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Economic freedom and its subcomponents: effects on Islamic bank performance

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Abstract

Purpose – This paper aims to examine the profitability of Islamic banks benefits from economic freedom and its subcomponents.

Design/methodology/approach – This study uses a sample of 41 Islamic banks from the Organization of Islamic Cooperation (OIC) Countries selected from 2010–2020. It conducts an empirical approach based on the System Generalized Method of Moments (SGMM).

Findings – Overall, economic freedom has a substantial impact on the profitability of Islamic banks. We then investigate the relationship between the subcomponents of economic freedom and the profitability of Islamic banks. The study's breakdown components suggest that financial and investment freedoms are favorable indicators, while business and monetary freedoms have a negative effect.

Practical implications – This research can serve as a guideline for Islamic bank management in terms of maintaining performance. The results of this study provide policy implications for the government to offer friendly regulations for economic actors to engage in financial transactions by looking at the economic freedom sub-component.

Originality/value – To the best of the authors' knowledge, the study of the role of economic freedom in Islamic banking performance is limited, particularly in the context of OIC Countries.

Keywords Economic freedom, Bank profitability, Islamic bank, SGMM, OIC, Economic growth

Paper type Research paper

1. Introduction

Banking institutions play a crucial role in financial intermediation, facilitating economic activity and enhancing efficiency in meeting investment and liquidity needs. The global financial crisis of 2008–2009 significantly impacted the global economy, causing the failure of over 462 financial institutions and affecting credit supply, bank profitability, and asset prices (Alshater *et al.*, 2021). While several conventional banks failed post-crisis, most Islamic banks continued to operate, highlighting the resilience of the Islamic financial system as a viable alternative amid the conventional system's vulnerabilities (Hidayat *et al.*, 2021; Rosman *et al.*, 2014).

Islamic banks' impressive growth and success have increased interest in their resilience, performance, risk management, and profitability (Hidayat *et al.*, 2021). As Islamic banking and finance become more significant globally, understanding the key factors influencing the sector's success is crucial. Thus, it is the responsibility of Islamic bank managers, central

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banks, bankers' associations, governments, and other financial authorities to identify and formulate policies that enhance the performance of the Islamic banking sector.

Institutional and economic freedom are vital for financial sector development. Post-crisis, a stable financial system supported by high-quality institutions is essential (Ng *et al.*, 2016). Property rights and investor protection significantly influence capital market development (Ng *et al.*, 2015). Crises are more severe, and recovery periods are longer in countries with low economic freedom than those with high economic freedom (Bjørnskov, 2016). Additionally, greater economic freedom, which enhances personal choice, freedom of exchange, and property rights protection, is linked to a reduced likelihood of banking crises (Baier *et al.*, 2012).

In recent years, an increasing body of literature has examined the impact of economic freedom indices on a variety of economic variables. At the macro level, researchers have examined the relationship between economic freedom and economic growth (Heckelman, 2000; De Haan and Sturm, 2000; Alnajjar, 2002; Gwartney, 2009). Other studies examine FDI (Bengoa and Sanchez-Robles, 2003; Sambharya and Rasheed, 2015; Korle *et al.*, 2020), Market Volatility (Chen and Huang, 2009), exchange-traded fund returns (Peterson, 2013), Trade flows (Seyoum and Ramirez, 2019), business cycles (Murphy, 2020).

In financial economics literature, the economic freedom index is used as an explanatory variable. Studies explore its effects on firm performance (Liao, 2018) and banking profitability (Sufian and Habibullah, 2011; Sufian and Zulkhibri, 2015; Sarpong-Kumankoma *et al.*, 2018, 2020; Psillaki and Mavrakana, 2019; Harkati *et al.*, 2020). Research has examined the link between economic freedom and bank performance in developed economies like China, the United States, and the EU (Sufian and Habibullah, 2011; Chortareas *et al.*, 2013, 2016; Asteriou *et al.*, 2021). Sufian and Habibullah's (2010) study is the first to directly investigate the relationship between economic freedom and bank performance using data from the Heritage Foundation. Their analysis of Malaysian banks shows that overall economic freedom and business freedom positively influence bank profitability.

In the context of Islamic banking, Sufian and Zulkhibri's (2015) research is the first to establish a correlation between economic freedom and the performance of Islamic banks in the MENA region from 2000 to 2010. Using a dynamic panel model, they found that greater financial freedom positively impacts Islamic institutions' performance in the MENA region. Harkati *et al.* (2020) examined economic freedom's effect on risk-taking in Malaysian dual banking (2011–2017) and found that both conventional and Islamic banks experienced adverse effects from economic freedom. Conventional banks were less affected by economic freedom than Islamic banks. Thus, a comprehensive study on economic freedom's influence on Islamic banks' profitability is necessary. This study aims to fill the gap by estimating the performance of Islamic banking in OIC countries.

As a result, this research adds to the body of knowledge. First, this study investigates the impact of economic freedom and its subcomponents on Islamic bank performance. This study fills a gap in the existing research by providing comprehensive findings on the effects of economic freedom and its subcomponents on the performance of Islamic institutions. Second, as stated previously, the majority of studies on economic freedom are only used as a control variable and must be thoroughly discussed. This is the first attempt to analyze the impact of economic freedom and its subcomponents on the performance of Islamic banking following the global financial crisis. Third, unlike previous studies in which we share motivations and some comparable results, we extend the geographical scope of our analysis beyond the GCC countries to include other economies where Islamic banking is a well-established phenomenon. In addition, our evidence is based on a larger number of banking institutions, a more recent time period, and meticulous data quality assurance. This study concludes by examining Islamic banking over a lengthier and more recent period of time. The period from 2010 to 2020 encompasses an entire business cycle (Yan and Huang, 2020).

2. Literature review

2.1 Economic freedom and its sub-components

Economic freedom refers to individual liberty, particularly the freedom of choice individuals have in acquiring and utilizing economic goods and resources (Heritage Foundation, 2022). The objective of economic freedom is not merely the absence of government coercion or restriction but also the establishment and maintenance of a sense of freedom that is mutually advantageous to all.

The index is calculated using 12 quantitative and qualitative factors, which are grouped into four broad categories of economic freedom: Rule of Law (property rights, government integrity, judicial effectiveness), Size of Government (government spending, tax burden, fiscal health), Regulatory Efficiency (business freedom, labor freedom, monetary freedom), and Open Markets (trade freedom, investment freedom, financial freedom). In addition to examining the overall economic freedom index, this study examines four subcomponent indices, namely business freedom, financial freedom, investment freedom, and monetary freedom, which are closely related to the financial sector (Sufian and Habibullah, 2011; Sufian and Zulkhibri, 2015).

Business freedom, a key indicator of economic freedom, reflects individuals' ability to establish and manage businesses without excessive state interference. Excessive regulations increase production costs, hindering entrepreneurial freedom (Heritage Foundation, 2022). Financial freedom measures banking system efficiency and independence from government control. State ownership of financial institutions reduces competition and credit access. Ideally, government interference is minimal, with independent central banks enforcing contracts and preventing fraud. Banks should freely extend credit, accept deposits, conduct business in foreign currencies, and treat foreign financial institutions equally to domestic ones.

A free investment environment promotes entrepreneurship, economic activity, productivity, and job creation. Restrictions on capital movements undermine resource allocation and productivity, distorting economic decisions. Lastly, monetary freedom requires a stable currency and market-determined prices. Effective monetary policy combats inflation, maintains price stability, and protects national wealth, fostering confident investment, saving, and long-term planning.

2.2 Literature review on economic freedom and bank performance

Regulators are interested in the impact of their policy decisions on the performance of banks, as this will significantly affect the economy. According to Sufian and Habibullah's (2010) study, economic and business freedom has a positive impact, which means that greater freedom in the activities that banks and entrepreneurs can engage in to launch a company increases bank profitability. Sufian and Habibullah (2011) investigated the relationship between economic freedom and efficiency using a sample from 2000 to 2008. China's banking industry discovered that business freedom and monetary freedom have a positive effect on bank efficacy. On the other hand, financial freedom hinders the effectiveness of banks. Chortareas *et al.* (2013) analyzed the relationship between economic freedom and bank efficacy in the European Union using data from the Heritage Foundation database. The findings indicate that the greater the level of financial freedom in an economy, the greater the returns for banks in terms of cost advantages and overall efficiency. In addition, their findings indicate that the impact of financial freedom on bank efficiency tends to be more pronounced in nations with more open political systems in which governments formulate sound policies and exercise superior governance.

Sufian and Shah Habibullah (2014) examined economic freedom and bank efficiency in Malaysia and discovered that greater freedom to establish new businesses hinders the efficiency of Malaysian banks. In addition, the results demonstrated that restrictions on bank activities are detrimental to their levels of efficacy. According to Sufian and Zulkhibri's (2015) study, greater financial and economic freedom positively affects the profitability performance of Islamic banks in the MENA banking sector. The same conclusion was reached by (Sarpong-Kumankoma *et al.*, 2018, 2020, 2021; Psillaki and Mavrakana, 2019), who discovered that financial freedom and economic freedom have a positive effect on profitability for banks.

Later, Chortareas *et al.* (2016) analyzed the effect of credit market freedom on the economic freedom index and bank efficiency levels in all fifty states of the United States. Their findings indicate that banks in jurisdictions with greater financial freedom are more cost-effective. Asteriou *et al.* (2021) investigated the impact of corruption, economic freedom, regulation, and transparency on bank profitability and stability using a sample of 326 banks from 19 Euro countries between 2005 and 2018. Their findings indicate that greater economic freedom increases the profitability and stability of banks. Masrizal *et al.* (2023), which examined the effect of economic freedom on the effectiveness of BPRS in Indonesia, found that economic freedom has a positive and substantial impact on the point of BPR Syariah. The study's specific components demonstrate that business freedom, government expenditure, and investment freedom are positive indicators. In contrast, government integrity and tax burden are negative indicators, and all hands are consistent with prior research.

Recently, Mawardi *et al.* (2024) examined the role of institutional quality, economic freedom, and technological development in the growth of Islamic finance in 22 OIC countries using static panel estimation methods. The results indicated that overall institutional quality and economic freedom significantly influence the development of Islamic finance. Furthermore, the contribution of technological development becomes evident when institutional quality demonstrates higher performance.

Overall, there is limited research that uses the economic freedom index in the analysis of Islamic bank performance. No existing research has been exclusively dedicated to examining the impact of economic freedom components on the performance of Islamic banks in OIC countries. Thus, the primary focus of this study is on economic freedom and its subcomponents. To the best of our knowledge, there has been no systematic effort to explicitly examine the impact of economic freedom and its subcomponents on the performance of Islamic banks in OIC countries using the SGMM approach.

H1. Economic freedom affects the profitability of Islamic banks

H2. Financial freedom affects the profitability of Islamic banks

H3. Business freedom affects the profitability of Islamic banks

H4. Monetary freedom affects the profitability of Islamic banks

H5. Investment freedom affects the profitability of Islamic banks

3. Data and methodology

3.1 Data sample selection

We follow Hassan *et al.* (2019) and Šeho *et al.* (2020) in determining these countries. First, OIC nations regarded as hubs of Islamic finance were chosen. According to the Islamic Finance Development Report (2022), this study identifies the OIC nations with the most advanced Islamic financial systems. Second, we only include countries with a market share of at least 5% of the country's total banking assets, according to the report of the Islamic Financial Service Board (2022). Initially, we included 12 countries in the sample, namely Bahrain, Turkey, Egypt, Bangladesh, Jordan, Saudi Arabia, Pakistan, Qatar, UAE, Kuwait, Malaysia, and Indonesia. However, due to incomplete data for three countries, specifically Turkey, Egypt, and Bangladesh, these countries were excluded from the research sample. Thus, we gathered information on 41 Islamic commercial banks from 2010–2020 in 9 OIC Member countries (Bahrain, Jordan, Saudi Arabia, Pakistan, Qatar, UAE, Kuwait, Malaysia, and Indonesia) where Islamic banks are prominent and well-established financial institutions. In this context, the nine selected OIC countries in the sample can represent global Islamic banking as they hold 72.1% of global Islamic banking assets (IFSB, 2021). Therefore, even without including the three countries (Turkey, Egypt, and Bangladesh) that only account for 7% of global assets, we believe that the results of this study can comprehensively depict Islamic banking in OIC countries.

3.2 Measurement of variables

This study uses the return on assets (ROA) as the dependent variable to reflect profitability, a measure commonly used in prior research (Sufian and Habibullah, 2011; Sufian and Zulkhibri, 2015; Hidayat *et al.*, 2021; Hakimi *et al.*, 2023). We evaluate the economic freedom index and its subcomponents from the Heritage Foundation (2022) as explanatory variables. The economic freedom indices from the Fraser Institute and the Heritage Foundation are precise measures, with the Heritage Foundation's index considered the most comprehensive since 1995 (Chen and Huang, 2009). This index is widely used in research (Sarpong-Kumankoma *et al.*, 2018, 2020, 2021; Psillaki and Mavrakana, 2019; Harkati *et al.*, 2020).

The economic freedom index is an aggregate measure of a country's economic freedom, rated on a scale of 0–100. A score of 100 represents the highest level of freedom: 100-80 indicates "free," 70–79.9 "mostly free," 60–69.9 "moderately free," 50–59.9 "mostly unfree," and 0–49.9 "repressed." All factors are equally weighted to ensure the overall score is unbiased. A higher score indicates less government interference and an economic environment conducive to greater freedom.

This study draws from previous literature to obtain a comprehensive review, using bank characteristics to explain Islamic banks' profitability. The ratio of loan loss provisions to total loans is a control variable for credit risk (Sufian and Habibullah, 2010). Liquidity is assessed using the ratio of deposits to total assets, estimating liquidity risk from deposit withdrawals (Nizam *et al.*, 2019). The variable LNTA, a proxy for bank size, captures possible cost advantages from economies of scale (Sufian and Zulkhibri, 2015). The ratio of total loans to total assets (LOANS/TA) measures liquidity, while the ratio of total capital to total assets (EQTA) proxies capital structure (Harkati *et al.*, 2020). The debt-to-equity ratio represents the debt ratio, indicating the bank's solvency and debt-paying ability.

Fernandes *et al.* (2021) found that the cash ratio, calculated as cash and cash equivalents divided by total assets, positively impacts bank profitability. Asset growth, reflecting the level and growth of total assets, controls the bank's balance sheet expansion during the year (Bitar *et al.*, 2018). Macroeconomic conditions, including GDP, inflation (INF), and trade, are critical to a bank's profitability and health, with several studies showing a relationship between the macroeconomic environment and bank performance (Saif-Alyousfi and Saha, 2021). (See Table 1 for details.)

3.3 Empirical approach and model specification

Our model incorporates lagged dependent variables to capture dynamic relationships. Given our data's characteristics—a small number of periods (T) and a relatively large number of cross sections (N)—traditional panel estimators are problematic. This is due to the non-zero correlation between lagged predicted variables and individual fixed effects, leading to highly biased coefficients, especially in panels with large (N) and small (T)

Dependent variable	Variable definition	Source
Return on Asset	*Net profit divided by total assets*	*Bloomberg*
Independent variable		
Economic freedom		
Overal indeks	*An index that reflects how relaxed economic policies are in the eyes of economic actors*	*Heritage Foundation's*
Buss_Free	*Business freedom measures how free entrepreneurs are to start a business, how easy it is to obtain a license, and how easy it is to close a business*	*Heritage Foundation's*
Monet_free	*Monetary freedom combines a measure of price stability with an assessment of price controls. Inflation and price controls distort market activity*	*Heritage Foundation's*
Finan_Free	*Financial freedom is a measure of banking safety as well as independence from government control*	*Heritage Foundation's*
Invest_free	*Freedom to invest reflects business opportunities and motivation for diversity of economic activity, high levels of productivity and employment opportunities*	*Heritage Foundation's*
Bank Specific Variables		
Loan loss provisions ratio	*Provision for loan losses divided by total loans*	*Bloomberg*
LNTA	*LNtotal assets*	*Bloomberg*
LOAN/TA	*Total loans divided by total assets*	*Bloomberg*
EQTA	*Equity divided by total assets*	*Bloomberg*
DA	*Debt divided by total asset*	*Bloomberg*
Cash TA	*Cash holdings divided by total assets*	*Bloomberg*
Growth Asset	*Total asset growth rate*	*Bloomberg*
Growth Interest Income	*Growth rate of net income*	*Bloomberg*
Macroeconomic Variables		
LNGDP	*Year-to-year percentage change in country's GDP*	*WDI*
INF	*Annual country inflation rate in percentage*	*WDI*
Trade	*Sum of import + export/GDP*	*WDI*

Source(s): Authors' own creation

Table 1.
Definition of variables

datasets (Šeho *et al.*, 2020). Additionally, OLS, fixed effects (FE), and random effects (RE) models often encounter issues like omitted variable bias and measurement error (Hakimi *et al.*, 2023).

The first-difference GMM estimator by Arellano and Bond (1991) uses first differences to eliminate individual-specific effects and lagged-level variables as instruments to address the potential correlation between explanatory variables and the error term. However, these instruments may be weak if the persistent explanatory variables lead to sample bias (Blundell and Bond, 1998). Additionally, first-difference GMM estimation can lose significant data variation (Arellano and Bover, 1995). To overcome these issues, Arellano and Bover (1995) and Blundell and Bond (1998) suggest the "System GMM" estimator, which combines regression in first differences and levels. System GMM uses lags of differences to instrument variables in levels and lags of levels to instrument variables in differences.

This method allows for more instruments, increasing efficiency (Roodman, 2009). Blundell and Bond (1998) consider System GMM to perform better than first-difference GMM due to its efficiency and reduced sample bias. We use the two-step System GMM estimator with Windmeijer's (2005) finite sample correction, making it more efficient than one-step estimation (Roodman, 2009). Additionally, System GMM helps address the endogeneity problem, a significant issue in corporate finance and banking. The SGMM method proposed by Blundell and Bond (1998) provides robust and more efficient results (Hakimi *et al.*, 2023).

The empirical strategy used in this study is to test the effect of the overall economic freedom index and to include each sub-component of the economic freedom index by including control variables. The econometric model to be tested is given in equations 1 to 5.

$$ROA_{i,t} = \beta_0 + \beta_1 ROA_{i,t-1} + \beta_2 Overalscore_{i,t} + \beta_3 \sum_{i}^{n} 1Contvar + \varepsilon_{i,t} \ldots\ldots\ldots\ldots \quad (1)$$

$$ROA_{i,t} = \beta_0 + \beta_1 ROA_{i,t-1} + \beta_2 Financial_{Free i,t} + \beta_3 \sum_{i}^{n} 1Contvar + \varepsilon_{i,t} \ldots\ldots\ldots\ldots \quad (2)$$

$$ROA_{i,t} = \beta_0 + \beta_1 ROA_{i,t-1} + \beta_2 Bussines_{Free i,t} + \beta_3 \sum_{i}^{n} 1Contvar + \varepsilon_{i,t} \ldots\ldots\ldots\ldots \quad (3)$$

$$ROA_{i,t} = \beta_0 + \beta_1 ROA_{i,t-1} + \beta_2 Monetary_{Free i,t} + \beta_3 \sum_{i}^{n} 1Contvar + \varepsilon_{i,t} \ldots\ldots\ldots\ldots \quad (4)$$

$$ROA_{i,t} = \beta_0 + \beta_1 ROA_{i,t-1} + \beta_2 Investment_{Free i,t} + \beta_3 \sum_{i}^{n} 1Contvar + \varepsilon_{i,t} \ldots\ldots\ldots\ldots \quad (5)$$

All variables' definitions are given in Table 2.

4. Result

4.1 Descriptive statistics

Table 2 presents the results of the descriptive analysis. The Return on Assets (ROA) as the dependent variable shows a highest value of 10.21%, owned by Bank BTPN Syariah in Indonesia in 2019, and a lowest value of −11.14%, owned by Bank Panin Dubai Syariah in Indonesia in 2017, with an average ROA of 1.04%. Bahrain's economic freedom had the

	Mean	Min	Max	Std. Dev	Source
ROA	1.038	−11.144	10.208	1.582	*Bloomberg*
OverallScore	67.103	52.800	77.7	6.564	*Heritage Foundation's*
Investmentfreedom	49.073	30.000	75	13.18	*Heritage Foundation's*
MonetaryFreedom	76.394	62.300	88.7	5.517	*Heritage Foundation's*
BusinessFreedom	69.112	49.100	93.5	10.816	*Heritage Foundation's*
Finan Free	56.463	40.000	80	11.445	*Heritage Foundation's*
DepositTA	67.579	7.101	92.551	20.408	*Heritage Foundation's*
GrowthAsset	16.597	−57.895	183.91	22.574	*Heritage Foundation's*
LOANTA	60.615	13.522	86.542	14.379	*Heritage Foundation's*
EquityTA	0.095	−0.564	0.446	0.085	*Heritage Foundation's*
totalDebtTA	14.521	0.000	134.719	17.159	*Heritage Foundation's*
ProvLoanLosses	1.339	−3.118	16.576	2.042	*Heritage Foundation's*
CashTA	0.063	0.000	0.42	0.073	*Heritage Foundation's*
INF	2.692	−2.425	12.939	2.269	*Heritage Foundation's*
GDP	4.244	−4.712	19.592	2.796	World Bank
Trade Openness	321258.58	0.253	2523179.7	784067	World Bank
Growthinterestincome	−11.292	−10696.698	594.555	530.793	World Bank

Source(s): Authors' own creation

Table 2.
Descriptive statistics

highest value of 77.7 in 2011, while Pakistan had the lowest value of 52.80 in 2014. The average economic freedom score for the selected OIC countries during the study period was 67.10, indicating moderate accessibility. Table 3 provides the correlation matrix for the explanatory variables used in the multivariate regression analysis. The correlations are generally not strong, suggesting mild multicollinearity. According to Kennedy (2008), multicollinearity becomes problematic when the correlation exceeds 0.80, which is not the case in this study.

4.2 Effect of economic freedom and subcomponent on islamic bank profitability

This study investigates the impact of economic freedom and its subcomponents on the profitability of Islamic banks. Due to issues such as autocorrelation and theoretical justifications that suggest OLS bias, fixed effects, and random effects in panel data, these studies have primarily focused on Generalized Methods of Moment (GMM) results. Arellano and Bover (1995) and Blundell and Bond (1998) recommend the GMM system for its reliability compared to alternative models. Using the GMM system, Table 5 presents regression results examining the relationship between bank profitability and explanatory variables. The dynamic panel model results indicate that the profitability level of Islamic institutions in a given period depends on the preceding period's level. Furthermore, the significant positive coefficient of the lagged dependent variable in all estimations supports the validity of this assumption.

The robustness test results indicate that the model matches the panel data. The Hansen test for the validity of the over-identification constraint in the GMM estimates is accepted for all tests of each model. In contrast, the AR(2) test rejects the possibility of second-order autocorrelation in the errors. As indicated by (Hoechle, 2007), we also conducted robust standard errors to assess validity. In addition, robustness tests were performed to bolster the results in Table 5. Holmes *et al.* (2010) and Sufian and Zulkhibri (2015) recommend eliminating macroeconomic and market condition variables from the regression model and recalculating the equation. The results of the robustness test confirm the key findings.

The regression results of the GMM system presented in Tables 4 and 5 indicate that economic freedom has a significant positive effect on the profitability of Islamic banks. Economic freedom is crucial for developing the banking system as it fosters a business-friendly environment and encourages the generation of innovative ideas. Greater economic freedom leads to a better business environment, enhanced economic growth, and improved banking performance (Psillaki and Mavrakana, 2019). Additionally, countries with higher economic freedom generally have higher income levels and experience faster development rates. The freest economies also have lower unemployment and inflation rates (Holmes *et al.*, 2010), leading to higher demand for banking services.

The findings are also supported by Sufian and Habibullah (2010, 2011), who examined the relationship between economic freedom and bank profitability in the banking systems of China and Malaysia. This study looks at the general economic freedom index and how the sub-components affect the profitability of Islamic banks. However, despite regulatory differences among OIC countries such as Saudi Arabia, which has varying levels of economic and investment freedom, the overall results indicate that countries with higher economic freedom can enhance the profitability of Islamic banks. Therefore, countries with lower levels of economic freedom can learn from those with higher levels of economic freedom.

The GMM regression results presented in Tables 4 and 5 of Model 2 indicate that financial freedom has a significant positive impact on the profitability of Islamic banks. This suggests that higher restrictions and controls on financial freedom can lead to inefficient resource allocation, negatively affecting institutions' profitability. The financial freedom index is closely related to deregulation, which removes artificial barriers preventing entry or

Table 3. Correlation matrix

Variable	Overall	Finan	Bussi	Monet	Invest	Deposit	GrowtTA	GrowthII	TA	Loan	Equity	Total_D	ProvLo	Cash	Trade	GDP	Inf
Overall	1.000																
Finance	0.516	1.000															
Business	0.715	0.239	1.000														
Monetary	0.455	0.156	0.222	1.000													
Investment	0.401	0.746	0.268	0.110	1.000												
DepositTA	−0.111	−0.324	0.142	0.004	−0.139	1.000											
GrowthAsset	−0.377	−0.356	−0.306	−0.150	−0.275	0.013	1.000										
Growth II	−0.131	−0.165	−0.122	0.000	−0.116	0.022	0.243	1.000									
TA	0.103	−0.097	−0.104	−0.104	−0.061	0.150	−0.219	−0.047	1.000								
LoanTA	−0.100	−0.244	0.143	0.151	−0.288	0.195	0.138	0.078	0.107	1.000							
EquityTA	0.112	0.110	0.097	0.026	−0.036	−0.180	0.158	−0.012	−0.050	−0.126	1.000						
TotalDebt	0.030	0.271	−0.211	0.011	0.098	−0.716	−0.028	−0.021	−0.193	−0.098	−0.062	1.000					
ProvLoan	0.024	0.106	−0.053	−0.047	−0.062	−0.114	−0.156	0.014	−0.072	−0.274	0.010	0.084	1.000				
CashTA	0.113	0.318	0.066	0.068	0.253	−0.109	−0.120	−0.055	−0.046	−0.140	0.202	0.143	−0.023	1.000			
Trade Open	0.339	0.741	0.231	−0.012	0.767	−0.218	−0.199	−0.126	−0.144	−0.421	0.133	0.140	0.112	0.230	1.000		
GDP	−0.092	−0.205	−0.022	−0.093	−0.230	0.058	0.197	0.027	−0.206	0.016	0.254	−0.087	0.011	−0.007	−0.074	1.000	
Inflation	−0.603	−0.335	−0.351	−0.312	−0.255	0.142	0.290	0.120	−0.272	−0.054	−0.127	−0.064	−0.025	−0.058	−0.136	0.063	1.000

Source(s): Authors' own creation

Table 4.
SGMM results

System GMM
Dependent (ROA)

	Model 1		Model 2		Model 3		Model 4		Model 5	
	Coef	p- value	Coef	*p*-value	Coef	*p*-value	Coef	*p*-value	Coef	*p*-value
ROA L.1	0.283	0.112	0.342**	0.013	0.377***	0.009	0.333**	0.032	0.285**	0.021
Economic Freedom										
Overall Score	0.093**	0.037								
Financial Freedom			0.086**	0.049						
Business Freedom					−0.037**	0.045				
Monetary Freedom							−0.036	0.292		
Investment Freedom									0.089**	0.037
Internal Factors										
Prov Loan Losses Total Loans	−0.584***	0.000	−0.569***	0.000	−0.607***	0.000	−0.623***	0.000	−0.591***	0.000
Deposit TA	−0.061	0.476	−0.013	0.824	−0.019	0.874	0.003	0.961	0.000	0.999
Growth Asset	−0.003	0.562	−0.002	0.595	−0.012	0.230	−0.007	0.339	−0.008	0.132
Growth Interest Income	−0.000	0.824	0.000	0.325	0.002	0.269	0.001	0.490	0.004	0.197
LNTA	−0.000	0.375	−5.05	0.860	0.000	0.554	−0.000	0.472	−0.000	0.320
Loan TA	−0.025**	0.041	−0.088***	0.007	−0.027	0.104	−0.061**	0.023	−0.098**	0.026
Equity TA	−1.082	0.890	12.270	0.167	9.546	0.486	2.050	0.801	10.984	0.330
Total Debt TA	−0.085	0.323	−0.027	0.681	−0.033	0.794	−0.011	0.882	−0.010	0.895
Cash TA	5.345	0.573	0.378	0.900	16.915**	0.048	15.597	0.157	3.731	0.653
Macroeconomic Factors										
Trade Open	−6.97	0.290	−1.96**	0.012	3.87	0.541	−3.83	0.543	−2.12***	0.008
GDP Growth Annual	−0.030	0.320	−0.048	0.511	0.046	0.568	−0.065	0.505	−0.068	0.132
Inflation	0.004	0.936	0.001	0.983	−0.080	0.478	−0.088	0.310	0.044	0.478
AR (1)	0.066		0.038		0.085		0.069		0.039	
AR (2)	0.778		0.548		0.096		0.319		0.075	
Hansen	0.171		0.363		0.234		0.212		0.631	
No of Observation	257		257		257		257		257	
No. instrument	32		36		36		37		32	
No. groups	36		39		38		40		36	

Note(s): ***, ** and * denote statistical significance at the 1, 5 and 10%, respectively
Source(s): Authors' own creation

Table 5. Robustness test

System GMM Dependent (ROA)	Model 1		Model 2		Model 3		Model 4		Model 5	
	Coef	p- value	Coef	*p*-value	Coef	*p*-value	Coef	*p*-value	Coef	*p*-value
ROA L.1	0.302**	0.056	0.290**	0.049	0.384***	0.001	0.339*	0.076	0.215**	0.002
Economic Freedom										
Overall Score	0.068**	0.044								
Financial Freedom			0.091**	0.035						
Business Freedom					−0.091**	0.045				
Monetary Freedom							−0.076	0.271		
Investment Freedom									0.104**	0.044
Internal Factors										
Prov Loan Losses Total Loans	−0.579***	0.000	−0.510***	0.000	−0.549***	0.000	−0.563***	0.000	−0.557***	0.000
Deposit TA	−0.051	0.425	−0.044	0.659	−0.004	0.979	−0.036	0.774	−0.010	0.911
Growth Asset	−0.004	0.376	0.003	0.794	−0.014	0.501	−0.014	0.334	−0.008	0.202
Growth Interest Income	0.000	0.317	0.000	0.577	0.002	0.325	0.001	0.413	0.007	0.122
TA	−8.21	0.782	2.62	0.918	0.000	0.369	−9.13	0.766	−0.000	0.368
Loan TA	−0.061*	0.065	−0.091*	0.057	−0.070*	0.066	−0.017	0.253	−0.116***	0.002
Equity TA	5.953	0.417	6.582	0.594	11.742	0.551	−1.49	0.911	16.179	0.196
Total Debt TA	−0.059	0.365	−0.063	0.547	−0.019	0.905	−0.049	0.707	−0.020	0.836
Cash TA	−0.434	0.853	8.819	0.215	26.742**	0.021	18.393*	0.083	0.174	0.982
Trade Open	−8.33	0.120	−1.73*	0.092	5.68	0.565	1.38	0.786	−2.52***	0.004
AR (1)	0.030		0.021		0.115		0.037		0.063	
AR (2)	0.707		0.091		0.133		0.892		0.159	
Hansen	0.375		0.263		0.720		0.139		0.709	
No of Observation	257		257		257		257		257	
No. instrument	31		35		36		36		32	
No. groups	36		36		37		37		36	

Note(s): ***, ** and * denote statistical significance at the 1, 5 and 10%, respectively
Source(s): Authors' own creation

competition among products, markets, and institutions. Besides the regulatory framework, financial freedom also considers the degree of state intervention in banks, the allocation of credit, and any barriers to opening and operating financial services companies for both domestic and foreign individuals.

A less restrictive environment helps Islamic banks achieve better returns on assets. This aligns with research (Chortareas *et al.*, 2013; Sufian and Zulkhibri, 2015; Sarpong-Kumankoma *et al.*, 2018) showing that banks in countries with minimal government intervention earn higher asset returns. Independence from government control indicates efficacy in the banking sector. In an optimal environment with limited government interference, independent central bank supervision and minimal regulation enforce contractual obligations and prevent fraud (Heritage Foundation, 2022). When financial intermediaries operate unrestrictedly, they adopt competitive policies and achieve greater efficiency (Chortareas *et al.*, 2013). Fewer constraints enable financial institutions to manage their businesses more effectively, control costs, and allocate resources efficiently.

However, Models 3 for business freedom and 5 and 6 for monetary freedom negatively affect Islamic bank profitability. The impact of business freedom is significant, consistent with Sufian and Shah Habibullah (2014), who found that greater capacity to establish new businesses lowers bank entry barriers, increasing competition and affecting bank performance. Hussain *et al.* (2020) also found that the ability to establish and manage new businesses raises entry barriers in the microfinance sector, increasing competition and decreasing the effectiveness of Islamic institutions. Additionally, this finding supports the notion that Islamic banks lend significantly less to SMEs than their conventional counterparts (Tayem, 2022). At first glance, these results contradict research on the role of Islamic financial products in facilitating credit allocation to SMEs (Aysan *et al.*, 2018).

Nevertheless, certain studies have highlighted the underutilization of mudharabah and musyarakah instruments while noting excessive reliance on murabahah mechanisms within Islamic finance. This phenomenon, often defined as Islamic finance mirroring mainstream financial products, is supported by Abdullah (2021). Abdullah compared the support of conventional and Islamic banks for entrepreneurship in Kuwait, an Islamic country, and found that conventional banks work with most businesses rather than Islamic banks.

This is unsurprising, given that Islamic banking is still in its infancy. The instruments used by Islamic banks need expansion to fulfill Sharia principles and the prohibition of interest, limiting them compared to conventional banks. Islamic institutions face numerous challenges, as their business activities are more complex and must comply with Sharia principles (Harkati *et al.*, 2020). Another explanation for the negative relationship between business freedom and Islamic bank profitability is that greater business freedom allows banks to engage in more hazardous activities, thereby decreasing profitability. This result aligns with Harkati *et al.* (2020). Consequently, these findings indicate that banking regulators must enhance the products offered by Islamic financial institutions to meet market demands.

Similarly, monetary freedom has a negative and negligible impact on Islamic bank profitability. This finding suggests that increased government market intervention enhances the profitability of Islamic institutions. A stable and reliable monetary policy is crucial for the business environment, assisting firms and the public in making investments, savings, and long-term plans. High inflation rates, in addition to confiscating wealth, distort prices, misallocate resources, and increase business expenses. However, this result contradicts the findings of Sufian and Habibullah (2010) and Sufian and Shah Habibullah (2014), suggesting that monetary freedom substantially negatively impacts bank performance.

In models 5 and 6, investment freedom has a substantial positive influence on the profitability of Islamic banks. Investment freedom reflects business opportunities and motivates diverse economic activities, productivity, and employment opportunities.

An environment characterized by equality and transparency fosters competitiveness and innovation, where all companies are treated equally regardless of size or type. The freedom to choose where and how to invest promotes efficient capital flow, reservation, and utilization, resulting in higher returns (Heritage Foundation, 2022). In countries with a free economy, there are no restrictions on the movement of investment capital. Individuals and businesses can shift their resources in and out of specific domestic and international activities.

This result is also consistent with Hussain *et al.* (2020) and Masrizal *et al.* (2023), who suggest that all firms, regardless of size and type, are treated equally in an environment characterized by equality and transparency. This encourages efficient capital flows, allocation, and utilization, leading to higher returns. The findings further indicate that greater investment freedom increases Islamic bank profitability. This freedom allows Islamic banks to select the optimal investment portfolio without interference from authorities, enhancing their capacity for long-term planning, particularly in devising strategies to maximize investment returns.

Investment freedom implies a free and open investment environment that maximizes entrepreneurial opportunities, increasing economic activity, productivity, and employment growth. When cross-border investment freedom is not unduly constrained, capital flows are facilitated and stimulated, expanding markets and enhancing growth opportunities. This positively affects the banking industry, whose primary clients are investors. Import barriers and inadequate investment in numerous nations lead to higher bank costs. Therefore, a favorable business cycle and strong entrepreneurship positively impact the performance and profitability of Islamic banks as intermediary institutions.

5. Conclusion and policy implications

This study contributes to the extant literature regarding the association between the economic freedom index and its subcomponents and the profitability of Islamic banks in OIC countries. Using the GMM system and data from 41 OIC banks sampled during 2010–2020, this study discovered that economic freedom significantly influences Islamic banks' profitability. Additionally, the financial freedom and investment factors are very positive. Interestingly, this study found that business freedom hurts the profitability of Islamic banks.

The conclusions of this study have policy implications. Since operating efficiency is crucial for Islamic banks' profitability, enhancing economic freedom—allowing individuals and organizations to engage in transactions with minimal government interference—can improve their performance without harming the economy. By creating inclusive regulations, government policies can support the halal industry and supply chain. Government, industry, and investors can boost the halal market share by integrating trade and investment. The government can promote halal sector growth through import laws and halal certification, enhancing trade. The halal market, including Islamic banking, will expand with government support and market-friendly laws.

To enhance investment freedom, the government should eliminate trade and investment barriers using existing legal frameworks like preferential tariffs and continental free trade areas. Streamlining regulatory processes and addressing institutional obstacles are essential. Strategic measures to attract investment in high-potential halal sectors include targeted incentives such as tax breaks, import duty exemptions, reduced property taxes, and easier entry permits. These policies are expected to attract domestic and foreign investors. Financial freedom encourages the government to promote Islamic finance and capital markets through product innovation, financial technology, and sukuk. Shariah-compliant trade finance products and services are crucial for the sustainability of the Islamic economy. Effective use of Islamic finance to syndicate funds and investments can facilitate optimal intermediat.

Investment products tied to trade finance portfolios, like sukuk, attract many stakeholders by providing potential returns. Default risks in high-risk markets can be reduced through multilateral partnerships, highlighting the importance of public and hybrid financing. However, excessive business freedom may hinder Islamic banking performance. To ensure optimal financial intermediation, the government should regulate products to meet halal certification and guidelines. Additionally, promoting Islamic banks' participation in financing MSMEs through profit-sharing contracts can restrict financing composition. These findings suggest that bankers should choose a flexible operating environment and an economic system supporting a dynamic banking sector for optimal performance. The regulatory effectiveness of the Islamic banking sector should be based on its operational performance.

Despite the contributions of this study, we must acknowledge its limitations. The research is based on data from Islamic banks in nine OIC countries from 2010 to 2020. Expanding the sample to include more banks and conducting a comparative analysis among OIC countries could better illustrate the impact of economic freedom and its subcomponents on Islamic banking performance. Future research should also consider other performance measures, such as bank efficiency and stability.

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