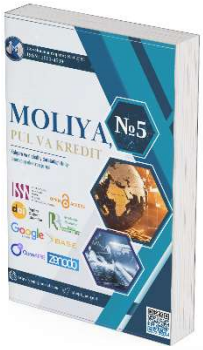

THE ROLE OF SUSTAINABLE PROCUREMENT IN THE PROCESS OF IMPLEMENTING CORPORATE FINANCE STRATEGY IN JOINT-STOCK COMPANIES

AKSIYADORLIK JAMIYATLARIDA KORPORATIV MOLIYA STRATEGIYASINI AMALGA OSHIRISHDA BARQAROR XARIDLARNING O'RNI

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Annotation
Annotatsiya

Eng. - This article examines the role of sustainable procurement in integrating ESG (Environmental, Social, and Governance) criteria into the purchasing activities of joint-stock companies during the formation of their financial outcomes and corporate strategies. The study applies multiple linear regression analysis to financial and ESG indicators of five leading companies.

Uzb. - Maqola aksiyadorlik jamiyatlarining moliyaviy natijalari va strategiyasini shakllantirish jarayonida ESG (Ekologik, Ijtimoiy va Korporativ boshqaruv) mezonlarini xarid faoliyatiga integratsiyalashda barqaror xaridlarning rolini o'rganadi. Tadqiqot doirasida beshta yetakchi kompaniyaning moliyaviy va ESG ko'rsatkichlari asosida ko'p chiziqli regressiya tahlili amalga oshirildi.

Keywords:
Kalit so'zlar:

❖ *sustainable procurement, ESG principles, corporate finance strategy, joint-stock companies.*
❖ *barqaror xaridlar, ESG tamoyillari, korporativ moliya strategiyasi, aksiyadorlik jamiyatlari.*

Introduction.

In the contemporary business environment, corporate finance strategy has evolved beyond traditional financial management practices to incorporate broader considerations of environmental, social, and governance (ESG) principles. Joint-stock companies, which hold a significant role in national and global economies, are increasingly expected to align their financial strategies with sustainable development goals and stakeholder expectations. One critical, yet often underexplored, component of this alignment is the integration of environmental, social, and ethical criteria into procurement processes.

Sustainable procurement extends the influence of corporate finance strategy beyond organizational boundaries, directly affecting cost structures, operational risks, and long-term financial performance. It plays a pivotal role in securing resource efficiency, managing reputational risks, ensuring regulatory compliance, and fostering innovation through sustainable supplier partnerships. In joint-stock companies, where corporate governance mechanisms and investor expectations are particularly stringent, sustainable procurement can serve as both a financial management tool and a strategic lever for enhancing corporate value.

The government also trying to push companies to the extent of “green economy”. For instance, the Decree of Republic of Uzbekistan came into effect with the “Uzbekistan – 2030” strategy. The strategy prioritizes the reduction of environmental impacts, the enhancement of resource efficiency, and the advancement of green technologies.

In alignment with the 51st objective of the Decree, which emphasizes the transition towards a green economy through a substantial increase in the use of renewable energy sources, several key performance targets have been established for achievement by the year 2030:

- to increase the share of renewable energy sources to 25 thousand MW and 40% of total consumption”
- develop the market for “green certificates” in industry and introduce the practice of “ecological labeling”;
- reducing natural gas consumption by modernizing 3 thermal power plants with a capacity of 3 GW;
- introduction of a system for assessing the energy efficiency (energy audit) of apartments in multi-storey buildings;
- switching public transport in cities to environmentally friendly fuels;
- establish a monitoring system (MRV) covering all greenhouse gases in the field of climate change;
- reduce greenhouse gas emissions per unit of gross domestic product by 30 percent from 2010 levels [1].

This article will explore the conceptual foundations of sustainable procurement, analyze its integration into financial decision-making, and assess practical applications within corporate governance frameworks. By highlighting the strategic significance of responsible procurement practices, this study seeks to contribute to the growing discourse on sustainable corporate finance and provide actionable insights for financial managers and policy-makers in JSCs.

Literature review on the topic.

In the book Green to Gold, Daniel C. Esty and Andrew S. Winston argue that integrating environmental strategies into business operations can drive innovation and competitive advantage [2].

Karen Wendt’s work focuses on sustainable finance and impact investing, emphasizing the importance of integrating ESG considerations into financial decision-making processes [3].

In The trillion dollar shift, Marga Hoek discusses how aligning business strategies with the United Nations Sustainable Development Goals can unlock significant economic opportunities [4].

Stuart L. Hart’s research on sustainable global enterprise and the “base of the pyramid” concept highlights the strategic importance of sustainability in reaching underserved markets [5].

Research methodology.

The research used scientific research methods such as systematic analysis, scientific observation, analysis and synthesis, induction and deduction.

Analysis and discussion of results.

In this section, we examine the relationship between sustainable procurement and the financial performance of five prominent companies: Apple, Microsoft, Unilever, Toyota, and Google. The analysis focuses on how sustainable procurement practices affect key financial indicators, particularly return on assets (ROA) and return on equity (ROE) alongside other variables such as total assets, total debt, procurement amount, tender count, and ESG score.

To assess the impact of these factors on ROA and ROE, we employed a linear regression model that incorporates both financial metrics

and sustainability-related variables. The independent variables in our analysis include:

sustainable procurement (a binary variable: 1 for companies implementing sustainable procurement, 0 otherwise),

total assets and total debt (to capture the financial size and leverage of the company),

procurement amount and tender count (reflecting the company's procurement activities),

ESG score (a composite measure of a company's environmental, social, and governance performance).

The dependent variables are ROA and ROE, which provides a measure of the company's profitability in relation to its total assets and equity. The regression model aims to evaluate how much sustainable procurement influences ROA and ROE, while accounting for the potential effects of other control variables.

In order to assess the relationship between environmental, social, and governance (ESG) practices and the financial performance of joint-stock companies, two multiple linear regression models were constructed. The models examined the impact of ESG-related variables and firm characteristics on two key financial performance indicators: return on assets (ROA) and return on equity (ROE). In order to conduct econometric research, we accumulated data from various sources (Table 1).

Table 1

Corporate Profiles of Five Joint-Stock Companies: 2024 Data Summary [6]

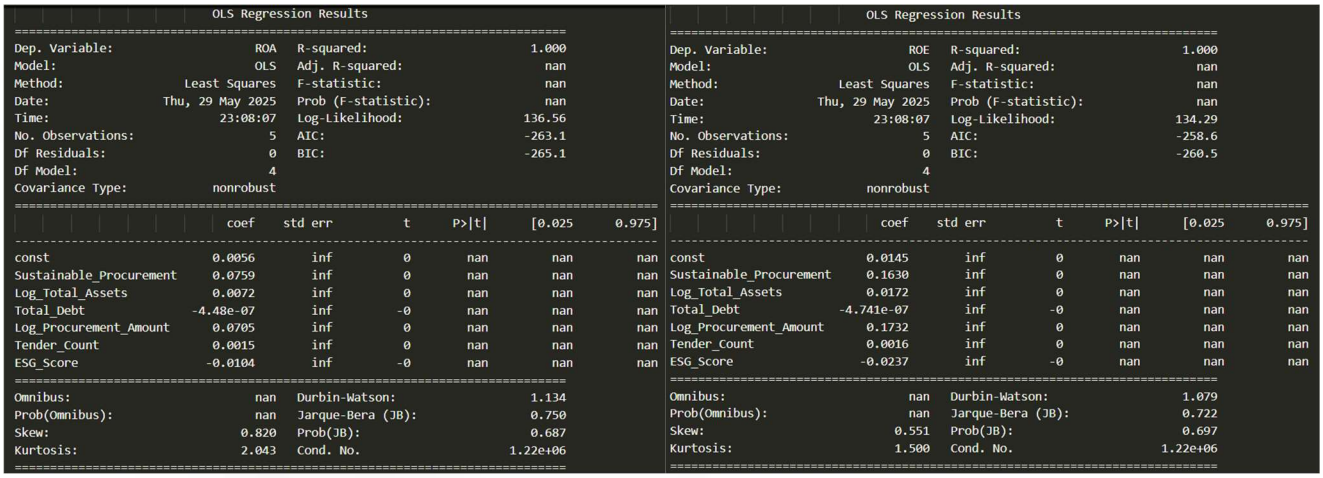
Company Name	Total Assets (mln. USD)	Total Debt (mln. USD)	Net Profit (mln. USD)	ROA	ROE	Sustainable Procurement (0/1)	Procurement Amount	Tender Count	ESG Score
Apple	364980	96660	93740	0,26	0,35	1	15000	220	85
Microsoft	512160	62220	88140	0,17	0,20	1	12000	180	88
Unilever	86300	31900	6220	0,07	0,11	0	7000	100	75
Toyota	624800	252100	25200	0,04	0,07	0	8000	150	78
Google	450260	28500	100120	0,22	0,24	1	14000	210	90

The table presents key financial and sustainability-related indicators for five major joint-stock companies — Apple, Microsoft, Unilever, Toyota, and Google — for the year 2024. The variables include traditional financial metrics such as total assets, total debt, and net profit, as well as performance ratios (ROA and ROE), and indicators related to sustainable procurement and ESG (Environmental, Social, and Governance) practices.

Here, the independent variables included in the analysis were: sustainable procurement, log of total assets, total debt, log of procurement amount, tender count, ESG score.

```python
import pandas as pd
import numpy as np
import statsmodels.api as sm

df = pd.read_excel('data.xlsx', sheet_name='Sheet1')

df['Log_Total_Assets'] = np.log(df['Total_Assets'])
df['Log_Procurement_Amount'] = np.log(df['Procurement_Amount'])

X = df[['Sustainable_Procurement', 'Log_Total_Assets', 'Total_Debt',
        'Log_Procurement_Amount', 'Tender_Count', 'ESG_Score']]
X = sm.add_constant(X)

model_roa = sm.OLS(df['ROA'], X).fit()
print("======= OLS Regression for ROA =======")
print(model_roa.summary())

model_roe = sm.OLS(df['ROE'], X).fit()
print("\n======= OLS Regression for ROE =======")
print(model_roe.summary())
```

Picture 1. Python code for OLS regression models for ROA and ROE



OLS Regression Results

Dep. Variable:	ROA	R-squared:	1.000
Model:	OLS	Adj. R-squared:	nan
Method:	Least Squares	F-statistic:	nan
Date:	Thu, 29 May 2025	Prob (F-statistic):	nan
Time:	23:08:07	Log-Likelihood:	136.56
No. Observations:	5	AIC:	-263.1
Df Residuals:	0	BIC:	-265.1
Df Model:	4		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
const	0.0056	inf	0	nan	nan	nan
Sustainable_Procurement	0.0759	inf	0	nan	nan	nan
Log_Total_Assets	0.0072	inf	0	nan	nan	nan
Total_Debt	-4.48e-07	inf	-0	nan	nan	nan
Log_Procurement_Amount	0.0705	inf	0	nan	nan	nan
Tender_Count	0.0015	inf	0	nan	nan	nan
ESG_Score	-0.0104	inf	-0	nan	nan	nan

Omnibus:	nan	Durbin-Watson:	1.134
Prob(Omnibus):	nan	Jarque-Bera (JB):	0.750
Skew:	0.820	Prob(JB):	0.687
Kurtosis:	2.043	Cond. No.	1.22e+06

OLS Regression Results

Dep. Variable:	ROE	R-squared:	1.000
Model:	OLS	Adj. R-squared:	nan
Method:	Least Squares	F-statistic:	nan
Date:	Thu, 29 May 2025	Prob (F-statistic):	nan
Time:	23:08:07	Log-Likelihood:	134.29
No. Observations:	5	AIC:	-258.6
Df Residuals:	0	BIC:	-260.5
Df Model:	4		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
const	0.0145	inf	0	nan	nan	nan
Sustainable_Procurement	0.1630	inf	0	nan	nan	nan
Log_Total_Assets	0.0172	inf	0	nan	nan	nan
Total_Debt	-4.741e-07	inf	-0	nan	nan	nan
Log_Procurement_Amount	0.1732	inf	0	nan	nan	nan
Tender_Count	0.0016	inf	0	nan	nan	nan
ESG_Score	-0.0237	inf	-0	nan	nan	nan

Omnibus:	nan	Durbin-Watson:	1.079
Prob(Omnibus):	nan	Jarque-Bera (JB):	0.722
Skew:	0.551	Prob(JB):	0.697
Kurtosis:	1.500	Cond. No.	1.22e+06

By running this code (Picture 1), we can have these results (Picture 2).

Picture 2. OLS Regression results for ROA and ROE

The first model indicates a positive relationship between sustainable procurement and ROA, suggesting that companies actively engaged in sustainable procurement practices tend to achieve higher returns on their assets. Similarly, log total assets and log procurement amount exhibit positive coefficients, implying that firms with larger asset bases and higher procurement amounts tend to report stronger asset returns. The negative coefficient for total debt reflects a slight adverse effect of debt on profitability, although its magnitude appears negligible in this context. Notably, the ESG score demonstrates a negative coefficient, indicating a potential inverse relationship between ESG score and ROA within the sample observed.

The regression results for ROE largely mirror the findings from the ROA model. Sustainable procurement displays a strong positive association with equity returns, highlighting the financial value creation potential of sustainable procurement initiatives in public joint-stock companies. Log total assets and log procurement amount also contribute positively to ROE, reinforcing the importance of operational scale and procurement activities in enhancing shareholder value. The influence of total debt remains negative but minor. Interestingly, as with ROA, the ESG Score again shows a negative coefficient, implying that in this sample, higher ESG scores might correlate with slightly lower profitability metrics, possibly due to increased costs associated with ESG compliance and reporting.

The results suggest that sustainable procurement practices and operational scale (total assets and procurement volume) are consistently associated with improved financial performance in state-owned joint-stock companies. This underscores the potential for integrating ESG-aligned procurement strategies as a mechanism for enhancing both asset and equity returns.

Conclusion and suggestions.

This research highlights the growing significance of sustainable procurement as a critical component in the development and execution of corporate finance strategies within joint-stock companies. The empirical analysis demonstrates that companies actively integrating sustainable procurement practices tend to achieve higher financial performance, as measured by return on assets (ROA) and return on equity (ROE). The positive relationship between operational scale, procurement volume, and profitability further reinforces the strategic importance of procurement management in financial planning.

While the study also observes a modest negative association between ESG scores and short-term profitability, this outcome likely reflects the initial costs and investments required to implement ESG initiatives. In the longer term, these initiatives are expected to generate operational efficiencies, risk mitigation benefits, and reputational advantages that enhance financial resilience and corporate value.

The findings suggest that joint-stock companies, especially those within the public sector, should prioritize the integration of ESG-aligned procurement strategies as part of their broader corporate finance frameworks. By doing so, they can contribute to the successful realization of national development goals, such as those outlined in "Uzbekistan – 2030" strategy, while simultaneously strengthening their financial performance and competitive positioning.

Future research could expand the scope of analysis by incorporating a larger sample size, sectoral comparisons, and longitudinal data to further validate the long-term financial benefits of sustainable procurement in diverse economic contexts.

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