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Institutional Quality and Sukuk Development: A Study of Five OIC Countries

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Abstract
The objective of this study is to shed some light on the effect of institutional quality on the development of the global *sukuk* market. Specifically, this study examines the impacts of the institutional quality that adopts three dimensions of the Worldwide Governance Indicators (WGI), i.e., Rule of Law (RL), Regulatory Quality (RQ), and Government effectiveness (GE) on the global *sukuk* development of the top-five countries of *sukuk* issuance, i.e., Malaysia, Kingdom of Saudi Arabia, United Arab Emirates, Indonesia, and Bahrain. Drawing on a quantitative study with the data in the forms of global *sukuk* issuance from 2002 to 2017, panel-data regression (OLS) and General Method of Moment (GMM) were applied. This study showed that RL and GE have a significantly positive effect on *sukuk* issuance; however, RQ did not influence the development of the global *sukuk* market. These results imply that a country that is capable to maintain the institutional quality, especially in terms of rule of law and government effectiveness, will most likely be the country that can successfully develop the *sukuk* market. These results play a crucial role in filling a research gap among previous studies and provide an empirical evidence of the government's role and its influence on the *sukuk* development.

Keywords: Institutional Quality; Islamic Financial Development; *Sukuk* Development; Worldwide Governance Indicators

Introduction

Nowadays, *sukuk* instruments are an important part of the Islamic financial market. The *sukuk* market represents the second-largest component of the Islamic financial industry after Islamic banking. Since the 2000s, *sukuk* has the potential to become an Islamic financial instrument for meeting the needs of the state and corporate funds (Kusuma & Silva, 2014), and is an attractive investment choice for investors in Muslim-majority and non-Muslim countries (Hassan et al., 2019; Abd. Aziz et al., 2016). The *sukuk* market provides alternative funding and a base for broader investors for corporate and state entities (Ahmad et al., 2012). Currently, *sukuk* is also included in the sub-sector which plays an important role in driving the economy of a country in the world.

The International Islamic Financial Market (IIFM) reports the development of *sukuk* since it was first published and registered in the global market with a value of USD 66,830 million in 2001, continuing to rise and growing to USD 137,599 Million in 2012, and USD 135,557 Million in 2013. Although it had dropped, however, it rose again and in 2018 stood at USD 123,150 Million (International Islamic Financial Market, 2018). The facts prove that *sukuk* is not only in demand by Muslims but also in demand by non-Muslims both individually and nationally. This fact is evidenced by the eight non-member countries of the Islamic cooperation organizations (OIC) that are currently participating in issuing *sukuk* in the global market, e.g., France, Germany, Luxembourg, Britain, Singapore, Hong Kong, South Africa, and the United States (Smaoui & Ghouma, 2020).

Various types of *sukuk* are issued in the global *sukuk* market, i.e., sovereign *sukuk* (*sukuk* issued by the state), corporate *sukuk* (*sukuk* issued by the company), quasi-sovereign *sukuk* (*sukuk* issued by business entities/state institutions), and institutional financial *sukuk* (FIs-*sukuk*) (*sukuk* issued by financial service companies). International Islamic Financial Market (2018) has launched a report on the issuance

of *sukuk* in the global market, i.e., state *Sukuk* amounts to USD 220,848 million (45%), corporate *sukuk* (USD 135,380 million or 27,58%), quasi-sovereign (USD 96,570 million or 19.68%), and FIs (USD 37,985 million or 7.74%). IIFM and Thomson Reuters have released data on the global market developments of *sukuk* showing the fact that certain countries have been highly prominent in *sukuk* issuances such as Malaysia, UAE, KSA, Bahrain, and Indonesia. These five countries have been the countries that occupy the top five of the world in *sukuk* issuance in 2017, namely Malaysia being the first country in the total outstanding *sukuk*, USD 168,942 Million, followed by Saudi Arabia (USD 52,546 Million), Indonesia (USD 36.986 Million), and UAE (USD 31,905) for the second, third, and fourth position in the global *sukuk* outstanding respectively. The character of *sukuk* is different from conventional financial instruments due to the necessity of underlying assets and its free-interest rate attributes which makes it more stable and less volatile.

However, regardless of the seemingly better attributes on *sukuk*, the great potential of Islamic finance is not maximal and is far from the market-share target. Apart from the significant growth rates experienced by the Islamic finance industry in several countries, over the past 20 years, the overall performance of this industry has been inadequate and unsatisfactory. The Islamic financial industry, including *sukuk*, is still very small; when compared to the conventional financial industry, it looks uncompetitive and, to some extent, becomes very vulnerable (BAPPENAS, 2016). The gap between *sukuk* prices compared to conventional bond prices continues to narrow and, in some cases, *sukuk* are getting tighter but markets continue to keep their risk-aversion strategy intact (International Islamic Financial Market, 2014). Various problems that emerge in the Islamic financial industry in Indonesia include, for example, many gaps in the sharia governance framework that exacerbate operational complexity, delays, and increased costs in some cases (BAPPENAS, 2016).

A variety of problems that hamper the pace of development of Islamic finance require the role of the government in solving them, to

form an investment climate that supports the development of the Islamic finance industry. (Asian Development Bank, 2005) states that among the factors that affect the investment climate is the role of government and securities companies/issuers, called the institutional role. Robinson (1952) explicitly states that institutions are the most important source that determines whether or not the economy of a country gets in failure or progress. Countries whose governance have established or whose economic institutions have been inclusive tend to have good economic performance since its institutional presence is not to negate the market mechanism, but to ensure that the market runs in line with the luminous rules, thereby all economic actors get equal access and certainty in doing business (Yustika, 2012).

Institutional quality is a set of rules and constraints that shape economic behavior and incentives. Experts argue that institutional quality is the main determinant of economic development (Challe et al., 2019). Some research states that institutional quality has an impact on investment development (Wang et al., 2014). Other evidence suggests that a better institutional environment can stimulate R&D activities by providing collaborative capacity building to companies (Wang et al., 2014; Intapan & Sriboonchitta, 2019). Other empirical evidence shows a strongly significant institutional quality effect on economic and financial development (Fagbemi & Ajibike, 2018; Khan et al., 2019) on the conventionally-financial development (Phuc et al., 2019), as well as on the Islamic finance development (Smaoui & Khawaja, 2017). Of course, this has become an important basis for further inquiry related to the degree to which the institutional quality has an impact on *sukuk* instruments.

Given the empirical studies and existing recommendations, it is important to examine the degree to which the role of the government has an impact on the development of Islamic finance, especially the development of global *sukuk*. Interestingly, due to very limited empirical studies regarding the institutional quality in Islamic finance, especially *sukuk*, this study aims to analyze the effect of institutional

quality (using three of the six WGI indicators, such as Rule of Law (RL), Regulatory Quality (RQ), and Government effectiveness) on *sukuk* development. It is worth exploring and examining due to the problems and constraints faced by Islamic finance, especially *sukuk*, such as legal regulations. Additionally, it will also provide an empirical novelty regarding the impact of institutional quality, i.e., Rule of Law (RL), Regulatory Quality (RQ), and Government effectiveness, on *sukuk* development.

Review of Literature

Sukuk is another term of Islamic bonds, and it has been known in Islam since the Middle Ages, where Muslims used the instrument in the context of international trade. *Sukuk* is a plural form of the word '*sakk*' which means a certificate or note. Auditing and Accounting Organization of Islamic Financial Institutions (AAOIFI) defines *sukuk* as proportional representation of ownership of assets for a certain period with risks and rewards associated with cash flow through underlying assets in the hands of investors (Paltrinieri et al., 2018). Based on the contract, *sukuk* is divided into *sukuk al-ijara, sukuk al-wakala, sukuk al-mudaraba, sukuk al-musharaka, sukuk al-istithmar, sukuk al-manafa'a, sukuk al-istisna'a,* and *sukuk al-murabaha*. The various types of *sukuk* are described by Smaoui and Ghouma (2020) and Borhan and Ahmad (2018). *Sukuk* is a sharia capital-market instrument as well as sharia financial-trading instruments; therefore, it requires a right product criteria and arrangements in the development process to its full potential (Hadiah, 2016), and does not leave out its sharia-principles. Thus, public are going to welcome *sukuk* with a full confidence and trust.

Various measurement models are applied as institutional indicators. The World Bank determines the measurement of the country's governance index or state institutions using the six governance dimensions included in the Worldwide Governance Indicators (WGI) by Kaufmann et al. (2009) i.e., Voice and

Accountability (VA), Political Stability and Absence of Violence (PSAV), Governance Effectiveness (GE), Regulatory Quality (RQ), Rule of Law (RL), and Control of Corruption (CC). Studies on the role of institutional quality have begun and have been applied as an indicator to measure economic and financial development spearheaded by Law and Azman-Saini (2012). They confirms that there has been no previous research conducted using a governance index to measure institutional quality and its role in financial development. Since then, research has been emerging to apply the same measuring index to represent the institutional quality effect on economic development in general.

Among them are the studies that examine institutional frameworks for economic growth. The result shows that a stable institutional framework will drive economic growth, while weak institutional activity causes stagnant economic growth (Jain et al., 2017). Buchanan et al. (2012), in their study of institutional quality with FDI-flow, conclude that institutional quality strongly influences FDI-flow; thus, the institutional quality significantly provides positive impact on FDI (Febrina & Sumiyarni, 2014). The study is statistically not much different from Globerman and Shapiro (2002) who examine institutions with their foreign investment. The result portrays that institutions have a positive relationship with foreign direct investment. A research using many institutional quality measures as conducted by Gani (2007) finds out that the Rule of Law (RL), Regulatory Quality (RQ), Control of Corruption (CC), and Political Stability and Absence of Violence (PSAV) have positive impacts on the flow of FDI. Moreover, research on the political stability effect on financial development is also strengthened by Roe and Siegel (2011) who explains the same results that political stability significantly affects financial development.

The potential connection between institutional quality and financial development has been reviewed by Khan et al. (2019) in their research on financial developments in the United States who conclude that institutional quality has a significantly positive effect on financial

development in the US. While their research uses conventional financial data objects, it is interesting to conduct a more in-depth study on the relationship between institutional quality and Islamic finance. Huang (2010) finds out a positive institutional-improvement effect on financial development at least in the short term, especially for low-income, developing, and economically-fragmented countries. Khan et al. (2019) recommend to include institutional-quality considerations in policymaking, specifically for financial development.

Other institutional research results examining the relation of institutional quality to RQ and PSAV indicators show a positive impact of institutional quality on investment development (Alam & Yazdifar, 2019). The relationship between institutional quality and the economy and finance, in general, depicts a stable institutional framework in driving an economic growth, while weak institutional activity leads an economic growth to stagnate (Jain et al., 2017). Ojeka et al. (2019) also confirm that weak institutional quality would reduce the market in the case of Nigeria. The study is also based on previous research conducted by Law et al. (2012) who examine the relationship of institutional quality with a country's finance. The result reveals that high-quality institutions are very important in explaining the financial development of a market. In addition to institutional quality using aggregate data, Ojeka et al. (2019) also test institutional quality by adopting individual indicators, i.e., PSAV, GE, RL, VA, and the result indicate a positive correlation to financial markets and corporate accounting performance. These results support the statement that institutional factors play an important role in economic and financial development and put pressure on policymakers to develop stable reforms to encounter uncertainty (Cherif & Gazdar, 2010). Consequently, it is proven that institutional quality has a positive and significant effect on financial development of a country (Tran, 2018; Khan et al., 2019; Alam & Yazdifar, 2019).

Although a number of previous studies have used institutional quality as a variable often involved in finance studies, an empirical

correlation between institutional quality and Islamic financial instruments, specifically *sukuk*, still remains more paucity of evidence. Initially, an empirical study on institutional quality and *sukuk* development was conducted by Said and Grassa (2013) who discussed the determinants of the development of the *sukuk* market applying various independent variables, *inter alia*, the RQ indicator for institutional quality. The results suggest that the Regulatory Quality (RQ) significantly influences the development of the *sukuk* market. The implication is that the countries with high institutional quality in terms of RQ will have a huge *sukuk* market, due to the efficiency and reliability in regulatory and law enforcement.

A study on the determinants of the *sukuk* market development was also conducted by Smaoui and Khawaja (2017) by applying some variables to proxy a combination of structural, financial, and institutional factors. The study suggests significant effects on the variables discussed. It should be noted that the greater the economy of a country is and the more Muslim population is, the better the investment profile of a country will be. The lower the corruption of a country is, the more the *sukuk* market of a country will be. Institutional quality has proven to be a factor that has a strong influence on *sukuk* development, as supported by Said and Grassa (2013). They contend that the institutional quality proxied by RL and RQ has a positive and significant impact on *sukuk* development. While Said and Grassa (2013) test several types of variables that might affect *sukuk* development from macroeconomic indicators and institutional quality, the in-hand study is specifically focused on examining the institutional quality on *sukuk* development to avoid the bias coming from the government-role variables and their influence on the *sukuk* development as studied by Said and Grassa (2013). Given the above description, it is hypothesized that:

H1: Rule of Law has a positive effect on the development of the global *sukuk* market.

H2: Regulatory Quality has a positive effect on the development of the global *sukuk* market.

H3: Government Effectiveness has a positive effect on the development of the global *sukuk* market.

Research Method

Sample Selection and Data Sources

The present study aimed to examine the potential correlation between several dimensions of WGI-World Bank on the development of global *sukuk* market in five OIC countries. To this end, this study made use of secondary data in the forms of global-*sukuk*-issuance released by countries being in the highest positions in *sukuk* issuance, i.e. Malaysia, KSA, UAE, Indonesia, and Bahrain. These countries are also listed in International Islamic Financial Market (IIFM) as a proxy for the development of the global *sukuk* market. As for the institutional quality data, this study adopted Worldwide Governance Indicators (WGI) established by the World Bank (Kaufmann et al., 2011). The data were sourced from the annual *sukuk* issuance and institutional quality from 2002-2017.

Variable Measurements

This study is quantitatively directed to investigate the effect of independent variable, that is institutional quality proxied by three of the six WGI-World Bank dimensions of governance, i.e. Rule of Law (RL), Regulatory Quality (RQ), and Government Effectiveness (GE) on the global *sukuk* development. In determining the three of the six WGI dimensions, this study took into account insights from Langbein and Knack (2012) and Phuc et al. (2019), who posit that institutional-quality indicators can be operated individually (see table 1). In a similar direction, Phuc et al. (2019) further argue that some of the dimensions partially affects a *sukuk* development. Hence, this study pointed out how RL, RQ, and GE as part of WGI-World Bank dimensions

potentially provide an impact on the global *sukuk* development in the five OIC countries.

Table 1: Definition of Operational Variables

Variable Definition		Unit	Source
Dependent Variable			
Sukuk Issuance (SI)	*Sukuk* data available in the global market is a combination of the three types of *sukuk* from the issuer side: state *sukuk*, corporate *sukuk*, quasi *sukuk*, and FIS (Financial Institutional *sukuk* or *sukuk* issued by financial institutions)	USD M %	IIFM
Independent Variables			
Rule of Law (RL)	Illustrates perceptions of the degree to which agents have confidence in and abide by the rules of society, and, in particular, the contract-enforcement quality, property rights, the police, and the courts, as well as the likelihood of crime and violence.	%	WGI-WB
Regulatory Quality (RQ)	Illustrates perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.	%	WGI-WB
Government Effectiveness (GE)	Illustrates perceptions of the public-services quality, the civil-service quality and the degree of its independence from political pressures, the policy-formulation, and implementation quality, and the credibility of the government's commitment to such policies.	%	WGI-WB

Source: Langbein and Knack (2012) and Phuc et al. (2019)

The data were processed using Panel Data Regression and Generalized Method of Moment (GMM) Regression. GMM is an expanded version of the moment method to estimate parameters. The moment method cannot be used if the number of instrumental variables is greater than the number of parameters to be estimated. GMM equates the condition moment of the population with the condition moment of the sample. GMM method is one method that can overcome data conditions by violating assumptions in regression analysis. GMM is obtained by minimizing the number of squares weighted from the moment of sample conditions (Ekananda, 2016). The regression model in this study is stated as follows:

$$SI_{it} = \beta_0 + \beta_1 RL_{it} + \beta_2 RQ_{it} + \beta_3 GE_{it} + e \qquad (1)$$

where,

SI_{it} = *Sukuk* development proxied by *sukuk* issuance for country i, period t;

β_0 = Constant parameters

$\beta_1, \beta_2, \beta_3$ = Coefficients for RL_{it}, RQ_{it}, and GE_{it}

RL_{it} = Rule of Law for country i, period t;

RQ_{it} = Regulatory Quality for country i, period t;

GE_{it} = Government Effectiveness for country i, period t;

e   = Error terms.

There are at least two reasons that underlie the use of GMM approach. First, GMM is a common estimator and provides a useful framework for comparison and assessment. Second, GMM provides a simple alternative to other estimators, especially towards maximum likelihood. In order to assume the dynamic panel data, static panel models such as Pooled Least Square (PLS), Fixed-Effect (FEM), and Random-Effect Models (REM) presumably indicate bias and inconsistent estimators due to the existence of a correlation between the lag in the dependent variable ($SI_{i,t-1}$) and the error terms (e_{it}). To deal with these problems, GMM was applied since it solved these problems by first-differencing the dynamic panel model to ensure that changes

of $SI_{i,t-1}$ and e_{it} were uncorrelated. Roodman (2009) suggests that the coefficient value of $SI_{i,t-1}$ in the GMM model should be between PLS and FEM or PLS ≤ GMM ≤ FEM.

Results

Data analysis commenced with data smoothing, by converting the monetary unit from the local currency into USD, then changed into a natural-logarithm (ln) model. Smoothing the data was run since the variables between *sukuk* issuance and institutional quality indicators were measured in different units, the monetary units (million USD) for *sukuk* issuance, and the percentage units for institutional quality indicators. Data smoothing was administered by changing the *sukuk* data into a natural-logarithm model; the *sukuk* units were changed from million USD into a percentage.

Table 2. Descriptive Statistics

	SI	RQ	RL	GE
Mean	12868.19	62.05093	57.62756	65.97137
Median	2251.000	66.90861	62.52962	68.33148
Maximum	97080.00	83.16327	78.36539	91.34615
Minimum	19.00000	20.91837	19.80198	38.23529
Std. Dev.	21450.04	14.35865	14.24026	15.32477
Observations	80	80	80	80

The panel-data regression requires a classic assumption test and a choice between the common-effect (CEM), the fixed-effect (FEM), and the random-effect model (REM). Given table 3, the data has also satisfied all the classic assumption tests. Jargue-bera is more than 0.8 or 0.92; and Breuch-Pagan-Godfrey test for heteroscedasticity shows that p-value (Chi-Square= 0.73) is greater than 0.05, meaning that the data does not contain heteroscedasticity or homoscedasticity. Other evidence from the results of the multicollinearity test is illustrated in Table 4.

Table 3 shows that the data indicate multicollinearity, but since it is stated by Widarjono (2007: 103-104) that the BLUE estimator does not

require assumptions to be free from multicollinearity problems, the model is continued. Following the autocorrelation test using the serial correlation LM-test, the result depicts that the probability value of Chi-Square (0.509) is greater than $\alpha = 0.05$, meaning that we fail to reject H0, which further indicates that the model does not contain autocorrelation. Henceforth, the panel-data regression requires a model-selection test between CEM, FEM, and REM. The results are presented in table 5.

Tabel 3: Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.349218	Prob.F(3,12)	0.7905
Obs*R-squared	1.284711	Prob.Chi-Square(3)	0.7328

Table 4. Correlations

	RL	RQ	GE
RL	1		
RQ	0.937	1	
GE	0.818	0.843	1

Table 5. Hypotheses Testing: CEM, FEM, and REM

Dependent variable: *Sukuk* Issuance (SI)

Variable	CEM			FEM			REM		
	koef	t-stat	Prob	Koef	t-stat	Prob	Koef	t-stat	Prob
C	5,06	5,68	0,00***	-3,38	-1,81	0,07*	2,43	2,17	0,03**
RL	0,10	2,57	0,01***	0,22	4,38	0,00***	0,12	3,12	0,00***
RQ	-0,06	-1,67	0,09*	0,01	0,18	0,85	-0,02	-0,54	0,59
GE	0,02	2,14	0,03**	-0,04	-2,52	0,01***	-0,01	-0,75	0,45
Adj. R²	0,25			0,57			0,19		
Chow-test	0,00								
Hausman-test				0,00					

Notes: Significant at level 10%, ** Significant at level 5%, ***Significant at level 1%

Based on the table 5, the Chow-test results show that the FEM model is the best compared to CEM (*p*-value=0,000), while the Hausman test shows that FEM is also the best model compared to REM (*p*-value=0,000). Hence, the model used in this research is FEM.

Referring to Verbeek (2012), the biased and inconsistent estimators in fixed-effect and random-effect models are still most likely to occur, due to, *inter alia*, endogeneity problems that should be eliminated. As a result, to get rid of these problems, a GMM test was applied, first, by looking at the validity of the model in the Sargan test using J-statistics (Ekananda, 2016). Sargan-statistic values distributed by chi-square statistic c (p-k) with the null hypothesis are validly over-identified. Calculating the *p*-value of Sargan statistical test by gauging the chi-square statistic c (p-k), where p = 8 is the rank instrument and k = 4 is the number of parameters, was conducted. Using an excel program, the *p*-value test shows that CHISQ.DIST.RT (5.07,4) is 0.966; the value is more than 0.05. If a p-value is more than 0.05, valid over-identification applies.

Table 6. Hypotheses Testing using OLS and GMM models

Dependent Variable: *Sukuk* Issuance (*SI*)

	OLS			GMM		
Variabel	Coef	t-stat	Prob	Coef	t-stat	Prob
C	-3,38	-1,81	0,07*	-3,377	-1,812	0,074*
RL	0,14	2,54	0,013***	0,218	4,378	0,011***
RQ	0,01	0,25	0,804	0,007	0,183	0,823
GE	0,065	1,70	0,093*	0,065	1,99	0,049***
Adj. R^2	0,547				0,547	
F-Statistics		15,81			-	
DW		0,49			0,48	
Inst. Rank		-			8	
J-statistic		-			5,07	
Sargan test		-			0,966	

Notes: Significant at level 10%, ** Significant at level 5%, ***Significant at level 1%

The results of Table 6 show that the three independent variables (RL, RQ, and GE) partially have a significantly positive impact on *sukuk* when the t-statistic values are greater than the corresponding critical t-value of 2.776 with df: n-k, namely 8-4 = 4. The relationship between the Rule of Law (RL) and *sukuk*, based on the results of the calculation, implies that the t-statistic value is 4.378, higher than its critical t-value (2.776). Since t- statistic value= 4.378 is greater than its critical t-value (2.179) with a significance level of 0.0000 (less than 5%), H1 is accepted, and H0 is rejected, meaning that the Rule of Law (RL) partially has a significantly positive effect on *sukuk* development. The t-statistic value of 4.378 strengthens the above hypothesis and also proves that a significantly positive relationship between RL and the development of *sukuk* exists.

The relationship between Regulatory Quality (RQ) and *sukuk* development, based on the results of the calculation, suggests that the t-statistic value is 0.183, while its critical value is 2.776; so, the t-statistic value (0.183) is less than its critical t-value (2.776) with a significance level of 0.855, greater than 5%. Hence, H2 is rejected and H0 is accepted, meaning that the Regulatory Quality has no positive effect on *sukuk*. Based on the t-stat. value, the RQ statistic shows that the RQ does not affect *sukuk* issuance.

The effect of Government Effectiveness (GE) on *sukuk* development is significant. Based on the results of the calculation, the t-statistic value is 1.997; while its critical t-value is 2.776. The t-statistic value is 1.997, less than its critical t-value (2.776) with a significance level of 0.049, less than 0.05. These results suggest that H3 is accepted and H0 is rejected, meaning that GE has a significant effect on *sukuk* development. The influence of GE on the *sukuk* development can be seen from the positive t-statistical value, indicating that the impact of GE on the *sukuk* development is positively significant, i.e., when GE increases, the *sukuk* market will also increases.

Referring to the results of hypotheses testing, it appears that the value of Adj. R Square is 0.567. This means that the GMM model for the

institutional quality variables of RL, RQ, and GE account for the *sukuk* variable by 56.7%, while the rest (43.3%) is explained by other variables not included in the model, such as macroeconomic variables, internal and external factors, and other instruments, i.e., both Islamic and conventional instruments. The coefficient of determination (0.567) is more than 50%, suggesting that the institutional quality effect on *sukuk* development is relatively high. Furthermore, based on the above table, the regression equation can be seen as follows:

$$logSI = \beta_0 + \beta_1 RL + \beta_2 RQ + \beta_3 GE + e \qquad (2)$$
$$LogSI = -3,377 + 0,218\ RL + 0,007\ RQ + 0,065 GE \qquad (3)$$

Given the abovementioned multiple-linear-regression equations, it can be seen that the constant (α) is -3,377. The constant is negative, meaning that if other variables (RL, RQ, and GE) are kept to be constant or zero, the constant will be able to reduce the development of *sukuk* by -3,377%. The regression coefficient of X1 is 0.218, showing a positive relationship, where every one-unit-of-percentage increase in RL will cause an increase in *sukuk* by 0.218%. Conversely, if a decrease in RL by one unit will also cause a decrease in *sukuk* by 0.218 percent, assuming the other independent variables are constant.

Moreover, the regression coefficient of RQ is equal to 0.007, meaning that the RQ coefficient of 0.007 shows a positive relationship where every one-unit-of-RQ increase will cause an increase in *sukuk* of 0.007 units. Conversely, if a decrease in RQ by one unit will also cause a decrease in *sukuk* by 0.007 units, assuming the other independent variables are constant. The regression coefficient of GE, amounting to 0.040, shows a negative relationship, where each one unit-of GE increase will cause a decrease in *sukuk* by 0.040 units. Conversely, if a decrease in GE by one unit will also cause an increase in *sukuk* by 0.040 units, assuming the other independent variables are constant.

Discussion

The institutional quality of WGI is measured from a community survey of its government in dealing with related cases. The next impact is that it will affect the level of public confidence in deciding investment activities, both as an investor and an issuer. Several previous studies have concluded that the institutional quality, both aggregately and individually, has a significant effect on financial, investment and economic instruments (Alam & Yazdifar, 2019; Jain et al., 2017; Choi et al., 2016; Huang, 2010; Gani, 2007). The development of most empirical studies on conventional finance has been still predominating the current debate of which its focus, object, and characteristics, of course, are different from Islamic finance, especially *sukuk* instruments (Paltrinieri et al., 2020).

This study finds empirical evidence that institutional quality also has a significant influence on the development of Islamic finance, especially *sukuk* in the global market, i.e. in the five OIC countries. The results of this study are mostly in accordance with the findings of Said and Grassa (2013) as well as Smaoui and Khawaja (2017) that the quality of individual institutions has a positive effect on *sukuk*, but different from theirs in some respects. In addition to applying different objects (countries) and the more-updated period of this study (2002-2017), the variables of interest in this study also focus on institutional quality to eliminate the macroeconomic-bias impact on the *sukuk* development as adopted in the study of Said and Grassa (2013). Meanwhile, Khawaja (2016) uses the ICRG (International Country Risk Guide) indicator as a measure of the institutional quality to affect *sukuk* instead of the WGI (Worldwide Governance Indicators pioneered by the World Bank) as applied in this study.

This study implies that when the *sukuk* development does not satisfy the expected market target, it is necessary to review the existing legal regulations, i.e. whether some possible obstacles for the *sukuk* development not realized by regulators exist. To identify these

problems, it necessitates constructive suggestions, sourcing from, *inter alia*, research findings, and corrective actions from the stakeholders regarding the existing regulations. It is evident from the results of this study that the Rule of law has a significant and positive effect on the development of *sukuk*, implying that these results are consistent with Said and Grassa (2013). Other empirical evidence shows that the rule of law has a significant and positive effect on financial markets (Ojeka et al., 2019).

Regulatory Quality (RQ) is an indicator of the government's ability to formulate and to implement sound policies and regulations that permit and promote the development of the private sector. Institutional quality, by increasing capacity to implement the rule, can have a complementary relationship with Islamic financial regulations and supervision of the effects on stability. The above results appear that two of the three institutional quality indicators have a significantly positive effect on *sukuk* development, namely RL and GE shows a significant effect on *sukuk* development, while one of the three institutional quality variables does not affect *sukuk* development, namely RQ. From the GE results, the political stability of democratic-system countries has a democratically-elected government and is relatively politically stable, which is committed to the development and welfare of its people. In the end, although the authorities have tried hard to support the Islamic finance industry, including in the development of *sukuk* instruments, government policy is still lack of optimizing these efforts. The results of this study are in line with Alam and Yazdifar (2019) that GE has a positive effect on investment development.

Institutional quality is an important indicator in developing both conventional and Islamic financial markets. Some of the previous empirical studies have provided evidence and a strong basis for the urgency of institutional quality in the development of Islamic financial markets. These results can empirically contribute to additional evidence of the previous studies on Islamic finance, especially *sukuk*

applying the global-governance-indicator approach as a proxy for the role of government in the *sukuk* development, especially in Indonesia in which the *sukuk* studies are still very limited. Adibuddin et al. (2019) state that Islamic financial literacy (Islamic finance) in Indonesia, especially the capital market, only reached 14% compared to Islamic banking with 52% of the total Islamic economic research as a whole. Interestingly, none of the 184 articles analyzed in the literature has discussed WGI, the institutional quality of *sukuk*, or other Islamic finance.

The results of this study have some implications. Research related to institutional quality and *sukuk* development is still very limited. It seems that the two studies from Said and Grassa (2013) and Smaoui and Khawaja (2017) that analyze the influence of institutional quality on the development of *sukuk* are initial studies on this topic. Thus, this study further strengthens these two studies and provides additional empirical evidence on the relationship between institutional quality and *sukuk* development. In this regard, the potential for *sukuk* development is related to the potential for maintaining the quality of a country's institutions. Thus, these findings have implications for the future regarding the idea that the degree to which a country can strengthen its institutions, especially in terms of law enforcement and government effectiveness, will be a key determinant on *sukuk* development.

The results of this study are also important for investors and *sukuk* issuers to assess the existing investment climate adopting the WGI, when the conditions are conducive and favorable for investment and *sukuk* issuance for issuers. However, on top of that, the most important thing is that practitioners should be able to provide input and encouragement to the government, especially the regulators, to build a conducive Islamic-financial-investment climate considering corrections and evaluations regarding the government's role in the laws and administration of the *sukuk* instrument, sourced from real practice and experience.

Conclusion

Drawing on the above-mentioned results, it can clearly be concluded that RL and GE are proven to have a significantly positive impact on the global *sukuk* market development; however, RQ does not. It is further revealed that the coefficient of determination (Adj. R Square) is 0.567. This finding suggests that changes in the *sukuk* variable (SI) by 56.7% can be explained by institutional quality variables, namely Rule of Law (RL), Regulatory Quality (RQ), and Government Effectiveness (GE), while the remaining proportion of 44,3% is explained by other factors not explained in this study. Moreover, since this study is limited to apply only three of the six-WGI indicators, further research are encouraged to test all the existing WGI dimensions or to use other indicators as a measure of the quality of government institutions, such as the International Country Risk Guide (ICRG) and Business Environmental Risk Intelligence (BERI) (Keefer, 1995). Future studies are also encouraged to test the same issue applying other methods so that the institutional-quality effect on *sukuk* development can be ascertained and made robust as an independent variable, or possibly as a moderating variable or a control variable.

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