Do institutions, financial and trade openness matter for financial development? Evidence from Muslim Countries

Faqeer Muhammad
Karakoram International Universtiy Gilgit

Rehmat Karim
Karakoram International Univerity Hunza Campus

Amjad Ali (amjad.eco@kiu.edu.pk)
Karkoram International University Hunza Campus

Research

Keywords: Financial Development (FD), Institutional Quality, Trade Openness (TO), Financial Openness (FO), Muslim countries

Posted Date: April 15th, 2020

DOI: https://doi.org/10.21203/rs.3.rs-22372/v1

Do institutions, financial and trade openness matter for financial development? Evidence from Muslim Countries

Dr. Faqeer Muhammad

, Head of Department of Economics,

Karakoram International University, Gilgit-Baltistan

. faqeer@kiu.edu.pk

Rehmat Karim

, Assistant Professor,

Karakoram International University, Hunza-Campus Gilgit-Baltistan

. rehmat@kiu.edu.pk

Amjad Ali,

Assistant Professor

, Karakoram International University, Hunza-Campus Gilgit-Baltistan.

amjad.eco@kiu.edu.pk

corresponding author

Abstract

This study investigates the influence of institutional, financial openness and trade openness on financial development in the case of 26 Muslim countries. For this purpose, panel data have been taken from world development indicators for the period 2002-2014 and the panel data model has been estimated using fixed effect random effect models. The findings of this paper have highlighted the role of institutions, trade and financial openness in financial development. The results show that the quality of institution, trade openness and economic growth have significant and positive effect on financial development. Keeping in view the results, it is recommended that Muslim countries should focus on adopting free trade policies, maintaining law and order situation, elimination of corruption and enhancing the quality of institutions for financial sector development.

Keywords: Financial Development (FD), Institutional Quality, Trade Openness (TO), Financial Openness (FO), Muslim countries

Introduction

The pioneering studies, which have highlighted the role of financial development in economic growth are Bagehot (1873); Schumpeter (1911); Goldsmith (1969) and McKinnon (1973). Later, the studies of Rajan & Zinagles (1998); Levine and Zervos (1998); Levine (1997); King and Levine (1993) further explained the finance-growth nexus. These studies have shown the positive effect of finance on economic growth. However, this relation varies between individual and group of countries having various economic characteristics (Rousseau & Yilmazkuday, 2009; Rioja & Valev 2004a, 2004b). Likewise, the effects of finance on growth also varies among different countries in the short and long run (Karlsson & Mansson, 2015). Beck and Levine (2004) rejects the hypothesis which argues that financial development is "un-important and harmful" for economic growth. In contrast with earlier studies, Favarra (2003), Robinson (1952), Lucas (1988) and Ram (1999) do not consider finance as the main determining factor of economic growth. In summary, this relation is still an un-resolve issue in the literature.

In addition, to the earlier empirical studies on the nexus between finance and growth, many studies have also been conducted on exploring the determinants of financial development (Mbulawa, 2015; Law, 2007; Le, Kim & Lee, 2016; Law & Habibullah (2009); Voghouei et al., 2011b; Huang, 2005). These studies have explored institutions (Acemoglu, Johnson, & Robinson, 2001), trade openness (Baltagi, Demetriades & Law, 2009; Law & Habibullah, 2009; Law, 2007), legal factors (La Porta et al. 1997, 1998) and macroeconomic factors for example real GDP (Outreville, 1999) as the major elements of financial development. Similarly, the study of La Porta et al. (1998) studied how legal traditions i.e. civil law and common law affects FD in economies. A less develop financial system is observed where French law exists, while countries having British legal tradition have a more developed financial system (La Porta et al., 1998). In addition, a flexible nature of the legal system has also an effect on the level of financial development, the more rigid legal system the lesser financial development and vice versa (Beck, Dermiguc- Kunt & Levine 2001). Hence, keeping in view the finding of previous studies, we can conclude that well developed financial system exits in countries, which have common law but the level of financial sector development is low where civil law traditions prevail. Acemoglu, Johnson and Robinson (2005) emphasized that varying economic development in various countries is due to a difference in economic institutions. Similarly, Voghouei, Azali and Law (2011a) also considered economic

institution as a major factor of FD. In the same way, according to Demetriades and Andrianova (2004) the determinants of a successful financial system are rule of law and financial regulation. This research studies the determinants of financial development in Muslim countries for the time period 2002-2014 an it has unique significance for Muslim countries which are facing political instability, internal and external conflicts, especially in Middle Eastern countries. In addition, political systems in Muslim countries are also different; ranging from parliamentary democracy, an autocratic and presidential system. The significance of this paper is that it will contribute and add value to the existing academic literature on financial development. Lastly, the findings will have policy implications for Muslim countries.

Review of Literature

The outcome of the study for G-7 countries has revealed that the major elements of financial development are income and quality of institutions (Law & Habibullah, 2009). Similarly, the effect of trade openness is also observed in enhancing capital development while the effect of financial liberalization is weak in emerging economies and its effect is more in developed economies. They further suggest that "capital market development can be achieved by; enhancing economy; quality institution and trade openness" (Law & Habibullah, 2009, 56). On the other hand, Voghouei et al. (2011b) argued that financial development in different countries is influenced by variation in political factors. Therefore, they suggest that future studies should be focused on political economy factors. Moreover, the main determinants of FD are openness and income (Takyi & Obeng, 2013). They advocate that government should focus on maintaining price stability, a stable growth rate, lower interest rate and trade openness for increasing financial development. Le, Kim and Lee (2016) findings have highlighted that; the main factor of FD are different among developed and developing countries. The effect of economic growth in all panel and developed countries is positive and significant, whereas in developing countries its effect is insignificant. Lastly, the effect of TO is positive for all panel groups, but the substantial influence is only observed in developed countries.

The results of Falahaty and Law (2013) have shown that the economic growth rate, openness, quality of institutions and bank concentration is significant on financial development, while the outcomes of DOLS have shown that only two indicators trade openness and bank

concentration are affecting FD. Further, they emphasize on macroeconomic stability, development, quality of institutions and liberalized economic policies for financial development. However, price stability and banking sector development are the pre-conditions for a positive effect of liberalized economic policies on FD. Conversely, the outcome of Cherif and Dreger (2016) has revealed that "trade openness and institutional quality are important for financial development i.e. the banking sector and the stock market". In addition, both corruption and law & order are important precursors for a stock market, whereas among other factors, corruption has a substantial effect on the banking sector. However, GDP per capita income and inflation have no effect on financial development. Further, they suggest that the policy should be focus on economic integration by maintaining law & order situation and curbing corruption.

The researchers Ayadi et al. (2013) asserted that reforms in the financial sector, governance and strong legal institutions are factors affecting FD, and the effect of inflation is negative on the banking sector. They argued that improvement in the banking sector is possible either by reducing government expenditures, financial reforms, or through institutions. In developing and industrial countries, domestic credit increases as a result of financial development (Sogut, 2008). Likewise, the influence of inflation on financial development is positive in high income, and its effect is negative in low income countries. A cross sectional study conducted by Benyah (2010) revealed that trade openness is an important factor for financial development and its effect is positive except in year 1995. On the other hand, excluding 2005, the effect of financial openness and GDP is insignificant. He suggests that improvement in institutional development and increasing international trade is essential for financial development. Further, "macroeconomic stability and sound legal system is also required for financial development to have a positive influence on economic growth" (Benyah, 2010).

Raza, Shahzadi and Akram (2014) observed that except rule of law and FDI inflow, the factors that are positively affecting financial development are population, agriculture as a % of GDP, trade openness, government spending, and democracy. Similarly, financial openness have an effect on equity market development (Chinn & Ito, 2006). Further, they also discovered that development of the equity market is the outcome of banking sector development; and for capital account liberalization, the precondition is trade openness. Likewise, trade openness and

institutions are affecting financial development but insignificant effect of culture on financial development (Herger, Hodler & Lobsiger, 2008).

Alam, et al., (2015 results have indicated the varying relationships among financial development and pollution. According to the results, CO_2 has a positive impact on all indicators of financial development except inflation. However, the effect of density of population is negative. Hassan and Murshed (2015) observed that governance is good for financial development while armed conflict has a negative influence on financial development. In addition, their findings have shown that governance quality is more important even in the situation of conflict. Outreville (1999) used cross- sectional analysis to analyse the effect of political instability and human development on financial development. The study has shown that various measures of financial development are positively related to human development index while having a negative relation with political instability. In addition, real GDP and human development indicators have significant effect and political in-stability has a negative effect on financial development.

Similarly, regulations and economic freedom are other factors that influences FD and more financial development is possible in countries, which have higher economic freedom (Hafer, 2013). The important determinants that are affecting financial development are GDP per capita, GCF, institutional factors and saving (Mbulawa, 2015). Furthermore, the conditions for financial development are low level of corruption, institutional development, lower violence, and maintain law and order situation. Lastly, Guiso, Sapienza and Zingales (2004) found a positive affiliation between social capital and financial development. In addition, their results have shown the positive link among various measures of financial development and trust.

Data and methods

This paper analyses the elements of financial development in Muslim countries for the time period 2002 to 2014 by employing panel data method, because panel data has several advantages like; "panel data controlling for individual heterogeneity" (Baltagi, 2005: 4). Also, "panel data provides efficient estimation of parameters, provides more information to the analyst and also it allows dynamic behavior of the parameters" (Asteriou & Hall, 2007; 368). In addition, the time series data has a problem of Multicollinearity, whereas in panel data it is not (Baltagi, 2005). Therefore, this paper adopted "fixed effect (FE) and random effect (RE) method" for empirical

analysis. Additionally, Hausman test is employed to choose the FE or RE method. In literature, financial openness has been measured by "de jure and de facto measures". The "de facto measure" is developed by Lane and Milesi-Ferretti (2006) and a "de jure" is developed by Chin and Ito (2006). This paper also utilizes a "de facto measure of financial openness" keep in view of the availability of data for majority of the panel countries. Out of two measures of financial openness; "foreign direct investment inflow as % of GDP and gross capital formation (GCF) as a % of GDP, this paper utilizes FDI inflow as a measure of financial openness by following" Matadeen and Seetanah (2013).

Similarly, financial development is measured by *dc*, which is widely used in literature for measuring financial development. Moreover, institutional quality variable is constructed from World Governance Indicators (WGI) data by following Le, Kim and Lee (2016). GDP per capita is incorporated in the regression to examine the effect of economic growth on finance. Lastly, inflation is used to measure the effect of macroeconomic stability. All variables of the study are converted into natural logarithm except institutions. The details of variables have been given in Table 01. The proposed model is given as

$$\text{fd} = \text{f (insq, top, fo, gdp, inf)} \quad (1)$$

$$fd_{it} = \beta_o + \beta_1 insq_{it} + \beta_2 top_{it} + \beta_3 fo_{it} + \beta_4 gdp_{it} \quad \beta_6 inf_{it} + u_{it} \quad (2)$$

Where fd is dependent variable representing financial development. On the other hand, the independent variables include; institutional quality (*insq)*, trade openness (*to*p), financial openness (*fo*), economic growth (*gdp*) and inflation (*inf*).

Table 1 Variables Description

Variable	Description	Sources of data
gdp	Gross domestic per capita in Million US dollar represents economic growth.	WDI
fo	Financial openness measures as a FDI inflow as a percentage of GDP	WDI
dc	Domestic credit as percentage of GDP	
top	Trade openness measured as a trade as percentage of GDP	WDI
inf	Consumer price index to measure price stability	WDI
insq	Institutional quality is measured by Combination of six indicators	WGI

Results and Discussion

The current study utilizes fixed effect (FE) and random effect (RE) method to determine the various factors of FD in Muslim countries. In addition, Hausman test is employed to select random or fixed effect method. The findings of random effect (RE) and a fixed effect (FE) are presented in Table 2. These findings have revealed that, the effect of economic growth is positive and significant on financial development. The researchers, Falahaty and Law (2013) also consider economic growth as a key factor for enhancing financial development. In line with the study of Law and Habibullah (2009), institutional quality is also an influential factor of FD with a significant effect in both random and fixed effect method. Likewise, trade openness is also a key factor of financial development in Muslim countries and researchers (Takyi & Obeng, 2013; Le, Kim & Lee, 2016) obtain the similar outcomes. However, the effect of financial openness is positive and insignificant in line with the former studies (Takyi & Obeng, 2013; Outreville, 1999; .Ayadi et al., 2013). The effect of inflation is negative on financial development and former studies have shown that in low-income countries the effect of inflation is positive but in high-income countries its effect is negative (Sogut, 2008).

Table 2 Estimation Results

variables	Fixed Effect	Random Effect
gdp	0.734***	0.308***
	(7.55)	(5.33)
insq	0.312*	0.295*
	(2.29)	(2.32)
top	0.601***	0.499***
	(5.14)	(4.33)
fo	0.00573	0.0200
	(0.31)	(1.06)
inf	-0.0843**	-0.0598*
	(-3.23)	(-2.22)

Note: t statistics in parentheses * p<0.05, ** p<0.01, *** p<0.001

Hence, the factors, which have a significant and positive influence on financial development, are quality of the institution, TO and economic growth. Similarly, the effect of financial openness is positive, but its effect in significant. However, the effect of inflation is negative and significant on FD. Therefore, the findings of this study recommend that these economies should follow free trade policies, enhance the quality of institutions and follow growth-oriented policies. The probability value of the Hausman test is Prob>chi2 = 0.7626, therefore random effect method is more desirable.

In summary, the findings of this study put emphasis on improving the quality of institutions, maintaining price stability and adopting trade liberalization policies for FD in Muslim countries. In addition, these economies also focused on growth-oriented policies

Conclusion and recommendations

This paper sought to analyse the determinants of FD in selected Muslim countries from 2002 to 2014 by adopting random and fixed effect methods. By following the previous studies, this study used domestic credit as a % of GDP represented as (dc) to measure FD. The outcomes of the study have reveals that institutional quality has a noteworthy and positive influence on FD. The outcomes of the study are in line with the several previous studies (Falahaty & Law 2013; Herger et al., 2008; Ayadi et al., 2013). In addition, a negative effect is observed for variable representing

macroeconomic stability i.e. inflation. It is further evident from the findings that trade openness also significantly and positively influences FD. As trade openness increases, the market size and demand for financial activities also increase. The outcomes of the current research are consistent with the studies of Law and Habibullah (2009), Chin and Ito (2006), Benyah (2010), and Raza et al., (2014). This study recommends that policies should focus on; trade liberalization, maintaining law and order situation, control on corruption and enhancing the quality of bureaucracy in Muslim countries. Also, to enhance financial system efficiency, these economies should also improve the legal system and institutional development, because both are prerequisites for financial development (Beji, 2007). Last, but not the least, it is recommended that the policy makers should maintain price stability in these economies.

DECLARATIONS

Availability of Data and Materials

Author declared that they have all the data are available at WDI on world bank side

Conflict of Interest

The authors declare that there is no conflict of interests regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancy have been completely observed by the authors.

Funding

This study did not receive any funding

Author Contributions

Amjad Ali has worked in conceptualizing the study, overall study design and data analysis. Dr. Faqeer has given his input in formulation of econometric model and estimation of the model and Mr. Rehmat has worked in literature review, data collection and drafting the paper.

Acknowledgment

Authors would like to thank to Dr. Kifayat Ullah for his valuable inputs to this draft.

References

Acemoglu, D., Johnson, S. & Robinson, J.A. (2001). The Colonial Origins of Comparative Development: An Empirical Investigation , *American Economic Review*, 91(5): 1369–1401.

Acemoglu, D., Johnson, S., & Robinson, J. A. (2005). Institutions as a fundamental cause of long-run growth. *Handbook of economic growth*, *1*, 385-472.

Alam, A., Azam, M., Abdullah, A. B., Malik, I. A., Khan, A., Hamzah, T. A. A. T., & Zaman, K. (2015). Environmental quality indicators and financial development in Malaysia: unity in diversity. *Environmental Science and Pollution Research*, *22*(11), 8392-8404.

Ayadi, R., Arbak, E., Naceur, S. B., & Groen, W. P. (2013). Determinants of Financial Development across the Mediterranean. MEDPRO Technical Reports.

Asteriou, D., Hall, S.G. (2007). Applied Econometrics: A modern Approach, E-Views and Microfit. Palgrave Macmillan

Baltagi, B .H. (2005). Econometric analysis of panel data: Chichester, England: John Wiley & Sons Ltd.

Bagehot, W. (1878). Lombard Street. A description of the money Market. C. Kegan Paul.

Beji, S. (2007). Financial openness and financial development in the South Mediterranean Sea countries: Institutional approach and calculation of developing thresholds. *European Research Studies*, XI (3-4)

Baltagi, B. H., Demetriades, P. O., & Law, S. H. (2009). Financial development and openness: Evidence from panel data. *Journal of development economics*, *89*(2), 285-296.

Beck, T., & Levine, R. (2004). Stocks markets, banks and growth: Panel evidence. *Journal of Banking and Finance*, 28 (3), 423-442

Beck, T., Dermiguc-Kunt, A., & Levine, R. (2001). Legal theories of financial development. *Oxford Economic Review*, 17(4), 483-501

Benyah, F.E.K (2010).The Determinants of Financial Development: A Focus on African Countries. Master thesis in Economics, Jonkoping University.

Chinn, M. D., & Ito, H. (2006). What matters for financial development? Capital controls, institutions, and interactions, *Journal of Development Economics*, 81 (1), 163-192.

Cherif, M., & Dreger, C. (2016). Institutional determinants of financial development in MENA countries. *Review of Development Economics*. 20(3), 670–680.

Demetriades, P., & Andrianova, S. (2004). Finance and growth: what we know and what we need to know. In *Financial development and economic growth* (pp. 38-65). Palgrave Macmillan, London

Falahaty , M., & Law, S.H. (2013). The determinants of financial development: New evidence from the Middle East and North African Countries. *SIU Journal of Management*, 3, (1)

Favarra, G. (2003). *An empirical reassessment of the relationship between finance and growth* (No. 3-123). International Monetary Fund

Goldsmith, R. W. (1969). Financial structure and Development. New Haven: Yale University Press

Guiso, L., Sapienza, P., & Zingales, L. (2004). The role of social capital in financial development. *American economic review*, *94*(3), 526-556.

Herger, N., Hodler, R., & Lobsiger, M. (2008). What determines financial development? Culture, institutions or trade. *Review of World Economics*, *144*(3), 558-587.

Huang, Y. (2005). What determines financial development? Department of Economics, University of Bristol, 8 Woodland Road, Bristol BS8 1TN

Hassan, M. R., & Murshed, S. M. (2015). Does civil war hamper financial development? *Defense and Peace studies*, *28*(2), 188-207.

Hafer, R. W. (2013). Economic freedom and financial development: International evidence. *Cato J.*, *33*, 111.

Karlsson, K. H., & Mansson, K. (2015). Revisiting the nexus of the financial Development and economic growth–Wavelet approach with a focus on Asian economies. In *Research Network Debate, Swedish Entrepreneurship Forum, Stockholm*.

Levine, R., & Zervos, S. (1998). Stock markets, banks, and economic growth. The American Economic Review, 88(3), 537-558.

King, R. G., & Levine, R. (1993). Finance and growth: Schumpeter Might be right. *The Quarterly Journal of Economics*, 108(3), 717-737

Lane, P.R., & Milesi-Ferretti, G.M. (2006). The external markets and pattern of international trade. *Journal of Development Economics*, 27, 57-70

Law, S. H., & Habibullah, M. S. (2009). The determinants of financial development: Institutions, openness and financial liberalisation. *South African Journal of Economics*, *77*(1), 45-58.

Law, S. H. (2007). Openness and Financial Development: Panel data evidence from various stages of development. *Journal of Emerging Market Finance*, 6(2), 145-65.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1997). Legal determinants of external finance. *The journal of finance*, *52*(3), 1131-1150.

Porta, R. L., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1998). Law and finance. *Journal of political economy*, *106*(6), 1113-1155.

Lucas, R.E. (1988). On the mechanics of Economic development. *Journal of Monetary Economics*, 22, 3-42.

Levine, R. (1997). Financial Development and Economic Growth: Views and Agenda, *Journal of Economic Literature*, XXXV, 688-726.

Le, T. H., Kim, J., & Lee, M. (2016). Institutional quality, trade openness, and financial sector development in Asia: An empirical investigation. *Emerging Markets Finance and Trade*, *52*(5), 1047-105.

Matadeen, J., & Seetanah, B. (2013). Financial Development, Financial Openness and Trade Openness: Evidence from Mauritius. In *International Conference on Information Theoretic Security*.

McKinnon, R.I. (1973). Money and Capital in Economic Development. Brookings Institution, Washington DC.

Mbulawa, S. (2015). Determinants of financial development in Southern Africa development Community (SADC): Do institutions Matter? *European Journal of Accounting Auditing and Finance Research*, 3(6), 39-62.

Outreville, J. F. (1999). Financial development, human capital and political instability. United Nations Conference on Trade and Development (UNCTAD), Geneva.

Ram, R. (1999). Financial development and economic growth: additional evidence. *Journal of Development Studies*, 35(4), 164–74.

Rajan, R. G., & Zingales, L. (1998). Financial Distress and Growth. *The American Economic Review*, 88 (3), 559-586.

Rioja, F. & Valev, N. (2004a). Does one size fit all? A re-examination of the finance and growth relationship. Journal of Development Economics, 74 (2), 429-447.

Rioja, F. &Valev, N. (2004b). Finance and the sources of growth at various stages of economic development. *Economic Inquiry*, 42 (1), 127-140.

Robinson, J. (1952). The Rate of Interest and Other Essays. The Generalization of general Theory, pp. 67-142. London: MacMillan.

Rousseau, P. L., & Yilmazkuday, H. (2009). Inflation, financial development, and economic growth: A trilateral analysis. *Economic System*, 33, 310-324.

Raza, S. H., Shazadi , H., & Akram , M. (2014). Exploring the Determinants of Financial Development (Using Panel Data on Developed and Developing Countries). *Journal of Finance and Economics*, 2(5), 166-172.

Söğüt, E. R. Z. E. N. (2008). The determinants of financial development and private sector credits: Evidence from panel data. *Middle East Technical University, etd.lib.metu.edu.tr*.

Schumpeter, J. A. (1911). The theory of Economic Development. Harvard University Press.

Takyi, P. O., & Obeng, C. K. (2013). Determinants of financial development in Ghana. *International Journal of Development and Sustainability*, 2(4), 2324-2336.

Voghouei, H., Azali, M., & Law, S. H. (2011 check incite reference). Does the Political institution matter for financial development? *Economic papers*, 30 (1), 77-98.

Voghouei, H., Azali, M., & Jamali, A.M. (2011b).A survey of the determinants of financial development, *Asian Pacific Economic Literature*. 25(2), 1–20.

World Bank (2016). World Development Indicators (WDI). The World Bank Group.

World Bank. World Governance Indicators (WGI). The World Bank Group.