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RESEARCH PAPER

Financial Development and Economic Growth: The Mediating Role of Quality of the institutions in Muslim Countries

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ABSTRACT

This paper aimed at exploring the mediating role of quality of the institution in relationship between "financial development and economic growth" in selected Muslim countries from 2000-2017.The results of mediation analysis shows that quality of the institution mediates the linkage between "financial development and economic growth" in Muslim countries. The contribution of both the sectors is significant and positive. In addition, quality of the institution has a fundamental role in growth in the given countries. The studies have witnessed that economies grow faster over the period, which possesses well-developed financial system, and financial development helps in reducing poverty and enhancing long-term economic growth. Therefore, this paper suggests that these economies should develop their financial sector and enhance the quality of institution for growth and development

Introduction

Many researchers for example, Rufael (2009), Levine (2005), Beck and Levine (2004), Rajan and Zingales (2003), Jalil and Ma (2008), Demetriades and Hussein (1996), Bangake and Eggoh (2011) and Zhang et al., (2012) have explored the "Finance-Growth" relationship for economies around the globe. Intially, Bagehot (1873), Schumpeter (1911), Goldsmith (1961) and McKinnon (1973) have discussed this relation. These studies have shown the positive and influential role of finance in enhancing economic growth (EG). Furthermore, the long run association is observed in studies of Johannes et al. (2011), Apergis et al. (2007), and Mahajan and Verma (2014). Financial development is required for increasing growth (Johannes et al., 2011) and there is the significant role of the well-developed financial system in enhancing “economic growth and productivity” (King & Levine, 1993b).Further, financial services increase the economic growth (Levine, 1992) by increasing “capital accumulation and by improving the efficiency” (pp. 735, King & Levine, 1993a). Financial intermediary development enhances the income and it reduces inequality and poverty. Similarly, it has an effect on income distribution and “Financial intermediary development is pro-poor” (pp.21 Beck, Demirguc-Kunt &Levine, 2004).On the other hand, financial factors have a vital role in the growth process and key role of “stock market and bank development“ in growth(Levine & Zervos, 1998). On the other hand, several studies have shown the different relation among “Finance and Growth” in various circumstance i.e. Rioja and Valev (2004a, b), Karlsson and Mansson (2015) and Lartey (2010) etc.

Patrick (1966) further contributed the finance – growth literature by propounding the two hypotheses namely. “Supply leading hypothesis andii. Demand leading hypothesis”. In addition to earlier studies, the researchers have carried out studies on examining the causality between “finance and growth” and numerous studies, for example, Calderon and Liu (2013), Apergis et al (2007), Lyare and Moore (2014) and Al-Malkawi, Marashdeh and Abdullah (2012) etc. have shown the different direction of causality (bi-directional, unidirectional and absence of causal relation). In addition to earlier studies, different direction of causality among finance and growth is depicted for various indicators of financial development (Kagochi, Nasser &Kebede, 2013).

Many researchers examine the effects of FD on EG i.e.Beck and Levine (2004). The studies of Bolbol et al. (2005) find different results for market and bank-based indicators. According to their results, the effect of market-based indicators is positive in contrast to the negative effect of bank-based indicators on TFP. However, Beck and Levine (2004) observed a significant effect of both sectors on growth. Similar results are also found in the study of Enisan and Olufisayo (2009) and their emphasis was on enhancing the stock market and its efficiency by removing barriers to it. By using quarterly data, the findings of the Jahfer and Inoue (2014) showed that economic growth is the outcome of “stock market development and financial development”. Similarly, Nyasha and Odhiambo (2014) findings indicated the existence of apositiveassociationamong“bank-based financial development and economic growth” but this relationship is absent for market-based.

Further, the condition for growth to occur is “society invests and maintains a sufficient amount of capital in firms that augment human capital and technology in the production process” (Levine, 1991). The study of Levine and Zervos (1998) has shown that both financial sector i.e. “banking and stock market “have a significant role in long-term growth. Further, their results are similar to the former studies, which emphasized that both sectors provide different services to economic growth. Similarly, Arestis et al. (2001) findings also showed that banks and stock markets have an effect on economic growth, while the role of banks in growth is higher as compared to the later market. Falahaty and Law (2013) revealed that the "stock market and banking sector" determines financial development; however, the impact of the earlier sector is higher than the later one. Therefore, they argue for banking sector development to enhance FD in these economies. On the other hand, the banking sector quality is more important for increasing EG instead of the volume of the banking system and it depends on the banking system qualities (Venancio, 2013).

Previous studies have shown the different impacts of "stock market on economic growth". The study of Rahman and Salahuddin (2010 has shown positive effects in long and short run. Similarly, the effects of banking sector reform on growth are positive but the reforms in the stock market have no effect (Chakraborty, 2010). Also, a smaller effect on EG is observed from the stock market as compared to the banking sector (Hondroyiannis et al. 2005).Similarly, financial development i.e. "bank based and stock market" is important for increasing EG (Bayar, 2014). Likewise, Zafar and Bukhari (2015) also stressed the positive role of financial development in enhancing growth. The outcomes of the study of Liu and Hsu (2006) have shown that the effect of aggregate banking and financial indicators has positive in Taiwan, but a negative effects depicted in the other two economies.

However, inconsistent with the view of Lucas (1988) and Robinson (1952 many studies have indicated the lack of any association between "finance and growth". The findings of Muhammad and Islam (2015) are in contrast to the views of Schumpeter (1911), Goldsmith (1973) and Bagehot (1973).In addition, Mhadhbi (2014) results have shown the absence of dependence of FD on economic growth, and further he argues that it is not a vital factor of growth. Similarly, this relationship is also not observed by Gantman andDabos (2012 and their results have revealed the insignificant effect of finance on growth. This empirical study is aimed at contributing the finance – growth literature for Muslim countries. There are several studies carried out on individual Muslim countries, Arab and the Middle East, and MENA region, etc. However, lack of research especially focusing on Muslim countries around the world from Asia and Africa. Therefore, this paper aimed at investigating the mediating role of the quality of institutions in effecting "financial development on economic growth". This study further categorized FD into "stock market and banking sector development". This paper will have a contribution to the academic literature on the "finance-growth nexus". In addition, the results of this paper will help policy implication for these countries, and it encourages researchers and academicians to conduct research on Muslim countries, which are facing many economic and political problems. The period for this research is from 2000 to 2017 for Muslim countries mainly from Africa, the Middle East, and Asia.

The whole paper is distributed into four parts. In the first part, this paper briefly discusses the finance-growth literature and reviewed empirical studies and in the second part, data and variables have been discussed. Similarly, results are presented in third part of the paper and conclusion is discussed in last part.

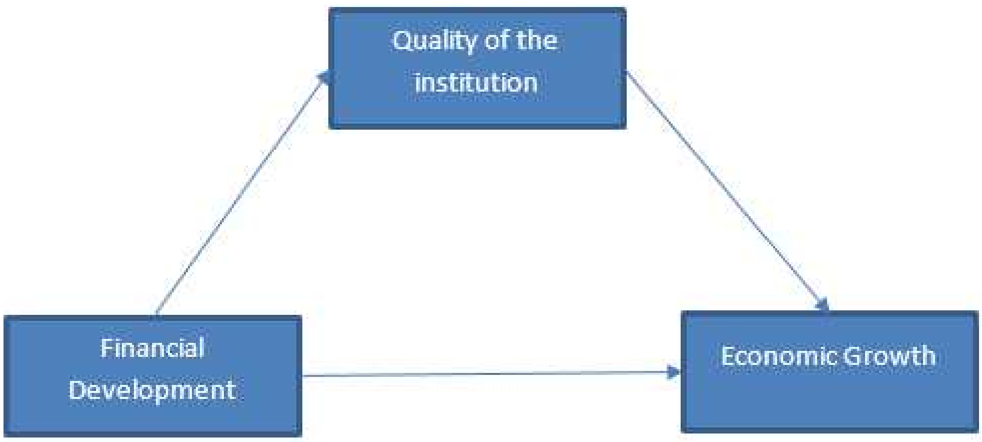
Material Methods

This paper aimed at analysing the mediating role of the quality of the institution in relationship between "financial development and economic growth" in Muslim countries. The period for this research is from 2000 to 2017for 15-selected Muslims countries. For variable selection, this study follows the previous empirical studies (Beck & Levine, 2004; Falahaty & Law, 2013).

Initially, this paper utilizes panel root tests to check the stationary/non-stationary of the variables under consideration. From above figure 01, the direct effect is the arrow from "financial development to growth" but the arrow from FD to quality of government is the indirect effect. Similarly, the arrow from the quality of government to growth is also an indirect effect. The given study has categorized the financial development into the "stock market and banking sector". This paper utilizes two indicators of the "stock market and banking sector". The proxy for the banking sector is "financial system deposits as a percentage of GDP" represented as *fsgdp*. Likewise, *smtv* measure stock market development. Lastly, the mediating variable in this research is the quality of the institution (qog).

The proposed model for this paper is given as

Figure 01: Theoretical Framework



The main hypothesis of the study is "quality of the institutions mediates the relationship between financial development and economic growth".

Results and Discussion

Table 1
Descriptive Statistics

	Gdp	*fdgdp*	*smtv*	*qog*
Mean	8680.243	50.15203	16.83173	0.499923
Median	3569.436	40.71000	5.905000	0.500000
Maximum	49588.76	126.3600	144.5700	0.666667
Minimum	497.2042	8.570000	0.000000	0.222222
Std. Dev.	10598.45	29.57265	24.78505	0.092563
Skewness	1.962117	0.738109	2.391719	-0.942884
Kurtosis	6.560428	2.571924	9.354157	3.764741
Sum	2343666.	13290.29	4275.260	134.9792
Sum Sq. Dev.	3.02E+10	230878.9	155417.5	2.304755
Observations	270	265	254	270

The results of the descriptive statistic and correlation matrix are given in Table 1 and Table 2. The outcomes of the descriptive statistics reveals that the majority of the variables of the study are "normally distributed" as the values of the skewness values lie between zero and one. In addition, the value of Kurtosis for the four variables is less than seven while the value for the rest of the two variables i.e. gdp and smtv is seven and nine respectively.

Table 2
Correlation Matrix

	gdp	*fdgdp*	*smtv*	*qog*
gdp	1.0000			
fdgdp	0.1350	1.0000		
smtv	0.2040	0.3645	1.0000	
qog	0.4521	0.5627	0.2498	1.0000

On the other hand, the results of the correlation matrix show that all variables of the study are less correlated with each other. Lastly, From Table 3, the variables of the study are stationary at first difference according to findings of the panel unit root tests.

Table 3
Panel Unit Root Results

Var.	LLC	IPS	ADF Fisher	PP Fisher
gdp	-1.45554 (0.0728)	0.34490 (0.6349)	31.8391 (0.3750)	286.137 (0.0000)
Δgdp	-2.98601 (0.0014)	-3.17347 (0.0008)	55.3670 (0.0032)	104.229 (0.0000)
qog	-1.20077 (0.1149)	-1.54205 (0.0615)	40.1654 (0.1017)	61.7489 (0.0006)
Δqog	-9.79336 (0.000)	--6.44052 (0.0000)	90.4041 (0.0000)	107.097 (0.0000)
smtv	-0.82510 (0.2047)	-0.93998 (0.1736)	33.6048 (0.2969)	53.9953 (0.0046)
Δsmtv	-6.92863 (0.0000)	-6.28129 (0.0000)	95.9796 (0.0000)	244.032 (0.0000)
fdgdp	-2.90051 (0.0019)	-0.32556 (0.3724)	30.7190 (0.4239)	46.8134 (0.0259)
Δfdgdp	-5.03267 (0.0000)	-3.67137 (0.0001)	62.6599 (0.0004)	87.8399 (0.0000)

Note: "LLC, IPS, ADF Fisher and PP Fisher show the Levin Lin and Chu test (2002), Im, Pesaran and shin (2003), Fisher ADF test and PP-Fisher rest respectively".

Banking Sector

Table 4 shows the outcome of the quality of institutions as a mediator in the case of banking sector i.e. fdgdp. The indirect effect is **0.01175** while the direct effect is .00160, which means that "partial mediation" occurs in this case. Furthermore, the sign of coefficients are positive and its corresponding p-values are zero depicting the significant effect. The findings of the banking are supporting the given hypothesis of the study.

Table 4
Mediation results of Banking Sector

Hypothesis	Estimate	p-value	Result
Ha: "Banking sector has a significant effect on the quality of the institution"	0.00175	0.000	supported
Ha: "Quality of the institution has a significant effect on the economic growth"	06.7085	0.000	Supported
Ha: "Banking sector has a significant effect on the economic growth"	0.00160	0.000	supported

Stock Market

This section discusses the role of quality of the institution as a mediator in the case of the stock market. The results of the stock market given in Table 5**.** In this case, mediation occurs because the indirect effect is .00094, which is higher than the direct effect .00109. The p-value of the paths is less than 5 %, which shows the significant effect of independent variables on the dependent variables. In sum, inconsistent with earlier results "partial mediation "occurs because the direct effect is significant after the mediator is entering the model.

Table 5
Mediation results of Stock Market

Hypothesis	Estimate	p-value	Result
Ha: "Stock market has a significant effect on the quality of the institution"	0.00094	0.000	supported
Ha: "Quality of the institution has a significant effect on the economic growth"	6.76280	0.000	Supported
Ha: "Stock market has a significant effect on the economic growth"	0.00109	0.000	supported

The mediating role of quality of the institution is observed from the findings of Table 4 and Table 5. Furthermore, influential role of both "banking sector and stock market" in affecting growth in Muslim countries. Lastly, a long run relationship is depicted among the variables. The outcomes of the study suggest that Muslim countries should enhance the quality of the institution. In addition, long-term economic growth is possible through. "Stock market and banking sector development".

Conclusion

The nexus between "finance and growth" is still unresolved debate in the literature instead of several empirical studies and theoretical models. Therefore, this research re-examine this relation by incorporating the mediating role of the quality of the government. The proponents highlighted the key and influential role of FD in development and growth (Schumpeter, 1911; Goldsmith, 1973; Bagehot, 1973), while opponents do not consider the finance as a key factor of EG (Lucas, 1988; Ram 1999).Later, several studies conducted to explore the supply and demand side hypothesis and findings highlighted mix results (existence or absence of both the hypotheses; only demand side hypothesis and supply-side hypothesis).Further, this relation is examined for different countries based on their economic characteristics (developing and developing, high and lower income) and for various level of financial development (Rioja & Valev, 2004a,b, etc.).Similarly, Rousseau and Yilmazkuday (2009) found that finance growth relation became weak in case of higher inflation and the strong relation is observed for a medium level of inflation.

There are several studies carried out on individual Muslim countries, Arab and the Middle East and MENA region. However, limited research on Muslim countries around the world. Therefore, this paper aimed at investigating the mediating role of the quality of the institution in effects of the "stock market and banking sector on economic growth" in Muslim countriesfrom2000 to 2017. These countries are mostly from Africa, Middle East, and Asia. Inconsistent with pioneering studies on finance – growth literature, the outcomes of the present study conclude that financial development is contributing growth in Muslim countries. Therefore, this paper recommended the financial market development for growth, as well as for "reduction in poverty and increasing income level of the poor" (Beck et al., 2004) in Muslim countries. Because in addition to its effect on growth "financial development is pro-poor" (Beck et al., 2004).Lastly, the influential effect of the quality of the institution on finance and growth recommends that these countries should enhance the quality of the institution for financial development and economic growth.

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