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28 November 2017

Online at <https://mpra.ub.uni-muenchen.de/82976/>

MPRA Paper No. 82976, posted 29 Nov 2017 05:24 UTC

Financial Liberalisation and Economic Growth: A Preliminary Analysis

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Abstract:

In Pakistan, various measures were undertaken during the period of 1989 to 1994 to liberalize financial sector as part of the overall structural adjustment program (SAP) with the objective to promote economic growth and welfare. Following McKinnon and Shaw (MS) thesis (1973), it was assumed that financial liberalisation through “deepening” and eliminating distortion and segmentation of financial markets, improves the process of the mobilisation of savings as well as the efficiency of investment, thereby accelerating the overall rate of economic growth. Financial liberalisation exerted positive effects on the financial system through a more efficient banking sector and more actively performing securities market in Pakistan. In addition to this, a considerable financial deepening was also witnessed after the 1990s in the financial sector through improved banking mechanism.

¹ Dawood Mamoon is highly obliged to Mr Arif Sargana (ISS graduate 1998-1999) for identifying International Institute of Social Studies to him as one of the best Economics Institute in the world and recommending for higher studies. The author also likes to thank ISS for generously accepting Pakistani students over the years with no racial or gender discrimination.

² The innovative two legs of McKinnon and Shaw’s thesis is the intellectual identification of Howard Nicholas taught to his students at International Institute of Social Studies and is hereto duly recognized.

1.Introduction:

Pakistan's growth performance has deteriorated in the 1990s. Against an average growth rate of 6.1% in the 1980s, the real GDP growth slowed to an average of 5.1% in the first half and 4.1% in the second half of the 1990s. Largescale manufacturing

Table 4.1: Growth Performance of Real Sector

Item	Unit	1980's	1990-95	1995-2000	1999-2000
A. GDP GROWTH RATE	%	6.1	5.1	4.1	4.5
a. Agriculture	%	4.1	4.2	4.6	5.5
b. Manufacturing	%	8.2	5.7	4.0	1.6
c. Large-scale Manufacturing	%	8.2	4.7	2.3	0.04
d. Services	%	6.6	5.1	4.1	4.5
B. Private Gross fixed Capital Formation (growth Rates)	%	14	15	8	8
a. Agriculture	%	11	10	8	14
b. Manufacturing	%	18	14	8	21
c. large-scale manufacturing	%	20	13	6	26
d. services	%	11	17	15	9
	as a % of				
C. TOTAL INVESTMENT	GDP	18.6	22.2	17.1	15.0
a. Fixed Investment	-do-	16.8	18.0	15.3	13.4
b. Public Investment	-do-	9.1	8.6	6.1	5.3
c. Private Investment	-do-	7.8	9.4	8.8	8.1
D. NATIONAL SAVING	-do-	14.7	14.2	11.1	12.2
a. Domestic Saving	-do-	7.7	13.4	14.6	14.0

Source: Pakistan Economic Survey 2000

and services sector were the main contributors in this decline (see table 1). Table1 also shows that the gross fixed capital formation for the private sector in the first half of 1990s showed little improvement and declined sharply in the second half of the same decade when compared to 1980s. Whereas the contribution of the most important sectors of the economy i.e. agriculture and manufacturing in private gross fixed capital, experienced a sharp declining trend in 1990s.

Investment is considered to be essential for sustaining higher economic growth. It has also registered a decline in the 1990s. Total investment and fixed investment averaged 18.6 percent and 16.8 percent of the GDP in the 1980s respectively, which actually increased in the first half of the 1990s to 22.2% and 18.0% despite the fact that economic growth slowed to an average of 5.0 percent. In the second half of the 1990s, the total and fixed investment rate declined sharply to 17.1% and 15.3% of GDP, culminating in a steep fall in 1999-2000 to about 15% and 13.4%, respectively[See Table 4.1]. Declining investment rate has contributed to the deceleration of growth in the 1990s. National saving rate also witnessed a sharp decline from 14.7% in the 1980s to 4.2% and further to 11.1% in the first and second half of the 1990s, respectively.

In short, the real sector of the economy performed poorly when the government was liberalising the financial sector. The question then arises, why did financial liberalisation failed to put any positive effects on the real sector as being predicted by MS thesis? Or at least sustain the levels of activity of the real sector in the 1990s, when compared with that of 1980s? The thesis suggest that market determined high interest rates after liberalisation will reduce the rate of inflation, increase private savings, investment, and economic growth through an increased level of efficiency and savings of the financial system of the country.(see , for example, Corbo and de Melo, 1985; Diaz Alejandro. 1985; Fry (1995, 1998; Levine, 1997; Pill, 1997)..

These improvements, according to MS thesis, should improve real activity by increasing aggregate private savings³ and productive efficiency.

The above analysis points towards the structuralists' fear that interest rates have actually played a negative role in relation to the real economic activity after liberalisation. Table 4.2, which comprises of correlation coefficients between interest

³ Aggregate Private savings (**Sp**) are calculated by National Income accounting methods (see Heemst 2000 for more detail).

Here **Sp**= **GNS-Sg** Where as **Sg** = **Rg-(Cg+Ct)**

Where as, **GNS**=gross national savings, **Sg**= Government savings, **Rg** =current government revenue, **(Cg+Ct)** = the sum of government final consumption expenditure and current transfer payments by government.

rates and some proxy variables of real economic activity, indicates a significant negative relationship in most of the cases reinforcing negative impacts of real interest rates. However, this analysis is very basic in its nature. In order to evaluate the validity of McKinnon and Shaw's transmission mechanism for a Pakistani case, in a more formal and appropriate way, a regression analysis concentrating on the key variables involved in the transmission is pre-requisite.

Table 4.2: Correlation Coefficients

Correlations	Real dr	Real mr
Aggregate Savings (as a %age of GDP)	0.0707 (1.29)	-0.3116 (-1.45)
Private Savings (-----)	-0.5429 (-2.07)*	-0.376 (-1.99)**
Private Investment (-----)	0.478 (1.44)	0.3038 (1.77)
Credit to Private Sector (as a share of Domestic Sector)	0.432 (1.69)	0.5010 (3.52)*
Productivity Efficiency (GDP/ Employment)	-0.386 (-1.92)**	-0.034 (-0.51)

*-significant at 5% level, **-significant at 10% level

2. A Test for McKinnon and Shaw's Transmission Mechanism:

There are two legs through which interest rates and financial development improves real economic activity after liberalisation in McKinnon and Shaw thesis. The first leg implies that through liberalisation of repressed financial markets in a developing country, the financial sector enables to offer higher returns on its saving instruments (e.g. deposits) and thus attracts higher levels of savings from the household. In addition to this financial development takes place with the abolishing of restrictions (i.e., credit ceilings) prevailing in the system. In response to liberalised/improved financial system, financial savings would increase and so does the private savings which then be utilized by investors. Thus private investments increase and ultimately economy undertakes a positive growth path. The second leg concentrates on the increased level of allocative efficiency of the financial sector after its liberalisation. The liberalised financial system allocates the resources it has generated to more efficient investments. One indicator of such efficiency is that financial sector increase allocations to the private sector which is considered to be more efficient than public. The efficient private sector utilizes these allocated resources investing in capital

intensive projects⁴ and the country's productive efficiency improves. This once again affect economic growth positively.

In this section we will test the validity of both legs in order to get answers for the contradictions we observed above for Pakistani case in relation to McKinnon and Shaw thesis. To achieve the mentioned objective we shall carry out OLS regression analysis on two linear models capturing the characteristics of the two legs explained above respectively:

$$S_p = \alpha_1 + \alpha_2 RDR + \alpha_3 M_2 + \alpha_4 TV + \alpha_4 MC + \varepsilon_1 \quad (1)$$

$$\frac{PC}{DC} = \beta_1 + \beta_2 RDR + \beta_3 M_2 + \beta_4 TV + \beta_4 MC + \varepsilon_2 \quad (2)$$

where,

Sp = Private savings/GDP, **PC**= Credit to Private Sector, **DC** = Credit to Domestic Sector, **RDR** = real deposit rate, **M2**= Broad definition of Money/GDP, **TV**= Stock Market turn over/GDP, and **MC**= Stock Market Capitalisation/GDP.

Here, model (1) shows the first leg of the MS transmission mechanism, where private savings as a ratio of GDP (S_p) is a function of real interest rate and different indicators of financial development⁵. Where as, Real deposit rate(RDR) proxies for real interest rates. (M2/GDP) proxies for financial deepening in the banking sector. The development in the stock markets are captured by market turnover(TV) and Market Capitalization (MC). TV indicates the liquidity in the secondary markets⁶ and MC shows its size⁷. Model (2) shows the second leg of MS transmission mechanism

⁴ The capital intensive projects need more resources. Thus according to McKinnon and Shaw, the increased private savings (first leg of the transmission) enables the investors to go for more capital intensive projects.

⁵ These different selected indicators of financial development are discussed in detail in chapter.2. Whereas they indicate activity in the banking sector as well as stock markets. The stock market indicators are being taken because of the active role these markets play in the financial system of a country.

⁶ Liquidity allows investors to alter their portfolios quickly and cheaply, thereby, facilitating long-term as well as more profitable investments. Liquidity is an important attribute of stock market because liquid markets improve the allocation of capital and enhance prospects of long-term growth.

⁷ Market capitalization equals the value of listed shares.

where allocative efficiency (PC/DC)⁸ is the function of same set of exogenous variables as in model (1). The data set we use for the analysis is from 1981 to 2000 on yearly basis.

The OLS regression results in table 4.3 shows that financial deepening is positively related to private savings as well as allocative efficiency of the financial system, as being predicted by MS thesis. Stock market size also has a positive relationship with the endogenous variables in both the models. Liquidity in stock market is not significantly related to the private savings. This is an expected result. Liquidity is more related to the concept of allocative efficiency⁹. The significant positive coefficient of TV in model 4.2, shows its role in improving the allocative efficiency. However, we note that the coefficients in both the models for the variables showing

Table 4.3. OLS Regression Results:

Exogenous Variables	Endogenous Variabes	
	Sp	PC/DC
Constant	-7.86 (-1.094)	0.423905 (6.0202)*
M2	5.41 (3.362)*	0.3510 (2.059)**
RDR	-0.4757 (-4.638)*	0.0037 (2.6213)**
MC	0.3111 (6.3621)*	0.0032 (3.9863)*
TV	0.4795 (0.4290)	0.052952 (3.0024)*
R-Squared	0.7538	0.9035
Adjusted R-Squared	0.6307	0.85526
F-Statistics	6.1239	18.72
Durbin-Watson stat	1.996	2.003

*-significant at 1% level. **-significant at 5% level, -No of Observations: 20.

⁸ (PC/DC) captures the allocative efficiency of the financial system because it captures the importance given to private sector compared to the public one. A rise in this variable over time shows that financial sector is allocating more resources to efficient private sector.

⁹ See footnote 5.

stock market activity are small in size. This implies that stock markets play a very limited role in improving private savings or allocative efficiency in Pakistani case.

Table 4.3 shows that rise in real deposit rates enable the banks to improve their allocative efficiency in model 3. This is again an expected result because rise in deposit rates boost the deposits held by banks enabling them to allocate more resources to the domestic sector. Whereas, an increase in credit to the private sector ensures the resources being allocated efficiently. However this improvement in allocative efficiency appeared to have put no favourable effects on productive efficiency of the country . The most plausible explanation is that high interest rates are negatively related to productive efficiency. What happened in Pakistan was that banks that suffered losses to their capital bases due to financial repression, were tempted to invest in riskier projects in an attempt to quickly recover these losses. The more riskier the project is, the more high be the lending rate since the probability of repayment of a loan is negatively related to interest rate charged by the bank. Since Pakistan's macro economic conditions were poor, the riskier projects most of the times failed and the borrowers defaulted. As a result loan defaults of banks and DFIs reached a level of Rs 128 billion at the end of December 1999- nearly 21 percent of total advances- from Rs 25 billion in 1990. Such a sharp rise in loan defaults might contributed significantly to paralyze the productive efficiency of the country.

Estimates of model 1 in table 3 shows a negative relationship between real deposit rates and private savings. This confirms our observation earlier that a sharp rise of real rates after liberalisation have contributed negatively to real economic activity. One possible explanation for that is the one given by the structuralists. Pakistan has a very deep rooted and developed curb markets after decades of fiscal imbalances and financial repression (see box 1). It seems that what happened in Pakistan was a credit squeeze in the curb markets which deterred private savings, depressing private investment and economic growth. The official banking sector in Pakistan could not

increase the credit supply to compensate for the decline in credit flow from the curb markets to productive firms.¹⁰

Box 1.

Shabsign (1995), estimated the size of informal economy (IE) in Pakistan during 1975-91. His findings showed that the IE's GDP averaged 22.6% of formal GDP during the study period, with the growth rate slightly higher than that of the formal GDP. The domestic component of the IE's GDP averaged 35.4% of the formal GDP and had grown at an average annual rate of 5%. Analyzing the relation between the IE and the fiscal position of the government, the study found that continued fiscal deficits had contributed to the growth of the IE. Finally, the author analyzed the role of the IE in the national income-expenditure cycle, which showed a leakage of resources from the formal economy to the IE via private investments, with an overall net loss in economic efficiency.

Another study by Iqbal et al (1998), assesses the size of the underground economy and tax evasion in Pakistan for the period 1973-96. Using monetary approach, the results confirm the existence of large underground economy and higher tax evasion over the period under analysis. The overall underground economy has remarkably increased from 20 percent of GDP in 1973 to 51 percent of GDP in 1996. The evidence also suggests that the rate of growth in the underground economy has been higher than the rate of growth of the formal economy.

Though these studies do not explicitly discuss informal financial markets and only indicate the strength of the overall curb markets. Yet, we can extract that curb markets in the financial sector have also become dominant because Pakistan had been facing severe financial repression for the period this study has been carried out.

However, if we take the word of structuralists, the low coefficients of interest rates for private savings show that the negative effect is somewhat limited and might as well be offset to an extent by the improvement in financial development indicators (e.g. M2 with a higher coefficient), such that the private savings sustained at old levels if not improved. Whereas a sharp decline of private savings right after liberalization need more explanation than just a sharp rise in interest rates leading to some distortions in more efficient informal markets. In short interest rates have carried out distortions in

Box 2.

It is common economic theory or a basic national accounting concept that savings are extracted from the income of the house holds. And household have three major modes of income:

1. They earn return by renting out the capital they possess.
2. They earn wages by providing their services.
3. They earn profits/retained earnings by investing in businesses.

This saving behavior should also be true for Pakistan. We know that return on capital have increased after liberalisation in Pakistan. Real wages are usually downwards rigid. So they may rise but cannot fall. It means we are left with the retained earnings part of the household income in order to explain a decline in overall savings behavior of the private sector. This approach hints towards the possible explanation that retained earnings of businesses have fallen in Pakistan leading to the fall in private savings.

some other variables too which are very important for private savings, and which, have been ignored by structuralists.

¹⁰ Money multiplier for informal financial institutions is greater than their formal counterparts because of no reserve requirement from the bank..

One such variable can be the concept of retained earnings (see box 2). If we believe in the argument mentioned in Box 2, the major cause of fall in private savings in Pakistan after liberalisation is because retained earnings fell. There can be two very obvious reasons of retained earnings to fall in Pakistan. Firstly retained earnings move, if anything, inversely with the rate of interest¹¹. As the interest rates rise, the companies decrease the level of their retained earnings on the basis of assessment of future profitability. Secondly we know from our initial analysis that the overall economy was not doing very good. GDP growth rate, which represent the internal as well as external situation and fiscal as well as monetary performance of the economy, experienced deterioration in 1990s. An overall unstable economic situation of Pakistan might as well have negative impacts on the domestic business firms' revenues, profits and eventually level of retained earnings.

Conclusion:

The paper tries to analyze the validity of MS thesis by capturing the performance of two legs of MS transmission mechanism. The study hints towards a failure of the working of these legs in respect to transferring financial development into real activity. However, since the OLS analysis explicitly assumes the exogeneity of financial variables with respect to real economic variables and could not address the time series data problems, it suffers from some theoretical and empirical handicaps. Thus some advanced time series econometric techniques are to be employed to have a more accurate analysis of MS thesis.

¹¹ The concept of retained earnings is not being encouraged much by the proponents of financial liberalisation or the later schools. But that cannot take away the importance of this variable in explaining saving or investment patterns of the economy. See for more detail "Howard Nicholas (2000)".

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