An Analytical Examination of the Effects of Financial Development on Poverty

Samira Motaghi
Department of Economics, College of Humanities, Payam-e-Noor University,
(Corresponding Author)
samira.motaghi@gmail.com

Mohammad Reza Ranjbar Fallah
Department of Economics, College of Humanities, Payam-e-Noor University

Salah Ebrahimi
Department of Economics, College of Humanities, Chamran University

ABSTRACT

Financial development is one of the pillars of economic development and growth at national level. While it improves revenue at macro level, its effect on distribution of wealth or income inequality and poverty is unknown. Therefore, the present paper is an analytical attempt to analyze the effects of financial development on poverty along with the factors effective in poverty in selected member countries of the Organization of Islamic Cooperation (formerly Organization of the Islamic Conference). By this study, the author hopes to take a small step towards alleviation of poverty in the Islamic countries that claim to be the leaders of justice and eradication of poverty. Based on the findings, ineffectiveness of the financial development index “ratio of private sector credit to gross domestic production” and the positive effect of government consuming spending on poverty are indicatives of state control on the economy in the selected Muslim countries. Expectedly, the private sectors in these countries is smaller and thinner than their public sectors. It is argued that the productivity of the credits to the private sector, in the countries under study, is not enough to affect distribution of wealth and poverty in return. Moreover, ineffectiveness of the other indices of financial development (ratio of liquidity to GDP) and the positive effect of inflation rate on poverty show that liquidity in Muslim countries has led to a higher inflation rate, inequality, and spread of poverty. Finally, the limited effect of the combined index of financial development in the Islamic countries on poverty indicates inefficiency of financial sector in these countries.

Keywords:

Financial Development, Liquidity, Poverty, Muslim Countries.

1. Introduction

According to economists like Schumpeter (1934) and Harris (1988) developed financial systems are the driving force of economic development and growth at national level. Through attenuating the costs of supervision, transactions, and information, such systems play a key role in improvement of financial intermediary. By finding and funding business opportunities, equipping savings, covering and diversifying risks and facilitate goods and services transactions, developed financial systems prepare the ground for expansion of investment opportunities. Better allotment of resources, improvement of investment, and accelerating capital accumulation lead to higher economic growth and national revenue at macro levels (Greane et al., 2004 , Dela et al, 2013).

A notable point, however, is the effectiveness of financial development on distribution of wealth -i.e. income inequality and poverty. It is not clear if higher income and productivity are the only outcomes of financial development or it also leads to more just wealth distribution and attenuates income inequality and poverty? This is a critical issue mainly for the developing and even undeveloped countries including Muslim countries that claim to be the pioneers of expanding equality, social justice, and eradicating poverty (Agbodji et al, 2015) The point is that despite a desirable economic growth rate in some of these countries, which many factors are responsible for, inequality and poverty still are not eradiated in these countries. Given that financial development, apparently and like development of financial and credit tools, can provide the opportunity for poor and low-income classes to take part in economic activities; however, underdeveloped financial markets, failure of formation of domestic gross capital, absence of a political structure to support economic development, state's control on economy and small private sectors in Muslim countries add to the risk of using financial development (Pogge ,Wisor, 2016). In light of this, the present study is a survey of the effectiveness of financial development in alleviation of poverty in the Muslim countries. The study asks "If financial development in the selected members of the Organization of Islamic Cooperation (OIC) is effective in alleviation of poverty in these countries?"

2. Literature Review

The literature of the relationship between financial development and poverty is divided into two general groups.

First group argues that there is a linear and inverse relationship between financial development and poverty (Alkire et al, 2017). The main attention is on human capital and investment on it as a way to attenuate poverty. It is said that a long-term income correlation between the rich and poor is not certain in economies without capital market where investment in physical and human capitals are not distinguishable. In addition and given the preliminary distribution of wealth, there is a high risk of stagnancy of income inequality. However and with the development of financial markets, credit barriers on the way of the poor are alleviated, which in turn leads to a decrease in poverty and inequality. In other words, development of market and financial intermediaries improve distribution of wealth through removing capital market faults and creating more opportunities for the poor to make investment in human capitals (Batana, 2013)

The second group puts the highest emphasis on physical capital, and by supporting Kuznets' (1995) theory, argues that financial development improves economic growth at the early stages of development and the growth, in turn, facilitates investment in financial infrastructure. At this stage, the membership fee of financial markets is a barrier for participation of individuals with low income and since they save less, their wealth accumulation is slower. Therefore, the income gap between those participating in financial market and those who do not is widen, which means higher inequality (Kuznets, 1995).

However, when the financial structure is fully developed and a larger group of individuals find access to the financial market, the level of inequality decreases and it is stabilized eventually (Greenwood and Jovanovic, 1990).

Accordingly, at the early stages of development, financial intermediaries, which are less developed, work in favor of the wealthy and increase inequality and poverty. Later and when the country is developed and incomes are higher, poverty and income gap decline and more households can have access to financial intermediaries.

All these three theories are built on growth theory in favor of the poor and trickle-down effect, which argue that growth, no matter how small, alleviate poverty and benefits the poor. In other words, growth is good for the poor, when they can enjoy even a small portion of the benefits of growth, although the wealthy enjoy the larger piece (Ravallion, 2004). The point is that through growth and development, a portion of the increase in the wealth of wealthy is transferred to the poor. One can say, that with economic development, wealth trickles down (Stiglitz, 2003) and poverty and inequality alleviate.

There are other theories as well, that express different ideas. They say that developed lead to alleviation of poverty and inequality when the poor's income growth rate is higher than that of the wealthy (McCullock & Boulch, 2000). In light of this, when the poor cannot use credits and compete with the wealthy to use financial markets, despite financial development (Dangel-Hagnauer, 2002), such development may make poverty as a permanent phenomenon and increase the costs of education and health services to an unbearable level for the poor.

This hypothesis was examined by economists like Clark G et al. (2006) and Alkire, S (2014) and they found that when institutes in a society are of low quality, financial resources are mostly directed towards the wealthy and influential groups. In addition, without collateral to take loans out, the poor are deprived from financial resources, which leads to a higher income gap between the poor and rich.

3. Methodology

3.1. Variables and data

Following an analytical-descriptive approach and modeling method, the effects of financial development and its indices on poverty in Asian countries were examined. This was done using panel data method, Eviews 10, and World Bank data from 1990 to 2017.

The study population included 57 Muslim member countries of the OIC. The dependent variable is poverty index (P), defined as the percentage of the individuals with less than US$1.9 income per day. The independent variable was gross domestic production (GDP- purchase power parity) and control variables were inflation rate (INF), exchange ratio to GDP (OPEN), government size (GOV), government spending to GDP, and financial development index (FD) (Hamorie&Hashiguchi, 2012; Beck et al., 2007).

3.2. Results of the model

The model used in the study is as follows:

$$P_{it} = a_0 + a_1 FD_{it} + a_2 GDP_{it} + a_3 INF_{it} + a_4 OPEN_{it} + a_5 GOV_{it} + +uit \quad (1)$$

Financial development index covers three variables. the ratio of private sector credit to GDP (PRI), annual growth rate of money in general term including ratio of money to liquidity to GDP (M), CPIA financial development index. A negative coefficient is expected for this index -i.e. a higher financial development index may lead to alleviation of poverty and inequality.

Table 1- Common root test on the variables of the model

Variable		P	INF	OPEN	GOV	FD	GDP
Levin, Lin & Chu)probability (PRI	On the surface, y-intercept, without trend	9.32 (0.00)	1.34 (0.83)	15.52 (0.00)	2.03 (0.78)	17.9 (0.00)	19.12 (0.00)
	First order difference	-	12.15 (0.00)	-	(16.42) (0.00)	-	-
Levin, Lin & Chu)probability(M	On the surface, y-intercept without trend	18.32 (0.00)	1.09 (1.00)	17.05 (0.00)	1.34 (1.00)	16.9 (0.00)	25.4 (0.00)
	First order difference	-	18.9 (0.00)	-	24.6 (0.00)	-	-
Levin, Lin & Chu CPIA	On the surface, y-intercept without trend	15.8 (0.00)	1.09 (1.00)	12.34 (0.00)	1.78 (0.75)	17.45 (0.00)	12.56 (0.00)
	First order difference	-	10.26 (0.00)	-	24.34 (0.00)	-	-

Source: results of the study

As the results listed in Table 1 show, all the variables are either at a significant level I(0) or become stagnant with one differencing I(1).

To estimate the general model based on panel data method, we need to determine whether y-intercepts are equal or not? To this end, F-limer test was used.

$$F(n-1\ ,\ nt-n-k) = ((R^2U - R^2R)/n-1)/((1-R^2U)/nt-n-1) \quad (3)$$

Where, R^2U stands for estimation using fixed-effect method and square sum of errors of the estimated model assuming different y-intercept values; R^2R stands for estimation using PLS (Pooled + OLS) and square sum of estimated errors assuming a fixed y-intercept value; *n* stands for the number of levels; *t* stands for time series observations; and *k* stands for descriptive variables of the model.

To determine the best method (fixed or random effects), Hausman test was used with the suitable or noun suitable assumptions for random effect.

The results of the model for each three models indicate that the model is estimated through fixed-effect method.

Table 2- Analytical survey of the effects of financial development on poverty

VARIABLE	Model 1- PRI replaces FD	Model 2- M replaces FD	Model 3- CPIA replaces FD
INF	0.15 (0.00)	0.38 (0.00)	0.31 (0.00)
OPEN	-0.13 (0.00)	-0.31 (0.00)	-0.19 (0.00)
GOV	0.21 (0.00)	0.45 (0.00)	0.25 (0.00)
GDP	-0.28 (0.00)	-0.39 (0.00)	-0.34 (0.00)
FD	Insignificant	Omitted	-0.03 (0.01)
ESTIMATION METHOD	Fixed effects	Fixed effects	Fixed effects
(R^2)	0.58	0.65	0.62
F-VALUE	65.7 (0.00)	83.5 (0.00)	92.7 (0.00)

Source: findings of the study (at 5% and 10% levels)

Results obtained for the three models with the variables “private sector credits to GDP” (model 1), “annual growth rate money in general term including ratio of money to near money (liquidity) to GDB” (model 2), and “financial develop index- CPIA (model 3) showed,

a) All the three estimated models are significant at 5 and 10% levels. In addition, most of the coefficients have an acceptable level of significance. Only the variable financial development was insignificant in the models 1 and 2. This shows ineffectiveness of private sector credits to GDP and ineffectiveness of liquidity to GDP on poverty in the selected members of ICO. One of the reasons that the effects of financial development in developing countries are meaningless is high inflation and insufficient supervision over credit payments, which ultimately stimulates demand, increases inflation and sometimes even spreads poverty and lowers real income. Another reason is the low development of the financial sector in Muslim developing countries that cannot meet the goals of poverty reduction and growth.

b) Based on the value of (R^2) and total error probability of the model, the three models are at an acceptable level and significant.

c) The coefficients of the independent variables viz. INF, openness, GDP, and GOV have the same sign (+ OR –) in all three models. That is, an increase in INF of the countries under study, leads to a higher level of poverty. That means inflation has worsened the poverty situation in the countries under study. In inflationary conditions, more people are below the poverty line.

In the case of inflation, wages do not increase in proportion to the rate of inflation, and as a result, the real wage drops. On the other hand, asset value of people with physical capital is increased by inflation. This is in fact a form of transfer of assets from wage earners to individuals with physical assets. As a result, inflation can lead to a widening income gap and worsening income distribution. Of course, inflation can sometimes improve the distribution of income. If inflation includes basic goods, it will cause more inequality, and when inflation involves luxury goods, it will reduce inequality.

This is while economic growth and openness alleviate poverty. International trade has also led to the expansion of the production process by expanding the market for goods and services. Trade liberalization is a technology transfer through the import of advanced capital goods. Such imports of capital goods with state-of-the-art technology also boost growth with export receipts and boost foreign capital inflows. As a result, opportunities for employment and income generation increase and can provide the basis for poverty reduction. Economic growth also increases per capita income and reduces poverty and inequality by increasing the average income of society.

d) The positive effect of GOV on poverty in the selected members of OIC is an indicative of the notable role of government in the fight against poverty in these countries. The government uses tax policies to obtain the resources needed to implement its policies. Among policies, how to raise and get tax will affect the growth in production and poverty, and the government can reduce poverty in the slum by granting tax exemptions, while creating employment and increasing income.

4. Results

According to the results of the present study, financial development had no significant effect on poverty. One reason that the effects of financial development in developing countries are meaningless is high inflation and insufficient supervision over credit payments, which ultimately stimulates demand, increases inflation and sometimes even spreads poverty and lowers real income. Another reason is the low development of the financial sector in developing countries that cannot meet the goals of poverty reduction and growth.

According to the results, inflation has a positive and significant effect on poverty. In other words, inflation has worsened the poverty situation in the countries under study. In inflationary conditions, more people are below the poverty line. In other words, under these conditions, wages do not increase in proportion to the inflation rate and, as a result, the real wages decrease. On the other hand, asset value of people with physical capital is added by inflation. This is actually a form of transfer of assets from wage earners to individuals with physical assets. As a result, inflation can lead to a widening income gap and worsening income distribution. Inflation, however, can sometimes improve the distribution of income. If inflation includes basic goods, it will cause more inequality, and when inflation involves luxury goods, it will reduce inequality.

It was also found that trade liberalization have had a significant negative impact on poverty in the estimation models. Trade liberalization is a technology transfer through the import of advanced capital goods. Such imports of capital goods with state-of-the-art technology also boost export growth and boost foreign capital inflows. As a result, opportunities for employment and income generation increase and can provide the basis for poverty reduction.

In addition, economic growth will also increase per capita income and reduce poverty and inequality in society by increasing the average income of society. The effect of the government size index on poverty has also been negative, indicating the role of the government in reducing poverty.

Also, the research results showed that the government obtains the resources needed to implement its policies using the tax policies. Among policies, how to raise and obtain tax affect production growth and poverty. The government can reduce poverty in poor areas by granting tax exemptions, while creating employment and increasing income.

Finally, economic growth in all three estimation models also had a negative effect on poverty. In other words, economic growth in the countries under study was poor. Economic growth can be effective in reducing poverty by increasing per capita income as well as increasing employment and income opportunities.

5. Discussion and Conclusion

The role and importance of financial institutions in the process of economic growth and development of countries is such that experts do not consider sustainable economic development possible without the growth and development of financial markets. Even some economists consider the difference between developed and developing economies as the development of financial markets and the underdevelopment of these markets in developing or underdeveloped countries.

Financial development is one of the pillars of economic development and growth at national level. Through it, countries can enjoy increase of income at macro level, while its effect on distribution of wealth – i.e. income gap and poverty – is not clear. Therefore, the effects of financial development on poverty, an outcome of in equal distribution of wealth and income gap, was examined in the selected members of OIC between 1990 and 2017 using panel data method. The results showed that:

a) The variables economic growth, openness, inflation, and size of government were the main effective factors in poverty in the selected members of OIC. Inflation and size of government increased poverty, while economic growth and openness alleviated poverty.
b) Insignificance value of the ratio of private sector credits to GDP means that private sector is not comparable to public sector in size in the countries under study. Credits provided to the private sectors in these countries do not have the efficiency to be effective on distribution of wealth and income. The significant and positive relationship between government spending and poverty shows that the countries under study have state-run economies and any economic inefficiency of the government, spending in particular, directly affects poverty and inequality in the Muslim countries.
c) Unsatisfactory estimate by the model with ratio of liquidity to GPD and inflation and re-estimating without the index M means that liquidity and inflation are co linear -i.e. liquidity in these countries leads to a higher inflation rate, poverty, and inequality (this is supported by the positive relationship between inflation and poverty).
d) Effectiveness of the third index (CPIA) on poverty and ineffectiveness of PRI and M show that the index of private sector credit and liquidity are not reliable indicators of financial development in the Muslim countries. Moreover, very limited effect of CPIA as a mixed index of financial development on poverty is an indicative of very small effect of financial development on inequality in the countries under study. This might be due to small and undeveloped financial sectors in the Muslim countries

References

1) Agbodji, A. E., Batana, Y. M., & Ouedraogo, D. (2015). Gender inequality in multidimensional welfare deprivation in West Africa: The case of Burkina Faso and Togo. International Journal of Social Economics, 42(11), 980–1004. doi.org/10.1108/IJSE-11-2013-0270.
2) Alkire, S., Roche, J. M., & Vaz, A. (2017). Changes over time in multidimensional poverty: Methodology and results for 34 countries. World Development, 94, 232–249. doi.org/10.1016/j.worlddev.2017.01.011.
3) Alkire, S., & Seth, S. (2014). Inequality among the MPI poor, and regional disparity in multidimensional poverty: Levels and trends. OPHI Briefing 25. Oxford: University of Oxford. Retrieved from: http://www.ophi.org.uk/wp-contentuploads/Inequality-Among-the-MPI-Poor-and-Regional-Disparity-in Multidimensional-Poverty-Levels-and-Trends.pdf?0a8fd7.
4) Batana, Y. M. (2013). Multidimensional measurement of poverty among women in Sub-Saharian Africa. Social Indicators Research, 112(2), 337–362. doi.org/ 10.1007/s11205-013-0251-9.
5) Beck, Thorsten and Augusto de la Torre, 2007, "The Basic Analytics of Access to Financial Service: Financial Markets, Institution and Instruments," World Bank Publications,Vol. 17, pp. 79-117 (Washington: World Bank).
6) De la Torre, Augusto, Erik Feyen, and Alain Ize, 2013, "Financial Development: Structure and Dynamics." World Bank Economic Review, forthcoming.
7) Dangel-Hagnauer, C. (2002). Schumpeter on the institution of money. In R. Arena and C. Dangel-Hagnauer (eds), 2002.
8) Greenwood, J., Jovanovic, B. (1990).Financial Development, Growth and the Distribution of

Incom, The Journal of Political Economy, Vol 98, N05 : 1076-1107

9) Harris, L. (1988). Alternative Perspectives on the Financial System. In L. Harris et al (eds.), Perspectives on the Financial System. London: Croom Helm
10) Hamori, S., & Hashiguchi, Y. (2012). The effect of financial deepening on inequality: Some international evidence. Journal of Asian Economics, 23(4), 353-359.
11) Kuznets, S (1995). Economic growth and income inequality, The American Economic Review, vol 45, no 1: 1- 28.
12) McCulloch, N., Robson, M. and Boulch, B. (2000). Growth, Inequality and Poverty in Mountania: 1987-96. IDS working paper, Sussex, Institute of Development studies.
13) Pogge, T., & Wisor, S. (2016). Measuring poverty: A proposal. In M. Adler & M. Fleurbaey (Eds.), The Oxford handbook of well-being and public policy (pp. 645–676). Oxford: Oxford University Press.
14) Ravallion, Ma. (2004). Pro-Poor Growth: A Primer. Policy Research Working Paper;No.3242. World Bank, Washington, D.C.. © World Bank. https://openknowledge.worldbank.org/handle/10986/14116 License: CC BY 3.0 IGO."
15) Schumpeter, J.A. (1934). The Theory of Economic Development : An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle. Cambridge (Mass.): Harvard University Press