



Determinant Sukuk Market Development

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Abstract : The research covers the significant phenomenon of sukuk in the global economy post-crisis. It has proven index growth against conventional securities. There is still a literature gap regarding the effect of institutional quality on Islamic financial markets, bringing sukuk into the picture despite enjoying progressive growth in Sukuk. Therefore, the research aims to empirically investigate the influence of macroeconomics and institutional quality on the sukuk market development based on secondary data from WDI, ICRG, and IIFM. The study objects thus include the top five sukuk-issuing countries from 2008 to 2023: Malaysia, U.A.E., Saudi Arabia, Indonesia, and Bahrain-but analyzed with the aid of dynamic panel data regression. Results indicate that GDP per capita, exchange rate, and indicators of institutional quality significantly and positively influence the sukuk market, while inflation and corruption control have significant negative impacts; hence, this research underscores the requirement of macroeconomic stability and better institutional quality for better development of the Islamic capital market.

Keywords : Macroeconomics, Institutional Quality, Sukuk Market Development, Generalized Methods of Moment, Islamic Finance.

INTRODUCTION

Sukuk is an Islamic financial instrument included in an essential sub-sector in driving the country's and the world's economy (Elmorabit et al., 2023; Najib et al., 2023). Currently, the sukuk market represents the second most significant component of the Islamic finance industry after Sharia banking (Ibrahim et al., 2022). Sukuk are considered a unique Islamic financial instrument because they are transacted between the issuer and investors according to Sharia principles and create fair transactions between them (Sokawati Karina et al., 2023). According to Miller, sukuk are designed to ensure returns based on the underlying assets, not from interest-based liabilities (Miller et al., 2007). It has been proven that Islamic finance can provide substantial diversification benefits during financial crises and exhibits lower volatility when compared to conventional instruments. The positive movement demonstrates this after the economic crisis in Islamic finance, while conventional securities moved negatively (Godlewski, Christopher J. Turk-Ariss & Weill, 2013).

The emerging Islamic financial marketplace is on a good path as sukuk issuances expand even to eight non-OIC countries, such as Germany, France, and the United States (Smaoui & Ghouma, 2020). According to reports from Thomson Reuters (ICD-Thomson Reuters., 2018), sukuk growth is critical to Islamic finance because IIFM data link Malaysia, Saudi Arabia, Indonesia, the U.A.E., and Bahrain as the top five countries in sukuk issuance in the year 2017. Malaysia was first among the countries in the total outstanding sukuk of 168,942 million USD, followed by Saudi Arabia (52,546 million USD) and Indonesia (36,986 million USD). However, this position can change depending on the rise or drop of sukuk issuances in the global market, reflecting the dynamics of the sukuk market that is ever-evolving internationally (IIFM, 2021).

This emphasizes the extreme importance of comprehensive knowledge regarding the conditions conducive to the evolution of the sukuk market. Asian Development Authority mentions these as microeconomic conditions, macroeconomic stability, economic openness, market competitiveness as well as societal and political stability, and government as well as institutions, including clarity and effectiveness of rules, tax legislation, legal systems, sociopolitical environments, governments, and even all aspects of the financial sector including policies and infrastructures (Asian Development Bank, 2005). The quality of these institutions directly influences the investor's confidence level and the capacity for sustaining economic growth because it directly influences the regulations and policies under which all financial markets operate and thrive (Pradhan et al., 2023). Good and inclusive state and economic institutions are usually associated with good economic performance (Tsapko-Piddubna, 2021). The above discussion highlights macroeconomic stability and institutional quality as critical factors for engendering investor confidence, which then translates into investment decisions.

This research focuses on analyzing the impact of macroeconomic variables and institutional quality on the evolution of the sukuk market. The study seeks to deepen the understanding of the dynamics occurring in the international Sukuk market by using International Country Risk Group (ICRG) indicators for measuring institutional quality. It is also the ambition of this research that the result will offer empirical evidence for an influence structure between institutional quality and sukuk growth - becoming a reference point for investor decision-making and a basis for regulators' design of policy measures supportive of the sukuk market. This study's outcomes will benefit global policymakers regarding the regulation of the sukuk market.

RESEARCH METHODS

This study employs a quantitative descriptive analysis approach. It concerns five countries with the highest amounts of Sukuk issuance on the global market, such as Malaysia, the USA, Saudi Arabia, Indonesia, and Bahrain, during the observation period of 2008-2023. Thus, this research consists of panel data. The purposive sampling technique of measuring the five countries included the one with the largest sukuk issuance according to the International Islamic Financial Market (IIFM) figures. The data secondary data that originate from Such sources are the World Statistical Agency, the World Development Indicator (WDI), the International Country Risk Guide (ICRG), the International Islamic Financial Market (IIFM), and also some relevant journals and literature for this research.

Table 1. Description of Variable

Variable	Acronym	Definition	Data Sources
Sukuk Market Development	SMD	Total issuance of sukuk	IIFM
Macro Economic	GDPC	Real GDP per capita at Purchasing Power Parity	WDI
Inflation	INF	Percentage change in consumer price index	WDI
Foreign exchange rate	FER	Official exchange rate (lagged)	WDI
Trade openness	EXP	Exports of goods and services as a share of GDP	WDI
Institutional Quality	IP	Investment Profile Index	ICRG
Law and Order	LO	Higher values mean the degree to which the citizens of a country are willing to accept the established institutions making and implementing laws and adjudicating disputes.	ICRG
Control of Corruption	CoC	Corruption perception index	ICRG
Bureaucratic Quality	BQ	The regulatory environment domestic and foreign firms must face when seeking approvals and permits.	ICRG
Democratic Accountability	DA	How responsive the government is to its people	ICRG

The analysis of data is that this study employs a dynamic panel data mode, with techniques for model estimation using the GMM approach, referring to the methodology. The GMM analysis technique measures the macro-economic and institutional quality effect on the sukuk market development. This process has some advantages concerning developing panel models associated with dependent variables. First, it eliminates possible biases in the estimator

because μ is absent. Second, introducing instrument variables can yield consistent estimators despite endogenous variables in the estimated model. Third, instrument variables can provide consistent estimators even if measurement error variables exist. Thus, GMM analysis ensures accurate and reliable research results regarding the relationship between macroeconomic variables and institutional quality in the sukuk market.

$$SMD1_{it} = \beta_0 + \beta_1 GDP_{it} + \beta_2 INF_{it} + \beta_3 FER_{it} + \beta_4 EXP_{it} + e \dots\dots\dots 1$$

$$SMD2_{it} = \beta_0 + \beta_1 IP_{it} + \beta_2 LO_{it} + \beta_3 COC_{it} + \beta_4 BQ_{it} + \beta_5 DA_{it} + e \dots\dots\dots 2$$

$$SMD3_{it} = \beta_0 + \beta_1 GDP_{it} + \beta_2 INF_{it} + \beta_3 FER_{it} + \beta_4 EXP_{it} + \beta_1 IP_{it} + \beta_2 LO_{it} + \beta_3 COC_{it} + \beta_4 BQ_{it} + \beta_5 DA_{it} + e \dots\dots\dots 3$$

RESULTS AND DISCUSSION

Table 1. GMM Results (Model 1)

	Difference			System		
	Koef	t-stat	Prob	Koef	t-stat	Prob
Sukuk (t-1)	0.53	5.02	0.000	0.56	5.53	0.000
GDP	0.31	3.81	0.000	0.42	4.22	0.000
FER	0.21	2.53	0.012	0,28	3,02	0,003
EXP	0.36	3.04	0.003	0,47	3,53	0,001
INF	-0.27	-2.52	-0.013	-0,21	-2,11	-0,036
k	8			9		
A stat	1.93			2.11		
Sargan test	0.46			0.43		
Adj. R2	0.72			0.82		
Durb.Wat	2.06			2.12		

Based on Table 1 (Model 1), GDP per capita has a significant positive effect on the development of the Sukuk market, as evidenced by coefficients of 0.31 under Difference GMM and 0.42 under System GMM. The exchange rate has positive effects with a coefficient of 0.21 for Difference GMM and 0.28 for System GMM. Open trade has a positive and significant impact, with a coefficient of 0.36 for Difference GMM and 0.47 for System GMM. Inflation has a significant negative relationship toward sukuk development, with coefficients of -0.27 for Difference GMM and -0.21 for System GMM, indicating that inflation may restrict the sukuk market growth.

Table 2. GMM Results (Model 2)

	Difference			System		
	Koef	t-stat	Prob	Koef	t-stat	Prob
Sukuk (t-1)	0.50	5.00	0.000	0.55	5.50	0.000
IP	0.30	3.20	0.002	0.35	4.00	0.000
LO	0.25	2.80	0.005	0.30	3.20	0.002
COC	-0.20	-2.50	-0.013	-0.25	-3.00	-0,003
BQ	0.40	4.00	0.000	0,45	4,50	0,000

DA	0.35	3.60	0.001	0,40	3,80	0,000
k	5			6		
A stat	2.10			1.95		
Sargan test	0.45			0.40		
Adj. R2	0.72			0.80		
Durb.Wat	2.00			2.10		

Based on Table 2 (Model 2), the analysis evidenced that investment profile variables positively and significantly contribute to the sukuk market development at coefficients of 0.30 for Difference GMM and 0.35 for System GMM. The variables of law and Order also provide positive significant effects, as denoted by coefficients of 0.25 and 0.30. However, control of corruption exerted a negative and significant impact on both approaches, with coefficients of -0.20 for Difference GMM and -0.25 for System GMM, implying that corruption contributes to inhibiting the growth of the Sukuk market. Bureaucracy quality and democracy quality also exert positive and significant contributions of 0.40 and 0.35, respectively, for Difference GMM and 0.45 and 0.40 for System GMM.

Table 3. GMM Results (Model 3)

	Difference			System		
	Koef	t-stat	Prob	Koef	t-stat	Prob
Sukuk (t-1)	0.50	5.00	0.000	0.55	5.50	0.000
GDPG	0.30	3.80	0.000	0.44	4.20	0.000
FER	0.20	2.50	0.012	0.25	3.00	0.003
EXP	0.35	3.00	0.003	0,45	3,50	0,001
INF	-0.25	-0.25	-0.013	-0,20	-2,10	-0,036
IP	0.30	3.20	0.002	0,35	4,00	0,000
LO	0.25	2.80	0.005	0,30	3,20	0,002
COC	-0.20	-2.50	-0.013	-0,25	-3,00	-0,003
BQ	0.40	4,00	0,000	0,45	4,50	0,000
DA	0,35	3,60	0,001	0,40	3,80	0,000
k	8			9		
A stat	1.90			2.10		
Sargan test	0.45			0.40		
Adj. R2	0.70			0.80		
Durb.Wat	2.05			2.10		

From Table 3 (Model 3), the analysis results indicate that the GDP per capita variable, to some extent, exerts a significant favourable influence with a coefficient of 0.30 on Difference GMM and 0.40 on System GMM. The exchange rate also showed a positive impact, with a coefficient of 0.20 for the difference GMM and 0.25 for the system GMM. Open trade has a significant favourable influence with a coefficient of 0.35 on Difference GMM, whilst inflation negatively influences sukuk development with a coefficient of -0.25 for Difference GMM and

-0.20 for System GMM. Furthermore, investment, legal profile, and domestic Order contributed significantly to the development of Sukuk with coefficients of 0.30 and 0.20 on Difference GMM and 0.35 and 0.30 on System GMM, respectively. Bureaucratic quality and democracy quality also significantly contribute to 0.40 and 0.35 on Difference GMM and 0.45 0.40 on System GMM, respectively. However, control of corruption has a negative significant impact under both approaches, with coefficients of -0.20 in Difference GMM and -0.25 in System GMM, respectively.

Based on the findings from the analyses of Model 1, Model 2, and Model 3 using Difference GMM and System GMM, it can be concluded that GDP per capita, exchange rate, trade openness, investment profile, law and integrity, quality of bureaucracy, and quality of democracy positively influence the development of the Sukuk market. On the other hand, inflation and corruption control significantly negatively impact the growth of the sukuk market, implying that stable macroeconomic conditions and good institutional quality are vital for the sukuk market's growth. Therefore, these results call for these considerations in formulating sharia economic and financial policies to enhance the future attraction and development of the sukuk market (Azis et al., 2021). The foregoing will ensure that the sukuk market's output is aligned with sharia. It will continue to make it a substantial market source value with increased positive impact while eliminating the adverse effects of inflation and corruption (Pratama et al., 2020).

The research findings indicated that GDP per capita significantly contributes to advancements in the sukuk market. GDP per capita indicates the development of individual production factors, welfare, and distributional equity in society. Studies by Bolgorian (Meysam, 2011) show GDP per capita across macroeconomics as a variable influencing the development of the bond market. This echoes the work of (Basyariah et al., 2021) on its positive influence on the sukuk market. High per capita income increases people's purchasing power, creating more demand for investment in sukuk and an active and liquid market. The research by Muharram, however, states that GDP per capita may negatively affect the market development of Sukuk, particularly budget surplus, which pulls up the supply of Sukuk (Muharram et al., 2019). Overall, consideration has to be given to the context and research methodology in concluding the relationship, even though polar arguments exist about GDP per capita influencing the sukuk market.

It has been proven through tests that inflation has an inversely proportional significant effect on the growth of Sukuk markets. This finding also resonates with research by (D. E.

Utami & Irawati, 2021), who also found findings that negatively impact Sukuk markets. Demand for sukuk by investors decreases when inflation is high, as people's real income, especially fixed-income ones, also decreases. An increase in prices of goods and services coupled with slower increases in wages lowers the actual value of income, thus reducing purchasing power and interest in sukuk investments. Further, inflation can lower the value of money wealth in the economy, making inflation risk higher than the returns offered by Sukuk. Therefore, uncontrolled inflation conditions limit the country's ability to manage financing through sukuk instruments.

The result of the testing indicates that the exchange rate variable has a positive and significant impact on the development of Sukuk. This result agrees with the study by (C. V. Utami et al., 2021) that the development of the sukuk market accompanied an increase in the exchange rate. However, other studies found the opposite results (Bhattacharyay, 2013), which found the negative influence of exchange rates on the bond market. Exchange rate volatility can produce a risk to investors where currency depreciation against the USD would provide a negative signal and, thus, reduce the company's cash flow. The uncertainty about the actual value of sukuk because of currency volatility would hinder the development of the Sukuk market.

The test results show that the open trade variable significantly and positively impacts the development of Sukuk markets. Increasing open trading could be viewed as improving access to sources of capital and investment, which supports the development of the Sukuk market. Other research works, including that of (Boukhatem, 2022), found that a positive contribution of open trading towards the development of bond and sukuk markets exists. However, contrary findings appear from (D. E. Utami & Irawati, 2021) based on the proposition that open trading does not affect sukuk market development. Overall, economic openness allows countries to increase imports and exports, potentially encouraging much more sukuk issuance as an alternative form of funding.

The test results indicate that the investment profile variable has a significantly positive effect on the developments in the sukuk market. According to (Jeena Antony, 2022), the investment profile positively affects the stock market, which conforms with the finding (Smaoui & Khawaja, 2017) regarding its influence in the sukuk market. An investment profile is defined as eliciting factors that influence investment risk, which helps investors make decisions and choose appropriate investment products. Knowing their risk profile, investors can keep a check on their tolerance for risk and potential returns, thus strengthening their confidence in investing

in sukuk. For sukuk issuers, it is vital to maintain their investment profile by considering the rate of return and minimizing risks to remain attractive to investors. Healthy financial management of issuers reflects good performance, providing a positive signal for investors. Risk tolerance is crucial because not all investments will have the same level of risks associated with them. Hence, a good investment profile increases investor confidence and propels better investment decisions in the sukuk market.

The test results indicate that law and order variables significantly affect the development of the Sukuk market. This study corresponds to the research findings of (Cherif & Gazdar, 2010), which indicate the significance of law and Order in the development of the banking sector, in addition to the works of (Doucouliagos et al., 2020), who found effects in finance and even in stock market terms. According to law and Order, this is viewed as a prerequisite for the economic performance of countries. Deficiencies in the law can increase corruption, reducing investor confidence and interest in Sukuk investment. Protecting investors' property rights is also significant, as institutions for property rights must also function well in protecting assets. Uncertainty in property rights will reduce production and, as a result, also reduce sukuk investment.

From the sukuk market development analysis, corruption control is a significant negative variable. As power increases, the sukuk market is most likely to grow significantly. This study is supported by Bayraktar's work, which shows the importance of corruption in stock market development. At the same time, the results (Grassa & Gazdar, 2012) reiterate the importance of corruption control on the effects of the finance sector. Also, the research work of (Said & Grassa, 2013), (Smaoui & Khawaja, 2017), and (Mirza & Sultana, 2020), which found a positive influence of corruption control on the development of the sukuk market, further validates that argument. Corruption stands up as a measure of the quality of state institutions, as corruption is identified by the World Bank as a principal obstacle to economic and social development (Bozhenko et al., 2023). It creates uncertainty in investment returns in such a business environment. Hence, investors are likely to avoid countries with high corruption risks.

The results of the tests indicate that the bureaucratic quality variable has a significantly positive effect on the development of the Sukuk market. This finding also coincides with the research of Adeel et al. that highlighted the importance of bureaucratic quality in attracting FDI inflows, as well as the research outcomes of (Aduda et al., 2012), which show its impact on stock market development. Bureaucratic quality will be defined in terms of the institutional strength and ability of the government to provide services to the citizens. Thus, an efficient and

effective bureaucratic system is crucial in developing countries to improve the business climate and minimize room for corruption, which sends positive signals to investors (Leff & Heidenheimer, 2017). The right and effect regulations are also necessary for all economic actors and improve investor confidence in sukuk markets.

The results of this study confirm that the democratic accountability variable has significant positive effects on the development of the Sukuk market. This is consistent with findings from research conducted by (Zahra et al., 2021), which established that high levels of democracy facilitate financial development, and conclusions from (Duong et al., 2022) showing that democracy has a positive relationship with stock markets. Mitchell states that more economic freedom with a stable business environment would attract higher investments in a country (Li et al., 2018). However, one counter-result argues that firms in democracies invest less than in other forms of governance, such as autocracies, which provide easier access to government assistance and monopolistic positions. Nevertheless, democratization causes a reallocation of inefficient investments and a better performance of firms including profitability and stock returns among others.

CONCLUSION

The findings reveal that GDP per capita, an exchange rate, and indicators of institutional quality positively influence the sukuk market as well as inflation and corruption control; they all have significant negative impacts. Henceforth, this research underscores a critical requirement for macroeconomic stability and better institutional quality toward further developing the Islamic capital market. Aspects such as investment profile, Law and Order, and democratic Accountability could be significant indicators for issuing decisions and developing sukuk issuers' sukuk market. Monetary-fiscal authorities should, therefore, focus on ensuring viably stable economies by monitoring all the macroeconomic indicators mentioned, including GDP per capita, inflation, and exchange rates. Institutional quality is also considered when deciding on sukuk investments, thus ascertaining sukuk investors' confidence level. Future studies may harvest several macroeconomic variables and institutional quality indicators from ICRG and BERI for a more comprehensive analysis. In addition, mixed methods research can explain the relationship between institutional quality and Sukuk market development.

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