.

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Assessment of Determinants of Cost of Living in Almaty, Kazakhstan

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Abstract

The study focuses on examining determinants of cost of living in Almaty, and evaluating effectiveness of government interventions. Three research questions are addressed: the causes of high cost of living, the policies implemented to manage it, and their effectiveness. Methodology includes secondary data analysis collected from official reports. To assess inflation trends, descriptive and comparative analysis are implemented. The results indicated that food prices and service costs are main causes of rising prices, whereas government regulations act as a temporary solution. It was concluded that overdependence on imports and structural factors keep driving these costs up.

Keywords: cost of living, inflation, Almaty, policy effectiveness, CPI trends

Introduction

The purpose of this study is to identify the underlying causes of rising living costs in Almaty city, and evaluate the effectiveness of government approaches to combat this problem. As cost of living has increased significantly over the past years, this placed more pressure on households and raised questions on affordability, inequality and overall economic stability. Therefore, it is crucial to understand what are the causes of high living costs in order to introduce most effective policy interventions to battle them.

Based on existing research, inflation in Kazakhstan is mainly caused by supply constraints, import dependence, and external shocks (IMF, 2025; NBK, 2022). World Bank analyses indicate increasing prices disproportionately affecting low- and middle-income households in highly-urban cities (World Bank, 2024). But mentioned studies center around national trends, where they aren't assessing policy effectiveness at the city level. Thus, our study addresses that gap by examining Almaty city specifically. Current market trends also demonstrate the urgency of the issue. Almaty faces abnormally high housing costs in addition to rising rental rates, whereas food and transportation costs keep growing even with state subsidies and other regulation measures.

To address these issues, the study uses a secondary-data analysis approach using official statistics, contribution-to-inflation tables, policy documents, and government reports.

Literature Review

2.1 Inflation

Abbas et al. (2023) investigated inflation determinants in six world regions between the years 2002-2021, including variables such as: GDP growth, political stability and control of corruption. The results indicated a substantial regional variation, however broad money growth was found to increase inflation in all six regions,

whereas political stability on the other hand resulted in lower inflation in most regions. Similarly, Sajid et al. (2024) studied inflation determinants in South Asia through the use of panel data for three decades. The results also indicated that money supply, trade openness, exchange rates, and global oil prices, are all significant positive contributors towards inflation. The results coincide with Abbas et al. (2023), emphasizing the importance of managing monetary expansion.

Rather et al. (2015) found that price rigidities in India, specifically the asymmetries between increases and decreases, have a significant influence on short-run inflation dynamics. Sun et al. (2021), studying the mutual influence between agricultural commodity prices (ACP) and inflation (INF) in China, found that agricultural commodity prices cannot predict inflation consistently, which implies that sectoral shocks interact with broader macroeconomic conditions in a much more complicated manner than what traditional monetary theories state.

2.2 Wages

Recent research emphasizes how wage-setting systems have responded to the 2021-2023 cost-of-living crisis. Tassinari et al. (2025) emphasizes how inflation today is much different than the one in the 1970s and 1980s, where strong unions had a major role. The study indicates that inflation is currently shaped less by wage pressures and more by direct policy interventions.

There are studies that focus on specific countries which further show how institutional structures shape wage outcomes. Theodoropoulou et al. (2024), examined the case of Greece, where it was found that given the context of weakened trade unions and collective bargaining institutions, the response from wages to inflation was weak, whereas profits significantly increased in concentrated industries, causing regressive distributional effects. Ibsen et al. (2024) studied the policy and collective bargaining responses to the cost-of-living crisis in 2021, in three Scandinavian countries. It was found that all three countries strengthened collective bargaining to protect real wages. Beyond collective bargaining, some research has also focused on wage-setting practices and policies aimed at boosting workers' financial well-being during the cost-of-living crisis. Brown (2023) showed that flexible payment schemes in the UK can help employees to manage the financial strain during a crisis, thus decreasing the need for short-term credit.

2.3 Studies on Central Asia

Methodological studies emphasized the need for more accurate inflation measurement ways, where Zhunussova and Dulambayeva (2024) stated that national inflation weights are not able to capture regional consumption patterns and propose city-specific indices.

Additional studies highlight the socio-economic inflation consequences. Chulanova (2022) identified labour potential and housing policy as key to boosting living standards, whereas Sharipova et al. (2023) indicated that subjective well-being in Kazakhstan and Kyrgyzstan differs sharply with financial satisfaction. Finally, broader macro-economic research shows Kazakhstan's sensitivity towards oil price volatility and financial conditions.

Methodology

This chapter explains the research design, secondary data sources used in the process, and the following procedures to collect and analyze data relevant to the study. The methodology is based around three research questions: the causes of high cost of living, the policies implemented to manage it, and their effectiveness. This chapter also explains criteria for data selection, analytical techniques, limitations of secondary data, and ethical considerations.

3.1 Participants/Data Sources

As the focus of the study is macro-economic trends rather than individual behavior, no human participants or company samples were involved. The study incorporates publicly available secondary data. The sources are: Bureau of National Statistics (BNS) for Consumer Price Index (CPI), inflation contributions by category, food inflation, price changes of essential goods, utility tariffs, and housing cost indices. National Bank of Kazakhstan (NBK) –for macroeconomic indicators connected to inflation, monetary policy statements, and economic reports. Ministry of National Economy and other government reports for policy documents, annual economic reviews, and measures taken to address inflation, and international databases like the World Bank.

3.2 Procedure

The procedure included the review of official statistical publications and government reports, to identify which indicators were most relevant to the analysis of cost of living. Main indicators include CPI, food inflation, housing and utilities prices, transport costs, and wage statistics. Additionally, government policy documents were collected to assess interventions designed to stabilise prices and support household incomes. All the information was carefully organized by themes to keep a coherent analytical structure.

3.3 Data Analysis Methods

The study incorporates descriptive and comparative analytical techniques, which is a suitable choice for identifying any patterns in secondary economic data. The data analysis is carried out in the following way:

- *Descriptive Statistical Analysis:* Percentages, averages, year-on-year changes are used to summarize inflation dynamics and price trends across various categories.
- *Contribution Analysis:* Contribution-to-inflation tables (Bureau of National Statistics) are used to help identify which categories have the most contribution to overall inflation.
- *Trend Analysis:* To identify patterns and increases in cost-of-living components, we analyze CPI and category-specific inflation trends across several years.
- *Comparative Analysis:* It was carried out for cost-of-living components, inflation and wage trends, policy implementation periods and corresponding price changes.
- *Policy Effectiveness Assessment:* The purpose is to find whether price-control measures, subsidies and regulations had any significant impact on cost of living.

3.4 Reliability, Limitations and Ethics

The study ensured reliability through the use of official government datasets only, that are collected systematically and recognised as credible. The cross-year comparisons further strengthened consistency. Limitations of the study include the limited control over available data, delayed updates to data, limited qualitative insight, and the use of aggregated data that cannot fully show variations in different areas of Almaty city. As the study solely relied on publicly accessible data with no human participation, the ethical concerns were at minimum. All sources used in the study were fully cited.

Results

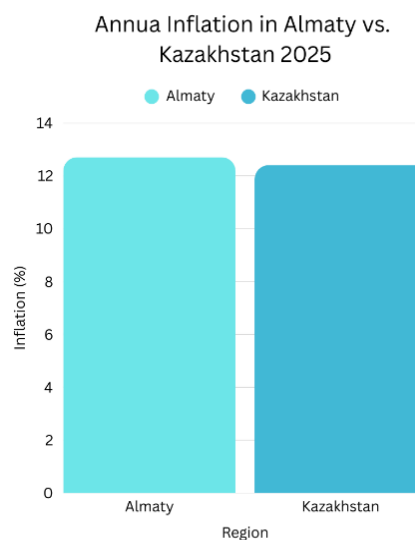
This section presents key findings based on secondary data collected from official statistical sources, which includes category-specific CPI changes, contribution-to-inflation tables, and regional inflation data. The results show the main determinants of the cost of living in Almaty, as well as provide a basis for assessing the effectiveness of government interventions.

4.1 Inflation Position of Almaty

Inflation data for this year illustrates that Almaty recorded an annual inflation rate of 12.7%, which is a little higher than the national average of 12.4%. This emphasizes that Almaty experiences more intense cost-of-living pressures in comparison to other regions. This persistently higher inflation indicates the local strong demand for food, services, and housing.

Figure 1

Annual Inflation in Almaty vs. Kazakhstan (2025)



4.2 Category-Specific CPI Trends (2023–2025)

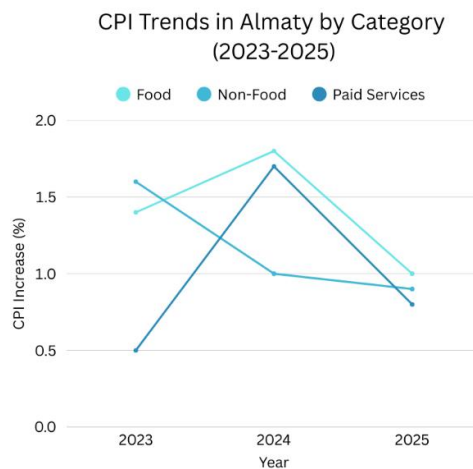
CPI data indicates a significant variation in price growth across food, non-food, and paid-services:

- *Food*: Increased in 2024 (1.8%) however declined substantially in 2025 (1.0%)
- *Non-Food*: Declined steadily from 1.6% (2023) to 0.9% (2025)
- *Services*: Increased sharply in 2024 (1.7%) then declined to 0.8% in 2025

These fluctuations indicate that food and services prices are the most volatile and influential components of household expenditure in Almaty.

Figure 2

CPI Trends by Category in Almaty, 2023-2025



4.3 Contribution of CPI Components to Total Inflation (2021–2025)

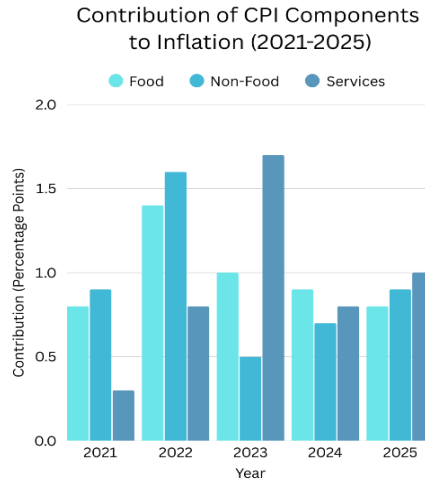
Contribution-to-inflation data indicates that:

- Food has consistently been the biggest contributor, ranging from 0.8 to 1.4 percentage points.
- Services demonstrated major volatility, peaking at 1.7 points in 2023.
- Non-food contributions declined sharply after 2022.

These patterns convey that food prices and service costs are the main determinants of rising living expenses in Almaty.

Figure 3

Contribution of Food, Non-Food, and Services to Inflation (2021–2025)

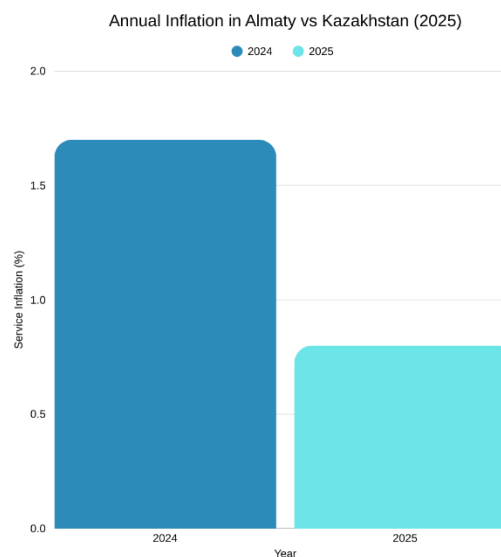


4.4 Policy Effectiveness

Some of the policies implemented in the period 2024-2025 align with the observable changes: 1. Utility & fuel tariff freeze (October 2025): Service inflation dropped significantly from 1.7% (2024) to 0.8% (2025). 2. Food price regulation: Food's inflation contribution declined consistently from 1.4 (2022) to 0.8 (2025). 3. Monetary tightening (base rate → 18%): Non-food inflation declined consistently

Figure 4

Service inflation Before and After Tariff Freeze



The data indicates that government interventions were partially effective in controlling inflation within individual categories.

Discussion

The goal of the study was to understand the determinants of cost of living in Almaty and assess the effectiveness of government interventions. Household budgets are mostly harmed by the food prices and service-related expenses, as shown by results. These two categories were found to have the most contribution to inflation during the years 2021 to 2025 and is the leading cause of why Almaty city is the most budget-unfriendly city in Kazakhstan.

Additionally, we found that government approaches to address the cost-of-living issue showed some developments, but only across certain categories instead of general cost-of-living support. For example, the 2025 tariff freeze aligns with a decrease in service inflation, meaning that utilities price controls tend to be productive in the short-run. Furthermore, market stabilization attempts and food price regulation had a positive impact on decreasing food's contribution to inflation. Unfortunately, as indicated by the data, the inflation rates in Almaty and Kazakhstan in general, keep maintaining high rates, emphasizing the power structural drivers (overdependence on imports, high service demand, and high urban consumption) have on cost of living.

5.1 Theoretical Contributions

As the focus of the research is Almaty city, this study offers city-level evidence that can enhance national-level existing literature on Kazakhstan. Indicated by results, factors causing inflation don't work in a similar way in big cities, as demand-pressures and service-sector dynamics intensify cost-of-living problems. The study also emphasizes the connection between policy interventions and components of inflation, providing a better understanding of how price controls and tighter monetary policy affect specific CPI categories.

5.2 Practical Contributions

The results indicate that policymakers need to target food-sector supply chains, decrease dependence on imports, and boost market competition. Instead of only "freezing tariffs", the government should focus on structural improvements in the utility sector. Better support is necessary for most vulnerable households with the high service and rental costs. Lastly, boost anti-monopoly regulations in key segments

5.3 Limitations and Future Research

The limitations of this research include lack of reflection of household-level experiences, and inability to separate the effect of certain policy from other factors, as only secondary data was incorporated. Furthermore, the public data gives only broad categories ignoring the more detailed costs. Recommendations for further research is to include primary data for deeper analysis, such as household-level surveys or structured interviews. Additionally, if broader datasets are available, apply some econometric techniques to further extend the findings.

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Political Trust, Distrust, and Online Platform Consumption in Central Asia and Georgia: A Quantitative Comparative Analysis

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Abstract

This paper analyses the relationship and impact of online platforms on trust and distrust for political institutions in Central Asia (Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan) and Georgia. The study is based on the regional survey conducted in Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan between November and December 2023. The study answers questions about how strongly the use of online platforms affects trust and distrust for political institutions and what role demographic factors such as age, place of residence, and level of education play in levels of trust/distrust. Based on the data collected from the regional survey, an analysis of the impact of the use of digital media, such as YouTube, Telegram, and TikTok, on people's attitudes toward political institutions in their countries will be conducted. This allows for a cross-country comparison of political trust and distrust, conditioned by the use of online platforms and the moderate influence of demographic factors. Methodologically, descriptive statistics will be presented and a correlation analysis will be conducted to identify differences between countries in terms of levels of trust and distrust, as well as between levels of digital media consumption. It is expected that the highest levels of distrust will correlate with greater dependence on unregulated online platforms. This work contributes to regional debates on digitalization and public administration by highlighting existing gaps in information resilience.

Keywords: online platforms, political trust, political distrust, media consumption

Introduction

With the development of technology and the rise of digitalization around the world, the global internet is accessible to everyone thanks to social networks and platforms, causing many countries to experience rapid changes in their information landscape, including post-Soviet countries such as Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, and Georgia. These changes have meant that social networks are no longer used simply for communication or entertainment, they are now fully functioning channels of political communication that not only influence the public, but also set and shape society's attitude towards the state, authorities, and institutions.

In recent years, especially against the backdrop of world events, political trust has become one of the key factors of stability and sustainability, both within and outside states. Now, the more society comes into contact with diverse information flows, thanks to news channels and content on social networks, the more often the question of the importance of building trust and mistrust is raised. This issue is also important in the former Soviet Union region, as all five countries have different levels of media freedom and levels of internet use regulation. Moreover, all five countries are located quite close to Russia, where the issue of trust in the government is reaching a critical

point. In other words, the media space is gradually becoming not only an alternative source of information, but also an arena of competition between official and informal narratives. This raises the key question: how does digital consumption affect society's trust or distrust of political institutions or the government?

Literature Review

Contemporary literature on political trust indicates that there are various factors influencing public trust in state institutions and actors, the first being individual characteristics, i.e., age, level of education, and social background. Next are contextual factors, such as the political situation in the country, the quality of governance, the level of corruption, freedom of speech and the media, and access to media (Mishler & Rose, 2001; Newton, 2007).

Digitalization is developing extremely rapidly, not only in social networks but also in artificial intelligence, which create a certain informational chaos. However, the influence of online content on public opinion is not always negative. That is, the internet and content on online platforms can both increase and decrease people's trust in the government. For example, people who consume more media on unregulated social networks such as Tiktok and Telegram have greater political distrust, as they are exposed to criticism of the government, satire, memes, and deepfakes (Tsfati & Cappella, 2003). However, content on official pages and major channels on online platforms can also increase public trust without requiring verification in countries where the internet is more strictly regulated (Kazakhstan, Uzbekistan). In other words, high trust in politics is due to greater control over the internet (Stockmann, 2013). Accordingly, trust can vary depending on the context, online media does not always reduce political trust.

This is precisely the picture that can be seen in the example of five former Soviet countries. In Central Asia, where the government is not always able to control the media consumed by society, people are dependent on social networks (Tiktok and Telegram), as there is less censorship and more independent content. However, due to their dependence on these global online platforms, people are also more susceptible to the influence of external content (Russian-language, American, and European) that carries its own narratives. Meanwhile, the situation in Georgia is different. Political competition is increasing in the country, citizens do not believe that parties and parliaments represent their interests, and scandals and protests are becoming more frequent, indicating a low level of political trust. In other words, Central Asia and Georgia are experiencing two different situations.

There are many studies on the media in Central Asian countries, digitalization in specific regions, and online media consumption. However, there are gaps in the literature, as comparative analyses of several countries at once regarding political trust depending on online platforms are rarely conducted. This work is a comprehensive quantitative study that should contribute to the academic literature.

Methodology

The study is based on a quantitative comparative analysis using data from a unique regional survey of five countries (Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, and Georgia) conducted in November-December 2023. The survey was conducted among more than 6,000 participants across all five countries, approximately 1,200 per country. The main variables used from the survey are: political trust/distrust in the government and key political institutions, frequency of use of various online platforms and social networks (Telegram, TikTok, YouTube), and demographic characteristics (age, place of residence, and level of education).

In addition, publicly available data was used, including reports and articles from Freedom House on media freedom, ITU statistics on internet and technology access, and key demographic data from government agencies to provide a more detailed description of the differences between countries.

Analytical methods include descriptive statistics to summarize key findings, correlation analysis between levels of online platform use and levels of political trust/distrust, and cross-country comparative interpretation to identify patterns related to national characteristics of the internet environment in the region.

Findings

The results obtained from the study indicate differences in political trust/distrust among all five countries. Most notable is the high level of trust in the government found in Uzbekistan and Tajikistan, where the internet space is controlled by political systems and where the media is strongly controlled by the state. A more moderate level of political trust was found in Kazakhstan and Kyrgyzstan, which have the most hybrid and competitive landscapes, where freedom of speech is not as extensive but allows for criticism and challenge of the government and political decisions and actions. Moreover, citizens of these countries are more exposed to external narratives through global social networks. The lowest level of trust was found in Georgia, where the political environment is highly competitive and has a more critical media environment, which increases the political polarization of citizens.

Preliminary expectations regarding the influence of individual social networks were confirmed. Telegram and TikTok lead to a decline in public trust in political institutions and actors, as these platforms are characterized by low moderation and regulation, the ability to quickly spread critical content, and a large amount of satire, deepfakes, and emotionally charged news and channels. Meanwhile, YouTube and official news sites have a neutral or slightly positive impact on public opinion. However, these effects vary from country to country. For example, in Uzbekistan and Tajikistan, these online platforms can strengthen political trust. In Kazakhstan and Kyrgyzstan, their effect is met with a neutral reaction from society. In Georgia, these channels only reinforce distrust of the government due to political polarization.

The hypothesis about the influence of demographic factors on political trust was also confirmed. Low trust in the government was found among young respondents (aged 18 to 29), who are more dependent and use social networks more often. The level of education also had an impact on the level of trust. Those with higher education

were more critical of the government. Conversely, respondents from rural areas with lower levels of education tended to trust the government more, as they were less dependent on online media.

Discussion

The results clearly confirm the importance of digital consumption as a key factor in shaping political trust in institutions or actors in the regions. This is because, in addition to official media and news channels, citizens can turn to alternative sources of information (Telegram, YouTube, TikTok) to build a more comprehensive political picture and form their own opinions on a given topic. In other words, the internet has become a kind of "reality filter." However, despite being a key factor, it cannot act in isolation from other factors, such as the national media environment, the political situation and competition in the country, and the degree of internet regulation.

It can also be argued that unregulated platforms increase public distrust of governments due to low or no censorship, the speed of news dissemination, and open criticism and expression of opinions. However, based on this, we conclude that the national context also plays an important role. If citizens are satisfied with the political situation in the country, the amount of emotional content and criticism will decrease. It is extremely important to take into account the country's politics, level of censorship, corruption, and media freedom. However, demographic characteristics remain another important factor. The older generation is more inclined to get information from TV channels and official sources, while the younger generation is influenced by information from several sources at once, often unregulated social networks. Here we see another divide that governments need to work on.

What governments need to do is build information resilience, that is, develop adaptability to the development of online platforms and events in the world. With the right development of information policies and transparency in the country, public trust can be regulated and increased. With balanced control of social networks and improved media literacy among the population, it will be possible to reduce the number of deepfakes and scandals, thereby reducing political polarization.

Conclusion

We can draw the following conclusions: online platforms have a significant impact on political trust in Central Asian countries and Georgia. Accordingly, the digital behavior of society is directly linked to trust in the authorities and the government. Meanwhile, distrust is caused by alternative online sources of information, where criticism, political cynicism, and scandals prevail. Moreover, trust can be increased through structured, i.e., regulated, platforms that focus on strengthening public loyalty.

This study and its findings can be used in practice to develop digital governance strategies and policies, educational programs, and initiatives to increase information resilience.

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Rise of Kazakh National Identity in *Kazakhstanskaya Pravda* (1981–1985): Preliminary Results

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Abstract

The paper explores the discursive basis of late Soviet Kazakhstani identity construction through the analysis of New Year speeches carried out in *Kazakhstanskaya Pravda* in the period between 1981 and 1985. The study touches upon the manner in which official Soviet political rituals operated in the cases of late *Brezhnevism* and the succession crisis. The paper has used the systematic analysis of visual semiotics, lexical choices, modes of address, authorship projection, and legitimation tactics to analyze five New Year addresses by applying qualitative Critical Discourse analysis based on the theory of interpellation developed by Althusser, the performative discourse of Yurchak, the three-dimensional approach of Fairclough, and the taxonomy of legitimation of Van Leeuwen. The initial analysis shows that the early years were marked by anonymity of bureaucratic authorship, formulaic linguistic performance focused on the Soviet collective sense of identity, and a rejection of the image of personalized leadership in favor of the abstract labor symbolism after the death of Brezhnev. This analysis indicates how performative stability preserved ideological consistency and, at the same time, localized spaces of identification.

Keywords: national identity, political communication, *Kazakhstanskaya Pravda*, Critical Discourse Analysis, Soviet media, New Year address

Introduction

In the Soviet ideological apparatus, the mass media played the major role of creating the social reality (Yurchak, 2006). *Kazakhstanskaya Pravda* was the official organ of the Communist Party of Kazakhstan that served as the major channel through which ideological directives of Moscow were relayed to the people of the republic. The New Year address occupied an exceptional place among the genres of political communication and served as a political ritual that restored collective affiliations with each other, with the help of standardized language performance (Kuznetsova, 2024; Lasitsa, 2017; Oslopova, 2009).

The years 1981-1985 signify the last period of *Brezhnevism* and the crisis of succession and the Soviet leadership, which included the deaths of three Soviet leaders, Brezhnev (November 82), Andropov (February 1984), and Chernenko (March 1985). Though the literature on the New Year addresses in the context of the Russian metropolitan life (Kuznetsova, 2016, 2024) and, specifically, the countries that remain current at the moment such as Finland (Heikkinen and Lounela, 2008) have covered this topic, little attention has been devoted towards how the rituals in question worked on the territory of the Soviet republics that would turn out to be the so-called independent countries.

The central area of concern behind this investigation is the issue of discursive formation of collective identity in the official Kazakhstani media throughout the late *Soviet period*. As it would be the final Soviet republic

to declare independence on December 16, 1991, knowledge of the discursive base that was created in 1981-1985 offers fundamental background to the subsequent changes. This paper aims at the achievement of the following goals: (a) to determine linguistic features and visual semiotic signs, which define the construction of collective identities in the time interval 1981-1985; (b) to define the correlation between the anonymous bureaucratic authorship and the performative stability; and (c) to create a background knowledge that can rationalize the development of the sense of national consciousness in later eras.

Literature Review

Ceremonial political messages are tools for recreating state power and organizing mass consciousness (Oslopova, 2009). The New Year speech is what Kuznetsova (2024) calls a field of political ritual - a moment when a governmental legitimacy is demonstrated, but not declared. A study by Alikberova et al. (2015) has shown that the New Year address is a unique type of communication that has a ceremonial register with high levels of vocabulary, a time-directed character with an element of retrospective accomplishment and future desire, and use of group pronouns that define group identity.

2.1 Theoretical Framework

The paper incorporates four theoretical frameworks that are complementary to each other. To start with, the conceptualization by Althusser (1971) of interpellation gives the basis of how ideology forms subjects. By calling the readers “Comrades” (*Tovarishchi*) in the newspaper discourse, the readers are placed in prestrained subject positions that get naturalized by being repeated. This unifying appeal to various social groups: workers, veterans, women, youth, soldiers, forms various points of identification, but retains the broad Soviet collective system.

Second, in *Everything Was Forever, Until It Was No More*, Yurchak (2006) develops the notion of performative shift, stating that the very stability of the late Soviet society was not based on the real ideological beliefs of people, but on the collective language performance. The constative dimension is overridden by the performative dimension, which is the social act of participation, within this paradigm. This theory is the reason behind the use of the language of wood or formula by early 1980s speeches; this rigidity was a feature of a system that allowed anyone to participate, without having to believe.

The three-dimensional model of Fairclough (1995, 2003) discusses the discourse on the levels of textual, discursive practice, and social practice. Fourth, according to the taxonomy of Van Leeuwen (2007, 2008), four types of strategies of legitimation were distinguished, namely, authorization (appeals to authority), moral evaluation (appeals to values), rationalization (appeals to goals), and mythopoesis (narratives rewarding legitimate actions). The legitimation between 1981-1985 was mainly about the impersonal bureaucratic authorization.

Research Methodology

The theoretical orientation and the methodological approach used in this study are the qualitative Critical Discourse Analysis (CDA) (Fairclough, 2003; Wodak and Meyer, 2009). CDA views language as a social practice, and it studies how discourse shapes the social reality, how discourse reproduces power relations, and how discourse reproduces ideologies. The corpus includes five of the New Year addresses of 1981-1985 published on 1st January every year at *Kazakhstanskaya Pravda*. Such texts were retrieved based on archival collections, and the full sample displays the entire population of New Year addresses in the study period.

The theoretical perspectives are operationalized into the analytical framework by systematic coding that considers five dimensions (1) visual semiotics, such as photographs, illustrations, and layout (informed by Kress and Van Leeuwen, 2006); (2) lexical selection, such as key terminology and semantic field; (3) mode of address, such as forms of address and implied audience; (4) authorship attribution, such as institutional and personal voice; and (5) legitimation strategies. All the texts were read closely and coded in a systematic way in all dimensions.

Results

4.1 Visual Semiotics Analysis

The visual impression shows that there was a pivotal change that took on after the death of Brezhnev. The speech of 1981 has a big central portrait of Brezhnev standing in the first place, which was taken when he was speaking on the Central Television and All-Union Radio; the reader can instantly understand who the ruler is. After his death, the visual policy changed to the anonymous collective symbolism. The Soviet soldier and worker in the issue of 1982 have no leader. In the 1983 issue, there is a worker who is seen to exercise power by holding a block marked “1983” with factory pictures. Issues of 1984 and 1985 include photographs of real working-class brigades of Kazakhstan: “one of the best brigades” of the Alma-Ata Housing Construction Complex (1984) and miners of the East Kazakhstan Oblast, the Ognevsky Mine (1985).

Table 1

Visual Representation in New Year Addresses (1981–1985)

Year	Visual Content	Critical Interpretation
1981	Large central portrait of Brezhnev from televised address	Personal cult of leadership; the reader immediately identifies the ruler, authority embodied in an individual figure
1982	Soviet soldier and Soviet worker; no identified leader	Shift to anonymous collective symbolism; authority transferred to abstract Soviet archetypes (defense + labor)
1983	Worker holding "1983" block showing strength; factories; transparent future years.	Labor as a source of historical progress; the worker physically constructs time; industrial achievement as legitimation
1984	New Year star; photo of brigade from Alma-Ata Housing Construction Complex	First appearance of specifically Kazakhstani workers; localization within the Soviet frame; real people replace abstract symbols

1985	Tree made of factories/plants; miners' brigade from Ognevsky Mine, East Kazakhstan	Industry as festive symbol; continued regional identification; Chernenko quoted but not pictured—leadership vacuum
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Note. Visual content based on the January 1st front pages of Kazakhstanskaya Pravda

4.2 Textual Analysis: Lexical Patterns and Mode of Address

The opening is the same in all five addresses: “Comrades! Friends!” (*Tovarishchi! Druzya!*), which make up the readers members of the Soviet group. The speech of Brezhnev in 1981 is a personal one; the themes identified in this speech continue to be the same throughout the corpus. Brezhnev admits the “troubles and frustrations”, but right away balances it with the “triumphs and pleasures” to state that the Soviet population “greet the passing year with positivity”. He stresses that the population of “the Soviet Union exists as a single family” and that “people and the Party are one”. The text creates an aura of unity, peace, harmony, collaboration - “assuming a human being is a Soviet, he is safe. In the USSR it is safe.”

The speeches always name certain social groups: workers, veterans, women, youth, soldiers, and those on labor duty to be sure that “no one will be left behind” and so that “each individual will feel significant”. It is also the case with the 1982-1985 speeches, which again rely on the same rhetorical strategy of referring to the “power and undefeated brotherhood of all peoples of the USSR” and underlining the fact that “the nation had achieved its prosperity and strength under the competent leadership of the Communist Party” (1983). The readings emphasize that the “Party/government would do whatever it takes to guarantee a peaceful life of the Soviet people” (1982) and that “boundaries were inviolably reliable” (1983).

Systemic problems are not mentioned at all in the corpus. The readings refer to the presence of only “tasks” that demand “intensive work, great organization and discipline” (1983), but not “problems”, unless the sentence begins with the word not. The 1984 speech directly refers to the relationship between work and welfare: “to live a better life, Soviet people are to take the way of diligent work”. The speech of 1985 made the concept of “people of labor” (*lyudi truda*) and underlined the idea that “accomplishment of these duties is determined by every labor group, every Soviet individual, his initiative and duty”.

Table 2

Dominant Discursive Themes Across Addresses (1981–1985)

Theme	Representative Formulations from Corpus
Unity of peoples	"People of the Soviet Union live as one friendly family" (1981); "Indestructible friendship and brotherhood of all peoples of the USSR" (1982–1985)
Party-people unity	"In this indestructible unity—the guarantee of new successes in our struggle for communism" (1981); "Indestructible unity of Party and people... source of invincible strength" (1982)
Security and safety	"If a person is Soviet, he is protected. In the USSR it is safe" (1981); "Inviolability of our borders and borders of our allies is reliably ensured" (1983)

Labor imperative	"For Soviet people to live better... the path is one—conscientious labor" (1984); "Fulfillment depends on each labor collective, on each Soviet person" (1985)
Problem denial	No mention of future problems—only "tasks" (1983); difficulties immediately negated: "difficulties and disappointments" → "successes and joys" (1981)

Note. All formulations translated from the Russian original texts in Kazakhstanskaya Pravda.

4.3 Authorship and Legitimation Analysis

There is an emergent critical pattern in authorship attribution. Brezhnev personally signed the address of 1981, and his photograph confirms personal power. After him, all later addresses (1982-1985) have collective institutional responsibility: "Central Committee of the CPSU, Presidium of the Supreme soviet, and Council of Ministers of the USSR". This change is a retrogression to anonymity of bureaucratic legitimation in the period of succession crisis. The speech of 1985 is more of a trans-hybrid: the words of Chernenko are quoted, "we have all chances to finish the five-year plan with honor", but there is no photo, and the institutionalization of the credit is maintained, which hints at the effort to reestablish the personal authority within the institutional limitations.

Table 3

Authorship Attribution and Legitimation Source (1981–1985)

Year	Formal Attribution	Visual Presence of Leader	Authority Type
1981	Personal (L.I. Brezhnev)	Yes - large central portrait	Personal-charismatic
1982	Institutional (CC, Presidium, CM)	No - anonymous collective	Bureaucratic-institutional
1983	Institutional (CC, Presidium, CM)	No - anonymous collective	Bureaucratic-institutional
1984	Institutional (CC, Presidium, CM)	No - anonymous collective	Bureaucratic-institutional
1985	Hybrid (Chernenko quoted; institutional signature)	No - words quoted, no photo	Transitional hybrid

Note. CC = Central Committee of CPSU; Presidium = Presidium of the Supreme Soviet; CM = Council of Ministers of USSR

General Discussion

5.1 Summary of Findings

An initial study of the address on New Year in *Kazakhstanskaya Pravda* in the years 1981-1985 shows that there was a time of performative stability and anonymous bureaucratic legitimation. The corpus is consistent in the dimensions: the same modes of address are used ("Comrades! Friends!"), solid semantic space and unity, security, and work discipline, and largely institutional authorship attribution after the demise of Brezhnev. Through visual analysis, one can see the shift of the visual representation of leadership (Brezhnev, 1981) to the collective symbolism (1982-1985) with the visual elements of the specifically Kazakhstani local labor brigades appearing in 1984-1985.

5.2 Theoretical Contributions

The findings are empirical evidence of the theoreticizations of the late Soviet performative discourse by Yurchak (2006). The formulaic nature of 1981-1985 speaks of them addresses, their "wooden" language, their uniformity, their systemic unwillingness to recognize systemic issues, proves that this rigidity was a systemic phenomenon that allowed people to engage in ideological cult without necessarily believing in it. The analysis

builds upon the interpellation model suggested by Althusser (1971) by describing specific means of action, in that the regular use of address to “Comrades” placed the readers into the categories of Soviet identity, and the listing of social groups gave rise to the identification points within the collective framework.

5.3 Practical Implications

The benchmark of 1981-1985 offers the necessary background in understanding the further changes in the course of *Perestroika* and dissolution. The explanation of the workings of the so-called “ritual of stagnation” sheds some light on how those rituals might be later reused to build a nation. The fact that the specifically Kazakhstani visuals appeared in the field of the unified Soviet discourse indicates that the republican media had the latent spaces of the localized identification that could be mobilized later.

5.4 Limitations and Future Research

There are a number of limitations that should be mentioned. The analysis focuses specifically on the discourse in the Russian language; the Kazakh-language *Sotsialistik Qazaqtan* might show other tendencies. This research is devoted to a single genre of publication. The data on the reception is still untouched; future studies that include oral history interviews would widen these results. Further study from 1986 to 1991 should be done to understand how this foundation was altered in the process of forming national identity.

Conclusion

New Year messages in the *Kazakhstanskaya Pravda* between 1981-1985 served as locations of performative ritual that formed Soviet collective identity via formulaic verbal performance, anonymity of bureaucratic validation, and the use of abstract symbolism to focus on abstract labor. Such a discursive formation is stable, which makes it possible to consider it the foundation on which the further changes, as well as ultimately, the formation of the Kazakh national identity, will be interpreted. The introduction of small-scale aspects into the inflexible Soviet paradigm indicates that subsequent expropriation of ritualistic modes to create national identities expanded on the space of latency already inherent in late *Brezhnevism*.

6.1 Disclosure Statement

This paper includes language refinement support provided by an AI-based writing assistant. The tool was used exclusively for improving grammar, clarity, and linguistic coherence.

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