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Social Capital in Islamic Finance: The Case of Sukuk

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Abstract: The impact of social capital on financial development is a longstanding issue. Empirical evidences suggest that social capital has an important effect on economic growth. Given this relationship, we hypothesize the same impact on the financial market. In this study, we examine the impact of social capital on the development of Islamic finance with a special focus on *sukuk* issuance. A sample of sukuk issuance from 2000-2014 from sixteen countries is examined. Results suggest that social capital promotes greater sukuk issuance, especially in the presence of a more democratic and financially liberalized environment. An important policy implication is that government should strengthen and enhance both political and economic institutions as they are the basis for social capital development.

Key words: *Sukuk* issuance, social capital, trusts, norms, social structure, network

INTRODUCTION

The financial architecture develops and repairs itself over time with new structures introduced to remedy the impact of financial crises over time. Islamic finance has become a viable alternative to the existing financial architecture offering a new live line following the repeated financial crises all over the world. The introduction of Islamic finance which set afoot as a shariah-compliant version of existing conventional products continues to develop albeit its struggle to fully embrace the essence of maqasid al-shari'ah (the objectives of shari'ah). The concept of social capital more or less mirrors the maqasid al-shari'ah from several perspectives. Trusts mirror the concept of 'thiqah' from the Islamic perspectives whilst norms and social structure relates the concept of 'ukhuwah' (brotherhood in Islam) which are vital elements to ensure the fulfillment of maqasid shari'ah. Social capital has been defined several ways which indicate the vitality of the subject. Over the years, measurements have been developed to quantify social capital to enable empirical testing and reporting. To capture social capital is a challenging task as quantifying human behavior, interactions, social connections and social phenomenon can be elusive and complex. The study on social capital mainly centers on what constitutes social capital which lead to the development of social capital index (Lee *et al*., 2011; Bjornskov, 2007) and on the impact of social capital on economy (Knack and Keefer, 1997; La Porta *et al*., 1997). The term social capital has also been used to explore non-economic phenomena such as the impact of trusts, civic participation and reciprocity on health (Lochner *et al*., 2003), parental involvement and education outcome (OECD, 2011) which are basically the component of network in social capital.

This study attempts to provide an empirical insight on the importance of social capital in facilitating the development of Islamic finance in the case of *Sukuk*. Social capital is categorized into four dimensions (Chen and Liu, 2013) trust, norms, network and social structure to facilitate understanding and to provide a more structured empirical analysis. We argue that social capital is not a foreign concept from the Islamic practices since the elements of social capital are in line with the maqasid al-shari'ah. To that extent, we provide empirical testing of the effect of social capital on *Sukuk* issuance.

LITERATURE REVIEW

Social capital, political and economic institutions: The concept of social capital, political and economic institutions overlaps as they can be captured using the similar variables. Based on existing studies, social capital revolves around four major domains - trust, norms, social structure and network (Lee *et al*., 2011). Social capital is expected to be one of the key determinants of the performance of government and markets (Algan and Cahuc, 2008). Trust is generally defined as "willingness to permit the decisions of others to influence your welfare" (Sobel, 2002). Fukuyama (1999) for example, define trust as honesty, duties and reciprocity which enhances social as well as economic cooperation. Extending trust from family and friends circle to strangers is described as generalized trusts which further stretched social cooperation. As

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such, a well-developed financial market for example can be an epitome of generalized trust (Guiso *et al*., 2000). Generalized trust is demonstrated by the citizens' faith in public institutions such as police, court and other government services. To gain generalized trusts, government must be efficient, corruption-free and operate in a fair manner. Given the generalized trust, government and policy maker face less resistance on immediate policies and decisions (Brehm and Rahn, 1997; Rothstein and Stolle, 2008). Measurement of trust includes confidence in the legal structure, legal institutions, property rights and social institutions. Public corruption is expected to breed norms to compete in dishonest manner hence degrading generalized trust (La Porta *et al*., 1997).

Social norms encompass civic attitude and social behavior which is measurable via public corruption, the extent to which society accepts and comply with the formal and informal rule of the society, rule of law and legal origin. The legal origin, for example is associated with the quality of law enforcement and protection of property rights. Law enforcement in democratic countries with common or civil law is expected to be better compared to countries in the communist or autocratic regime. Social structure is characterized by culture and social conflict. A homogeneous society tends to have a higher level of social cooperation especially those with similar socio-income base and horizontal relations. The social network is horizontal associations achieved by civic engagement and voluntary relationship.

North (1981, 1990) and more recently, Acemoglu *et al*. (2004), economists and political scientists have recognized the role of institutions in economic development. North (1990) defines institutions as 'rules of the game in a society or more formally are the humanly devised constraints that shape human interactions'. Acemoglu (2008) characterize the economic institutions as the product of political process or the political institutions. In contrast, Ha and Kang (2015) deduce that politics is the outcome of market dynamics in the presence of crises. Institutions can generally be categorized into political institutions and economic institutions (Flachaire *et al*., 2014) although, other studies may restrict the definition to just political institutions (Galor, 2005).

The majority of the literature on political regime centered on the impact of democracy or autocracy on economic growth. Studies by Przeworski (1966), Hutington and Dominguez (1975), Weede (1983) and Landau show that growth is relatively faster in autocratic countries. In contrast, Pourgerami (1988, 1991), Barro (1989) and Feng (1997) amongst others show that democratic countries perform better in terms of growth. On a different note, Kohli (1986) and Marsh (1988) show no difference between the two regimes. In assessing these two institutional frameworks, Butkiewicz and Yanikkaya (2006) found that democracy has a negligible impact on growth and Helliwell (1992), Tavares and Wacziarg (2001) and Aisen and Veiga (2013) suggest that democracy has a negative impact on growth. In these studies, it is argued that physical capital accumulation is hindered via increased government consumption spending. Since in autocratic countries, the public has limited political involvement, government spending could be properly planned for the most effective usage. Jetter (2014) suggests that volatility in government spending leads to lower growth in democratic-led countries. There is also empirical consensus that political instability can adversely affect a wide range of macroeconomic variables such GDP growth (Alesina *et al*., 1996; Jong, 2009; Aisen and Veiga, 2013), private and public investment (Alesina *et al*., 1996; Darby *et al*., 2004) and government spending (Devereux and Wen, 1998) by disrupting long-term economic policies.

Estimation strategy and data issues preliminary testing and estimation strategy: Prior to deciding the more appropriate estimation to be used, we perform two preliminary tests cross section dependency test and unit root testing. Cross-sectional dependency distorts panel unit root and cointegration tests, making them irrelevant. There are several methods to test for cross-section dependence. First, cross-dependency is tested using the Breusch-Pagan test based on Lagrangian Multiplier (LM) statistics for which the null hypothesis is no cross sectional dependence or zero correlation over cross-sectional units. The test statistic is as follows:

$$CD_{lm} = T\sum_{t=1}^{N=1}\sum_{j=i+1}^{N}\hat{p}_{ij} \quad (1)$$

where $\hat{p}_{ij}$ the sample estimate of the pair-wise correlation of residuals. If T is small and N is relatively large, Breusch-Pagan test will be invalid. Second, Pesaran (2004) offers a cross dependency test for small samples which has exactly mean zero for fixed values of T and N for panel data including heterogeneous dynamic models. The Pesaran CD test is as follows:

$$CD = \sqrt{\frac{2T}{N(N-1)}}\left(\sum_{t=1}^{N=1}\sum_{j=i+1}^{N}\hat{p}_{ij}\right) \quad (2)$$

Third, Frees (2004) proposed a test statistics based on the squared rank correlation coefficients and equals:

$$R^2_{ave} = \frac{2}{N(n-1)} \sum_{i=1}^{N-1} \sum_{j=i+1}^{N} \hat{r}_{ij}^2 \quad (3)$$

Frees test is based on the testing procedure by Sarafidis *et al.* (2009) using frees' Q-distribution. Frees test is designed for static models, hence not suitable for dynamic panels since the finite sample properties have yet to be explored.

In the case of this study, Pesaran CD test is more suitable since the sample size is relatively small. Results of Pesaran CD test fails to reject H_0 cross-sectional independence. Frees test for correlation dependence fails to reject the null hypotheses of no cross correlation dependence (0.034<c.v. 0.01 = 0.3583). Breusch-Pagan CD test results also indicate the absence of cross dependency in the sample errors (LM test statistics = 2.4380, p = 0.3144). The correlation matrix of residuals for the sample is -0.327, supporting the absence of common correlated errors in the sample.

Next, panel unit root tests are applied to the relevant variables. We apply LLC and IPS panel unit root tests. Results suggest that majority of the variables are generally I(0), ruling out the possibility of cointegration amongst the variables. Since, the sample size is relatively small, we rely on static panel data technique. The most appropriate model would be the Fixed Effect (FE) model which controls the presence of country-specific effects such as economic, political and institutional characteristics and prevent biased estimates. The error term of the FE model captures part of the country-specific effect in addition to the idiosyncratic term.

Data issues: Majority of existing studies use World Value Survey (WVS) to capture social capital. Since, the focus of this study is to examine the role of social capital in *Sukuk* issuance, we focus on selected variables rather than fully adhering to the conventional measures. In addition, certain variables which are normally used as a proxy for institutional and social capital overlap, resulting in redundancy. To remedy this problem, we reorganized the proxies such that it would be in line with our objectives. Table 1 illustrates the proxies used to represent the social capital components norms, network, trust and social.

Political institutions are captured by the type of political institutions that governs the state. Variants of democracy and autocracy are captured via values where values between 0-10 are categorized as democracy and -10 to 0 as autocracy based on Eichler (2014). The theory on the determinants of *Sukuk* issuance is still absent since, *Sukuk* is a relatively new subject area in Islamic finance. Given that the sample covers sixteen different countries,

Table 1: Proxy for social capital

Proxy	Data source
Norm	
Regulatory quality	WGI
Internal conflict	PRS
Democratic accountability	PRS
Bureaucracy quality	PRS
Regulation	Gwartney *et al.* (2006)
Trust	
Corruption	WGI, PRS, FH
Government effectiveness	WGI
Rule of law	WGI
Law and order	PRS
Property rights freedom	FH
Monetary freedom	FH
Government spending freedom	FH
Military in politics	PRS
Government stability	PRS
Network	
Voice and accountability	WGI
Press freedom	Freedom of press
Economic freedom	FH
Fiscal freedom	FH
Government spending freedom	FH
Freedom to internationally trade	Gwartney *et al.* (2006)
Business freedom	FH
Trade freedom	FH
Investment freedom	FH
Investment opportunities	PRS
Religious tension	PRS
Ethnic tension	Gwartney *et al.* (2006)
Social structure	
Political stability	WGI
Labour freedom	Fraser institute
Financial freedom	Fraser institute
Socioeconomic condition	PRS
External conflict	PRS

PRS = International country risk guide, PRS group; WGI = World Governance Index, World bank; FH = Freedom House

we use macroeconomic variables as control variables based on the general-to-specific methodology. The preferred model consists of five macroeconomic variables only to ensure parsimony of the regression. The five macroeconomic variables are openness, government debt, savings, government spending and inward foreign direct investment.

In the financial development literature, financial liberalization requires greater openness. Liberalization leads to relaxation of certain rules and regulation to enable a higher volume of financial transactions in the market. Part of the financial liberalization process includes the establishment or empowerment of secondary markets to facilitate liquidity in the financial sector. Following financial liberalization, more conventional even Islamic financial products are expected to be traded in the financial markets. *Sukuk*, being the shari'ah compliant version of bond will thrive in a more liberalized environment. The expected sign of openness is positive. Savings is expected to have an inverse relationship with *Sukuk*. Higher savings diminishes the urge to raise financing in debt form. Companies can use their retain

earning for further investments. In the absence of savings or retain earnings, companies may resort to *Sukuk* apart from the loans in the Islamic banking as a source of financing. In addition, the average return of *Sukuk* may be relatively higher than fixed deposit rates rendering companies to invest in *Sukuk* as oppose to fixed deposit savings in banks.

Government debt consists of both domestic and external debts. In the presence of high debt, government may raise *Sukuk* to help cover existing debts or other debt servicing payments. In this case, government debt will have a positive impact on *Sukuk*. On the other hand, higher existing debt may hinder government from incurring new debts. Apart from the current debt serving or repayment, new debts will be another source of government liability. The government may be discouraged from acquiring new debts if the cost-benefit analysis shows that the debt is unsustainable. If this happens, then government debt may have a negative impact on *Sukuk*. Government spending is expected to have either a negative or positive effect on *Sukuk* depending on their financial situation. Higher government spending, especially on infrastructure is expected to boost *Sukuk* issuance for the purpose of financing development projects. However, competition from another source of financing like equity financing may undermine the prospect of *Sukuk* issuance. For these reasons, the sign of government spending may be negative or positive. The fifth-factor affecting *Sukuk* issuance is foreign investment inflow. Inward foreign investment is expected to have a negative effect on *Sukuk* issuance since such investment is expected to bring in money into the country hence, reducing the need for another form of financing.

RESULTS AND DISCUSSION

Since, *Sukuk* is mainly concentrated in Malaysia, Pakistan, Indonesia and the GCC countries, the sample is almost a balance between democracy-led state represented by Malaysia and autocracy-led states as captured by the GCC countries. Table 2 present the estimation results of the impact of political institutions on *Sukuk* issuance. Regression 1 in Table 2 serves as a benchmark model for the determinants of *Sukuk* issuance. Openness is positive and significant in all models across both political and economic institutions whilst saving and government debt are negatively related to *Sukuk* issuance in all samples. Foreign investment and government spending are negative in all regressions and significant in the majority of the regressions. In general, the actual signs of control variables are consistent with the hypothesized signs. Crisis dummy is insignificant, hence, dropped from the models.

With reference to Table 2, political institution proxied by polity is positive and significant suggesting the importance of political institutions on *Sukuk* issuance. We decompose polity into democratic (demo) and autocratic (autoc) regimes to scrutinize the origins of the positive impact. Results suggest that *Sukuk* issuance intensifies in the democratic regime compared to the autocratic regime. It should be noted that the negative sign for autoc in regression 3 does not mean that the issuance of *Sukuk* is lower in autocratic countries, but is seen as slightly slower compared to issuance in democratic countries. The countries with higher level of democracy often practice dual systems where both conventional and Islamic financial systems co-exist in a multi-dimensional financial eco-system. Major examples include Malaysia, Indonesia and Pakistan. Issuers have the choice between Islamic and conventional financing instruments and decisions are often made based on which instruments provide better deals such as tax deductions and incentives by the government. Malaysia, for example, provides such incentives. The samples of democratic countries are often more liberal in terms of muamalat interpretations resulting in different types of *Sukuk* based on different shari'ah

Table 2: The impact of political regime on *Sukuk* issuance dependent variable: *Sukuk*

							Political variables	
Reg.	Open	Sav	fdi_in	Gov_debt	Gov_sp	c	a	b
1	6.5243***	-1.2065**	-0.2773**	-4.3651***	-0.2911**	2.3451		Benchmarkmodel
	(0.9531)	(0.9855)	(0.1109)	(0.9454)	(0.1289)	(6.1863)		
2	7.6445***	-4.7149***	-0.1355	-6.8767***	-0.3396***	8.5502	0.3463***	Polity2
	(0.3658)	(0.9458)	(0.0911)	(0.9952)	(0.0950)	(4.8135)	(0.0909)	
3	6.7115***	-5.0253***	-0.2049**	-6.5170***	0.2856**	1.5413	0.6218***	Demo
	(1.1693)	(1.0881)	(0.0896)	(1.0100)	(0.1010)	(4.8180)	(0.1834)	
4	8.9625***	-4.1264***	-0.0731	-7.0027***	-0.3995***	1.8420**	-0.7011***	Autoc
	(0.7340)	(0.8394)	(0.0975)	(0.9969)	(0.0953)	(0.1788)	(0.1788)	
	Obs.	Within R^2	Between R^2	Overall R	F-test			
1	34	0.8713	0.4510	0.5823	2.31 (0.059)			Benchmark
2	34	0.6595	0.4613	0.5610	4.31 (0.002)			Polity2
3	34	0.8335	0.4915	0.5216	4.35 (0.004)			Demo
4	34	0.7443	0.4376	0.5263	4.22 (0.002)			Autoc

, * denote 5 and 1% significance level. F-stats represents the f-test for all $u_i = 0$. Demo and autoc denote democracy and autocracy. Standard errors in parentheses

concepts. The availability of these different types of *Sukuk* provides more choice to issuers and facilitates the processes of issuing *Sukuk*.

Table 3 shows the results for norm. All proxies except bureaucracy quality are significant. Internal conflict (int_con), democratic accountability (dem_acc) and regulation (Area 5bii) positively affect *Sukuk* issuance. The strength of democratic accountability and less internal conflict promote a stable environment for *Sukuk* development. Reduced internal conflicts serve as one of the most important factors to promote government stability which is vital to attracting foreign investors.

Regulatory quality, on the other hand, is negative and significant implying poor enforcement of regulation may slow down *Sukuk* issuance.

From the perspective of trust and generalized trust, lower corruption have significant positive impact on *Sukuk* issuance. Table 4 shows that regardless of the

Table 3: Social capital component: norm dependent variable: *Sukuk*

							Political variables	
Reg.	Open	Sav	fdi_in	Gov_debt	Gov_sp	c	a	b
1	7.4365***	-4.7811***	-0.1314	-7.1032***	-0.3114***	7.1446	-3.4139***	Reg
	(1.0974)	(1.0156)	(0.1196)	(1.1755)	(0.1004)	(6.9877)	(1.1173)	
2	7.6254***	-3.2807**	-0.1554	-7.1564***	-0.3251***	6.3140	2.8171**	Int_con
	(1.5363)	(1.2882)	(0.0872)	(1.1134)	(0.0912)	(6.3032)	(1.3085)	
3	8.3778***	-4.6000***	-0.3251**	-6.9081***	-0.2324**	-4.8867	2.5428**	Dem_acc
	(0.7401)	(0.8182)	(0.1507)	(0.9025)	(0.1101)	(3.8744)	(1.2014)	
4	7.1187***	-2.6928**	-0.4167***	-5.5563***	-0.1886	-1.3544	2.9975	Bur
	(0.9322)	(0.9506)	(0.1151)	(0.9337)	(0.1325)	(5.2561)	(3.4387)	
5	7.7976***	-2.3213**	-0.2496**	-4.6171***	-0.20111	-0.9827	4.4117**	Regulation
	(0.9810)	(0.8977)	(0.0240)	(0.8825)	(0.1545)	(0.6134)	(1.2691)	
	Obs.	Within R^2	Between R^2	Overall R	F-test			
1	33	0.9385	0.4061	0.5829	3.74 (0.012)			Reg
2	34	0.9325	0.4423	0.6110	3.35 (0.018)			Int_con
3	34	0.9511	0.4459	0.6207	4.12 (0.007)			Dem_acc
4	34	0.9230	0.3940	0.5880	2.71 (0.032)			Bur
5	34	0.9442	0.3858	0.5646	3.77 (0.029)			Regulation

, * denote 5 and 1% significance level. F-stats represents the f-test for all $u_i = 0$, reg, int_con, dem_acc, bur and regulation denote regulatory quality, internal conflict, democratic accountability, bureaucracy and the extent of regulation. Standard errors in parentheses

Table 4: Social capital component: yrust dependent variable: *Sukuk*

							Political variables	
Reg.	Open	Sav	fdi_in	Gov_debt	Gov_sp	c	a	b
1	7.6232***	-3.7332***	0.1253	-6.1185***	-0.3486**	8.9277	5.1522***	cor
	(1.199)	(0.8133)	(0.1300)	(1.0053)	(0.1643)	(7.0121)	(1.0009)	(WGI)
2	6.5428***	-2.2627**	-0.5582***	-3.6991**	-0.0877	-10.5733	4.3876***	Cor_free
	(1.0452)	(0.7448)	(0.1244)	(0.9835)	(0.1515)	(8.0456)	(1.2375)	(FI)
3	7.3267***	-4.4124***	-0.1557	-6.7011**	-0.4214**	7.5441	6.0065**	Cor2
	(1.0423)	(1.0027)	(0.1515)	(1.1891)	(0.1146)	(5.0924)	(2.9244)	(ICRG)
4	7.2365***	-3.6107***	-0.1769	-6.6859***	-0.3541**	8.5598	1.8125**	G_eff
	(1.6237)	(1.0079)	(0.1365)	(1.3232)	(0.1670)	(6.9885)	(0.8974)	
5	8.7953***	-5.7034***	-0.1463	-7.0001***	-0.3665**	8.5631	-5.4445***	rol
	(1.3176)	(1.0093)	(0.1354)	(1.0372)	(0.1299)	(7.3525)	(1.6002)	
6	9.1339***	-4.1078***	-0.1142	-7.0311***	-0.2687	2.9978	4.9167	lao
	(1.2508)	(1.1151)	(0.1327)	(1.2102)	(0.1531)	(4.5432)	(4.0055)	
7	8.5601***	-3.0117**	-0.5398***	-3.7887***	-0.1165	-9.9711	-2.7221	Prop_right
	(1.0918)	(0.8431)	(0.1041)	(0.5671)	(0.1815)	(8.2731)	(2.2142)	
8	7.5510**	-1.5344**	-0.4819***	-3.5094***	-0.1565	-7.1129	4.2076**	Mon_free
	(1.8012)	(0.7572)	(0.1237)	(0.7254)	(0.1605)	(6.6537)	(2.0012)	
9	8.5641***	-2.5845**	-0.7186***	-4.7489**	-0.0904	-8.5584	2.5391	Govsp_free
	(1.3730)	(1.1814)	(0.1341)	(0.8113)	(0.1155)	(7.3385)	(4.2932)	
10	7.0089***	-3.7149***	-0.1747	-5.3855***	-0.2811**	6.5991	6.5443***	Mil
	(1.6259)	(1.2017)	(0.1109)	(1.2336)	(0.1401)	(6.6775)	(2.1021)	
11	8.8656***	-5.4677***	-0.1344	-4.7431***	-0.4001***	8.0064**	-3.0929	G_stab
	(1.3811)	(0.9837)	(0.1126)	(1.0012)	(0.0879)	(3.9940)	(3.6453)	
	Obs.	Within R^2	Between R^2	Overall R	F-test			
1	33	0.9395	0.3988	0.5223	4.78 (0.004)			COR (WGI)
2	19	0.9544	0.4621	0.5354	5.83 (0.003)			Cor_Free (FI)
3	34	0.9335	0.4375	0.5355	4.78 (0.004)			Cor (ICRG)
4	33	0.9311	0.4125	0.5178	3.78 (0.010)			G_EFF
5	33	0.9437	0.3978	0.5223	3.65 (0.010)			Rol
6	34	0.9390	0.4452	0.5503	2.76 (0.034)			Lao

Table 4: Continue

							Political variables	
Reg.	Open	Sav	fdi_in	Gov_debt	Gov_sp	c	a	b
7	19	0.9488	0.4586	0.5687	6.56 (0.015)			Prop_right
8	19	0.9552	0.5375	0.5466	8.42 (0.008)			Mon_free
9	19	0.9314	0.4716	0.5661	5.61 (0.021)			Govsp_free
10	34	0.9344	0.4632	0.5764	3.61 (0.013)			Mil
11	34	0.9419	0.4694	0.5129	5.05 (0.002)			G_stab

, * denote 5 and 1% significance level. F-stats represents the f-test for all $u_i = 0$. WGI is the World Governance Index, ICRG denote International Country Risk Guide by PRS group and FI represents Fraser Institute. Cor, g_eff, rol, lao, prop_right, mon_free, govsp_free,mil, g_stab denote corruption, government effectiveness, rule of law, property rights, monetary freedom, government spending freedom, military and government stability. Standard errors in parentheses

Table 5: Social capital component: network. Dependent variable: *Sukuk*

							Political variables	
Reg.	Open	Sav	fdi_in	Gov_debt	Gov_sp	c	a	b
1	8.5748***	-4.8314***	-0.0535	-6.5962***	-0.4055***	9.4366	-5.3762**	Va
	(0.7544)	(0.9214)	(0.1123)	(1.2012)	(0.0563)	(7.4217)	(1.8710)	
2	7.1453***	-4.2543***	-0.0516	-7.3763***	-0.3854***	7.1176	3.8859	Press_free
	(0.6476)	(0.9912)	(0.1154)	(1.0565)	(0.0635)	(5.9976)	(2.7625)	
3	8.5572***	-3.1298**	-0.5169***	-4.3983***	-0.1180	-7.7655	-6.3257	Econ_free
	(1.0326)	(0.7073)	(0.1435)	(0.8525)	(0.1320)	(6.9762)	(5.9228)	
4	8.8614***	-2.9561**	-0.6265***	-3.5020	-0.0832	-9.5486	0.3253	Fis_free
	(1.2710)	(0.6872)	(0.1134)	(2.3615)	(0.1187)	(8.3247)	(2.0480)	
5	8.6115***	-2.8722**	-0.5569***	-2.7475**	-0.0991	-10.7535	-2.6711	Bus_free
	(1.2832)	(0.7205)	(0.1231)	(1.2737)	(0.1354)	(8.7659)	(3.942)	
6	7.9257***	-1.9901	-0.5850***	-2.5232**	-0.0599	-9.0763	-3.4325	Tra_free
	(1.0035)	(1.5872)	(0.1267)	(1.1662)	(0.1327)	(8.5462)	(3.7868)	
7	7.8523***	-2.3325**	-0.5236***	-2.7450**	-0.1158	-7.5433	-2.4247	Inv_free
	(1.1321)	(0.7246)	(0.1235)	(1.1277)	(0.1384)	(7.6643)	(2.9745)	
8	9.4856***	-4.4569***	-0.1924	-6.9573***	-0.3169***	5.6577	2.3235	Inv
	(1.4562)	(0.9665)	(0.1362)	(1.2548)	(0.0723)	(6.7734)	(3.2247)	
9	8.1688***	-4.7366**	-0.1523	-7.1162***	-0.3465**	9.6549	4.7382	Relig
	(1.3721)	(2.2683)	(0.1311)	(1.8113)	(0.1301)	(8.7513)	(3.9554)	
10	7.1980***	-4.3856**	-0.1569	-6.7856***	-0.3438**	7.4982	1.3248	Eth_con
	(1.1400)	(2.0928)	(0.1466)	(1.2812)	(0.1375)	(7.6787)	(3.9929)	
11	8.5265***	-4.7698**	-0.1453	-6.5573***	-0.3576**	9.6431	4.3225***	Tra_free
	(1.3106)	(2.2849)	(0.1438)	(1.0253)	(0.1413)	(8.3032)	(0.9285)	
	Obs.	Within R^2	Between R^2	Overall R	F-test			
1	33	0.9549	0.3795	0.5315	5.31 (0.002)			Va
2	34	0.9377	0.4332	0.4653	5.13 (0.002)			Press_free
3	19	0.9565	0.4743	0.5732	6.23 (0.016)			Econ_free
4	19	0.9574	0.4732	0.5460	4.81 (0.029)			Fis_free
5	19	0.9557	0.4501	0.5672	6.21 (0.016)			Bus_free
6	19	0.9464	0.4598	0.5838	5.42 (0.023)			Tra_free
7	19	0.9573	0.4643	0.5679	6.14 (0.017)			Inv_free
8	34	0.9457	0.3935	0.5521	4.72 (0.004)			Inv
9	34	0.9392	0.4176	0.5463	2.60 (0.033)			Relig
10	34	0.9375	0.4368	0.5319	2.73 (0.038)			Eth_con
11	34	0.8294	0.4244	0.5266	3.62 (0.021)			Tra_free

, * 5 and 1% significance level. F-stats represents the f-test for all $u_i = 0$. The va, press_free, econ_free, fis_free, bus_free, inv_free, inv, relig, eth_con, tra_free represents voice and accountability, press freedom, economic freedom, fiscal freedom, trade freedom, investment freedom, investment, religions in conflict, ethnic conflict and trade freedom. Standard errors in parentheses

source and definition of corruption, lower level of corruption is vital to expedite the processes of *Sukuk* issuance. All three proxies are significant, entailing the importance to reduce corruption for a more efficient financial environment. The consistency in results are also due to the data from Fraser Institute on freedom from corruption are based on the Political Risk Survey (PRS) database. Government effectiveness (g_eff) provides an ideal ground for *Sukuk* to prosper. Rule of law (rol) is surprisingly negative and significant since we would expect stricter rule of law to promote any form of financial development and products. Checking the original data, we found that the estimates assigned to the sample countries are negative, rendering negative results. To reiterate, the sample of countries are still lacking in terms of the rule of law which may restrict development of *Sukuk*.

The majority of the proxies for network are insignificant. Table 5 shows voice and accountability (va) is significant but negative implying that many countries in the sample lack freedom of speech, especially in

Table 6: Social capital component: social structure. Dependent variable: *Sukuk*

							Social structure	
Reg.	Open	Sav	fdi_in	Gov_debt	Gov_sp	c	a	b
1	10.4465***	-4.1211***	-0.1240	-7.1002***	-0.3756***	6.4468	-1.3145	P_stab
	(1.3682)	(1.1229)	(0.1159)	(1.3245)	(0.0899)	(5.2945)	(1.7567)	
2	9.4138***	-2.3855**	-0.6247***	-2.6667**	-0.0132	-9.3997	0.7649	Lab_free
	(1.1348)	(0.9939)	(0.2015)	(1.0667)	(0.1448)	(8.7539)	(2.5882)	
3	8.5972***	-2.7435***	-0.4879***	-4.5643***	-0.1535	-1.5659	-5.4687**	Fin_free
	(0.9896)	(0.7020)	(0.1301)	(1.2351)	(0.1240)	(4.0033)	(2.1531)	
4	7.5331***	-3.5813**	-0.1848	-5.8995***	-0.2639**	5.3245	6.9445***	Socio
	(2.2541)	(1.5278)	(0.1732)	(1.6645)	(0.1007)	(5.1436)	(2.0135)	
5	9.5339***	-4.3557***	-0.0839	-6.3648***	-0.4138***	7.4376	5.3557	Ext_con
	(1.3969)	(1.1339)	(0.1037)	(1.3969)	(0.1159)	(6.2457)	(5.5148)	
	Obs.	Within R^2	Between R^2	Overall R	F-test			
1	33	0.9401	0.3915	0.5223	4.65 (0.004)			P_stab
2	19	0.9459	0.4673	0.5832	4.72 (0.035)			Lab_free
3	19	0.9328	0.4532	0.4756	7.11 (0.012)			Fin_free
4	34	0.9443	0.3877	0.6032	4.78 (0.003)			Socio
5	34	0.9547	0.4213	0.5051	5.23 (0.002)			Ext_con

, * 5 and 1% significance level. F-stats represents the f-test for all $u_i = 0$. The p_stab, lab_free, fin_free, socio and ext_con represents political stability, labour freedom, financial freedom, socioeconomic conditions and external conflict. Standard errors in parentheses

autocratic countries. Trade freedom (tra_free) from Gwartney et al. database is positive and significant, indicating that fewer days for trade processes leads to a more welcoming environment for network which later enhances financial development in a country.

Table 6 provides results for the social structure component. Financial freedom (fin_free) is negative suggesting the possibility that lack of financial freedom essential to promote *Sukuk* issuance. Finally, good socioeconomic conditions play an important role in promoting the economic and financial development and in this case, encourages *Sukuk* issuance.

CONCLUSION

The impact of social capital on *Sukuk* is examined in this study. We argue that the concept of social capital is akin to the teachings of Islam and fulfills the maqasid al-shariah. The recent interest on *Sukuk* has prompted more countries to issue this debt instruments alongside bonds, its conventional counterparts. This study provides an empirical groundwork to the determinants of *Sukuk* issuance with a special focus on the impact of institutions and social capital apart from macroeconomic variables. Five (5) macroeconomic variables are selected based on the general-to-specific methodology to ensure parsimony. Openness is consistently positive and significant in all regressions regardless the changes in the institutional variables. Similarly, other control variables such as savings, government debt, government spending and inward foreign direct investment are consistently negative in all regressions.

Results of the political institutions imply that *Sukuk* issuance is better in a more democratic environment. Segregation of the polity data into democratic and autocratic further substantiate the argument that *Sukuk* thrives in a more democratic ecosystem. The decision to issue of corporate or sovereign *Sukuk* do not go through the parliament plus the fact that *Sukuk* issuance is of negligible amount, hence special seating to discuss *Sukuk* issuance is not necessary. Less corruption is a factor that could promote more *Sukuk* issuance. The presence of corruption may impose a higher cost of issuance and if other financing instruments are less expensive, investors may resort to other financing products. Less corruption is expected to lower the cost of issuance, making *Sukuk* a good and viable alternative financing instrument.

Good governance is the result of effective political institutions and social capital is vital to support good governance. Our results indicate that regulatory framework and, voice and accountability of the countries in our sample are still inadequate. Improvements in government efficiency, regulatory framework and, voice and accountability will definitely promote higher *Sukuk* issuance. Improvements in socioeconomic condition which could be translated into higher economic growth and development will continue to provide stronger ground for *Sukuk* to develop. In addition, governments' responsiveness towards public needs may spur the development of the financial sector which would eventually benefit the *Sukuk* market.

Several lessons and policy implications can be derived from this study. First, *Sukuk* issuance performs better in democratic countries and social capital provides a favorable platform for *Sukuk* to flourish. Second, better regulatory framework, less internal conflict, greater democratic accountability and better regulation is a 'norm' that would promote good governance which is later, translated into a better environment for *Sukuk* issuance.

Third, corruption hinders financial development and in this case, the development of *Sukuk* market. Finally, the 'network' and 'social structure' component of social capital namely voice and accountability, financial freedom and socio-economic conditions are significant factors that affect the *Sukuk* market.

In conclusion, stable political system coupled with adequate social capital are necessary conditions to promote financial development and sophistication in their financial products. *Sukuk*, a relatively new financial innovation, rely on established financial market, good governance and incentives to thrive in competitive and challenging world. Important policy implications based on the findings are: countries should strive towards a politically stable nation with prudent macroeconomic management, an enabling financial ecosystem and infrastructure for *Sukuk* and incentives such as tax deduction, to further boost the *Sukuk* industry. In other words, social capital in term of norms, trust, network and social structure play important role in the overall financial development.

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