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Does financial instability weaken the finance-growth nexus? A case for Pakistan

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Does Financial Instability Weaken the Finance-Growth Nexus? A Case for Pakistan

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ABSTRACT

The paper investigates whether financial instability weakens finance-growth nexus in case of Pakistan. In doing so ARDL bounds testing approach is used for cointegration among variables over the period of 1971-2005. The results show that financial instability does weaken finance-growth nexus. Trade openness increases economic growth through spillover effects. Increasing inflation retards economic growth i.e., lower inflation rates are necessary for sustained economic growth. Political instability impedes economic growth. The present study indicates new direction for policy makers to sustain the pace of economic growth and avoid financial crisis.

Key words: Financial Crisis, Financial Development, Economic Growth,

Jel Classification: N1, E44, O11

Introduction

The importance of financial development for economic growth has been scrutinized in many studies both theoretically and empirically. Primarily this issue was explored by Bagehot (1873), Schumpeter (1911) and latter on by Hicks (1969) showing positive impact of financial development on economic growth. Recently, financial development and economic growth relationship is investigated by Cameron (1972), Cole and Park (1983), King and Levine (1993), Levine (1998), Rajan and Zingales (1998), Love (2003), Harrison et al. (2004) and Shahbaz (2009). The positive relation exists between financial development and economic growth which is a unique contribution to this field [Goldsmith (1969), McKinnon (1973) and Shaw (1973)]. This shows that association between financial development and economic growth has been examined carefully in empirical economic literature.

Variety of methods has been applied to investigate the relationship between financial development and economic growth. Primarily cross-country growth regressions have been used by [King and Levine (1993), Dawson (2003) and Berger et al. (2004)]. Furthermore, the causal relationship between financial development and economic growth is discussed in recent literature using the time series approaches [Demetriades and Hussein (1996), Luintel and Khan (1999), Ghirmany (2004) and Butt et al. (2006)]. This indicates that researchers have examined the impact of financial development on economic growth with a great focus but ignored the adverse affects of financial instability on economic growth. This humble effort is to fill the gap and seems to be good contribution in literature in case of Pakistan.

The literature also shows that link between financial development and economic growth has been analyzed by using cross-country and time series data sets with simple econometric approaches [King and Levine (1993) and World Bank (2001)]. The empirical evidence of King and Levine (1993) on relation between financial development and economic growth is interesting. Their analysis reveals that 'higher level of financial development is significantly and robustly correlated with faster current and future rate of economic growth, physical capital accumulation and economic efficiency improvement'. The main question in present study is about the investigation of finance-growth relationship when there is financial instability in the economy. Financial instability manifestes through the failures of significant institutions, intense assets price volatility or collapse of market liquidity, it also implies a situation of wider spread failures of financial institutions and payments systems.

The improved efficiency of financial sector may not be guaranteed of gathering informations while these informations are one of the key factors to develop financial system in the economy. Low levels of financing and private investment may be led by asymmetric information, externalities in financial markets (Stiglitz and Weiss, 1992) and imperfect competition that further declines economic growth. Inefficient allocations of funds to desirable capital and bank frauds are also injurious for **economic growth**. These market imperfections can be controlled through appropriate public policy. The legal and institutional background such as competitive policy in the country can become helpful in fostering effectiveness of financial system that tends to lead **economic growth** to desirable levels. The efficiency of resource allocation totally depends upon less market imperfections and adverse selection i.e. moral hazard [Demirguc-Kunt and Degatriache, (2000); Gourinchas et al. (2001) and Bencivenga and Smith, (1991)]. Economic literature also points out the destabilizing effect of financial liberalization during financial crisis as it leads to over lending. Different channels are used for over lending including less capacity of regulatory agencies to monitor the funds, banks incapability to differentiate

private investment projects in the prosperous (boom) periods, and insurance security against the failures of banks (Shneider and Tornell, 2004). Blejer, (2006) points out three basic reasons of financial instability in financial sector. First, financial instability severely occurs when there is a dramatic grown in the volumes of financial intermediation. Secondly, globalization ceases the whole world in a village, so integration of financial institutions seems to increase the systematic risk. In such circumstances, any adverse shock in the economic system will affect the whole world severely[1]. The complexity of financial instruments is also a reason of financial instability and it is not easy to understand such financial instruments.

The crisis in financial sector is linked with more than 10 percent non-performing resources while more than 2 percent of annual GDP is eaten up to save these financial resources. This may decline the per capita GDP and economic growth[2]. Thus GDP per capita and economic growth fall to bottom levels during financial crisis and takes time to recover (Caprio and Klingebiel, 1996). In contrast, Blejer, (2006) notes ambiguous effects of financial instability on economic growth and argues that economic growth is affected adversely due to pure cyclical instability i.e. asset prices bubbles, excessive leverage and credit mispricing. Furthermore, market volatility increases financial instability which may increase risk taking and tends to improve stream of informations that impacts the economic growth positively.

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[1] One can imagine the adverse impacts of recent financial crisis in USA on other countries
[2] In 1995, Argentina growth was declined 7% due to financial crisis while the fall in GDP was increased to 17% in 2002. The economic growth was negative in Japan due to crisis.

There are some factors contributing to moral hazard such as permit value of bank is eroded when ceilings are benefited on deposit interest rates with the reduction of barriers to entry. The increased bank competition reduces monopolistic earnings as well as it alleviates the fear of bankruptcy. Furthermore, banking competition tends to lead the banks in choosing riskier loans. The sound and competent prudential regulations and supervision control the incentives leading to moral hazards but increased degree of choosing riskier loans may also become a major cause of financial instability due to said moral hazards [Hellman et al.(2000) and Loayza and Ranciere, (2002, 2005)]. Caprio et al. (2007) seem to conclude that all of the capital working in banking system is eaten up by financial crisis.

In liberalized financial system, interest rates are flexible and market determined. One of the functions of banks as financial intermediaries is to transform short term liabilities into long term assets, banks are become more vulnerable in an environment where interest rates are more volatile (Chari and Jagannathan, 1989). There is clear evidence in economic literature that financial liberalization also raises economic costs in terms of inflated financial fragility due to inefficient and underdeveloped banking sector in developing economies. For instance, Bonifiglioli and Mendocino, (2004) come to conclusion that financial instability is injurious for economic performance. Financial crisis hits less developed and closed economies. The cost of financial crisis is higher in closed economies due to poor quality of

institutions as compared to more liberalized countries. The quality of institutions in rich and open economies is good that saves the economies from external and internal crisis or shocks. Hellman et al. (1994) suggest that the high moral hazards frequently seem to credit with low value of bank franchise. This low value of bank due to moral hazards may assist to give details that how financial liberalization causes banking crisis through its injurious channels.

There is an extensive empirical work on finance–growth nexus across cross-sectional and time series studies but no study investigated the impact of financial instability on finance-growth nexus in case of Pakistan. This study is an effort to fill this gap. The present paper contributes in literature by three folds: (i) financial instability index has been generated following procedure by Loayza and Ranciere, (2002, 2005, 2006), (ii) ARDL bounds testing approach is used to examine cointegration among variables and (iii) Error Correction Method (ECM) is for short run dynamics with stability tests such CUSUM and CUSUMsq for stability of long run and short run estimates.

II. Modeling and Data Description

To explore the affect of financial instability on the link between financial development and economic growth, time series dataset has been used. The theoretical economic literature predicts that financial instability leads decline in economic growth. This shows that financial instability lowers the contributional impact of financial development on economic growth. To investigate the impact of financial development and financial instability on economic growth, we will investigate the following model:

$$LGDPC = \theta_{\circ} + \theta_1 LFD + \theta_2 IFL + \theta_3 LTGDP + \theta_4 LINV + \theta_5 PL + \varepsilon_t \ (1)$$

Financial instability has also included in checking the hypothesis that financial instability has no impact on finance-growth nexus. This tends to extend our basic model that is being modeled in equation-2:

$$LGDPC = \beta_\circ + \beta_1 LFD + \beta_2 FNS + \beta_3 INF + \beta_4 LTGDP + \beta_5 LINV + \beta_6 PL + \varepsilon_t \quad (2)$$

We used common measure of financial development (FD) is credit to private the sector as share of GDP. FNS is for financial instability and we include the inflation rate (IFL) as control variable, assuming that low inflation is prerequisite for sustainable economic growth. Exports plus Imports as share of GDP is a proxy used for trade openness (TGDP), while gross fixed capital formation proxy for private investment (INV) to examine impact on economic growth. We used dummy for political instability (PL) i.e. D = 1 (period of military government as political instability) and D = 0 (democratic government as political stability). Political instability significantly lowers private investment, as well as economic growth, since it has adverse influence on property rights, and by that on private investment and economic growth (Barro, 1991). Political instability may lead entrepreneurs to wait until the uncertainty is resolved, before undertaking irreversible private investment projects, it may also lead to capital flight; by the same token, multinational companies may be less likely to locate their subsidiaries in countries that face the possibility of coups, revolutions, terrorism, or expropriation. Economic growth is proxies by real GDP per capita (GDPC). The data of the variables used in this study is obtained from economic Survey of Pakistan (various issues) and time span of study is from 1971 upto 2005.

III. Methodological Framework and Results Discussions

This is an important issue from the development policy perspective since the financial sector's ability to manage its contribution in economic growth during financial crisis, so an accurate estimate of the determinants of economic growth is very important. So, the present study has applied the most advanced approach such

as Auto Regressive Distributive Lag Model to verify the presence of cointegration among macroeconomic variables, where x_t is time series vector $x_t = \{LGDPC, LFD, FNS, LTGDP, INF, PL, LINV\}$ with $y_t = GDPC$, this approach is being begun with an unrestricted vector autoregression:

$$z_t = \mu + \sum_{j-1}^{q} \delta_j z_t + \varepsilon_t \qquad (3)$$

Where $z_t = [y_t, x_t]^{'}$; μ is showing vector of constant term, $\mu = [\mu_y, \mu_x]^{'}$ and δ is indicating matrix of vector autoregressive (VAR) parameters for lag j. As mentioned by Pesaran et al. (2001) two time series y_t and x_t can be integrated at either *I(0)* or *I(1)* or mutually cointegrated. In such case, y_t economic growth (GDPC) while time series vector x_t, financial development (FD), financial instability (FNS), trade openness (TGDP), inflation (IFL), political instability (PL) and private investment (INV) can also be integrated at different order of integration. The error terms vector $\varepsilon_t = [\varepsilon_{y,t}, \varepsilon_{x,t}]^{'} \sim N(0, \Omega)$, where Ω is definitely positive. Equation-3 in modified form can be marked as Error Correction Method (UECM) as given below:

$$\Delta z_t = \mu + \gamma z_{t-1} + \sum_{j=1}^{q-1} \lambda_j \Delta z_t + \varepsilon_t \qquad (4)$$

Where $\Delta = 1 - L$, and

$$\lambda_j = \begin{bmatrix} \lambda yy , j\lambda yx , j \\ \lambda xy , j\lambda xx , j \end{bmatrix} = -\sum_{k=j+1}^{q} \varphi k \qquad (5)$$

Here, γ is the multiplier matrix in long run as following:

$$\gamma_j = \begin{bmatrix} \gamma yy & \gamma yx \\ \gamma xy & \gamma xx \end{bmatrix} = -(I - \sum_{j=1}^{q} \varphi_j) \qquad (6)$$

I is indicating an identity matrix. The fundamental diagonals for said matrix are not restricted. It implies that each variable will be stationary either at *I(0)* or *I(1)*. This approach enables one to examine the maximum cointegrating vectors that include both y_t and x_t. It would investigate that either γyx & γxy can be non-zero but not both of them.

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Here, the restriction that is imposed is $\gamma xy = 0$ which indicates that financial development, financial instability, trade openness, inflation, political instability and private investment have no effect on **economic growth** in a long span of time. Under the said assumption that is $\gamma xy = 0$, equation-4 can be rewritten as follows:

$$\Delta y_t = \beta_{\circ} + \beta_1 y_{t-1} + \beta_2 x_{t-1} + \sum_{j=1}^{q-1} \beta y_{,j} \Delta y_{t-j} + \sum_{j=1}^{q-1} \beta x_{,j} \Delta y_{t-j} + \varphi \Delta x_t + \mu_t \qquad (7)$$

Where

$$\beta_{\circ} = \mu_y - \omega' \mu_x ; \beta_1 = \lambda_{yy} ; \beta_2 = \lambda_{yx} - \omega' \lambda_{xx} ; \beta_{y,j} = \lambda_{yy,j} - \omega' \lambda_{xy,j} \text{ and } \beta_{x.j} = \lambda_{yx,j} - \omega' \lambda_{xx,j} .$$

This is termed as Auto Regressive Distributed Lag (ARDL) Model (Pesaran et al. 2001) is denoted by unrestricted error correction model (UECM). Empirical evidence on coefficients of equation-7 can be investigated by ordinary least squares and non existence of long run link among the said variables. This can be tested by calculating F-statistics for the null hypothesis of $\beta_1 = \beta_2 = 0$. Under the alternative hypothesis $\beta_1 \neq \beta_2 \neq 0$, stable relationship in long run between said variables can be described as following:

$$y_t = \varphi_1 + \varphi_2 x_t + v_t \qquad\qquad (8)$$

Where $\varphi_1 = -\beta_{\circ} / \beta_1, \varphi_2 = \beta_2 / \beta_1$ and v_t is a stationary process having zero mean. Pesaran et al. (2001) reveal that the distribution of F-statistics is based on the integrating order of the variables. Diagnostic tests have also been conducted. These tests include investigation of serial correlation, functional form, normality of error term, ARCH test and white heteroscedisticity connected with model. Whether the ARDL model is stable or not, will be examined by CUSUM and CUSUMsq tests.

IV. Results Interpretation

Primary focus of study is to find out the stationarity levels of macroeconomic variables. In doing so, ADF unit root test is used to examine unit root problem at level and 1st difference. The empirical exercise reported in Table-1 reveals that financial instability

(FNS) and inflation (IFL) are stationary at their level while financial development (FD), economic growth (GDPC), international trade (TGDP), private investment (INV) and political instability (PL) are stationary at their 1st difference. This dissimilarity in stationarity level for variables is suitable to apply ARDL approach for cointegration.

Table-1: Unit Root Test

Variables	ADF Test With Intercept and Trend at Level	Prob-value	Lags	ADF Test with Intercept and Trend at 1st Difference	Prob-value	Lags
LGDPC	-2.692	0.2459	2	-5.187	0.0010	0
LFD	-2.583	0.2894	1	-5.442	0.0005	1
FNS	-4.425	0.0067	0	-5.071	0.0016	3
IFL	-3.681	0.0380	1	-4.482	0.0060	1
LTGDP	-2.797	0.2081	1	-4.088	0.0155	1
LINV	1.410	0.9999	4	-5.156	0.0012	2
PL	-1.831	0.6672	0	-5.536	0.0004	0

The ARDL bounds testing approach for cointegration starts from selection of lag order. The appropriate lag length is chosen using AIC criterion which is 2. The empirical results are reported in Table-2 indicates that F-statistics are more than the critical boundaries generated by PPS (2001) and latter on by Narayan (2005). The critical values of lower and upper bounds by Pesaran et al. (2001) at 1 percent level of significance are 6.10 & 6.73 respectively. Narayan, (2005) has tabulated critical values at 1 % (5%) of lower and upper bounds are 7.643 & 9.063 (5.457 & 6.570) respectively. The F-statistic of both models seems to confirm the long run association amongst the variables.

Table-2: VAR Lag Order Selection Criteria

Lag Orders	Sequential Modified LR Test	Final Prediction Error	Akaike Information Criterion	Schwarz Information Criterion	ARDL Estimation for Estimation**	ARDL Estimation for Estimation***
1	252.2583	3.21e-08	-0.271680	1.652098*	7.769	5.868
2	54.21884*	2.26e-08*	-0.875303*	2.697428	9.523	7.456
* indicates lag order selected by the criterion ** shows cointegration for LGDPC, LFD, INF, LINV, LTR, PL *** shows cointegration for LGDPC, LFD, LFNS, INF, LINV, LTR, PL						

Now we move towards finding out the marginal impacts of independent variables on economic growth. The results of are given in Table-3. Financial development impacts economic growth positively at 5%. It indicates that financial development leads economic growth. Trade also has positive impact on economic growth. It is generally accepted that economic growth is accelerated by international trade. Openness of an economy increases access to advanced technology with positive spillover effects. Thus, availability of necessary inputs from rest of the world increases domestic output. In resulting, economic growth is promoted. Private investment is positively correlated with economic growth at 1%. The rise in private investment leads enhancement in employment opportunities both for skilled and unskilled workforce that leads to output and hence economic growth.

Table-3: Long Run Relationship

Dependant Variable = LGDPC				
Variables	**Coefficients**	**Prob-value**	**Coefficients**	**Prob-value**
Constant	5.9619 (12.582)	0.0000	6.4590 (8.297)	0.0000
LFD	0.4856 (4.513)	0.0001	0.3392 (3.359)	0.0023
FNS	–	–	-0.0139 (-2.251)	0.0327
LTR	0.6227 (4.207)	0.0002	0.5922 (3.484)	0.0017
IFL	-0.2120 (-7.067)	0.0000	-0.1792 (-4.716)	0.0001
PL	-0.1207 (-4.091)	0.0003	-0.1055 (-2.881)	0.0077
LINV	0.0092 (18.562)	0.0000	0.0007 (12.715)	0.0000
R-squared = 0.9627 Adj-R-squared = 0.9488 Akaike info Criterion = -2.4589 Schwarz Criterion = -2.1895 Log Likelihood = 47.8014 F-Statistic = 144.7633 (0.000)			R-squared = 0.9518 Adj-R-squared = 0.9412 Akaike info Criterion = -2.1441 Schwarz Criterion = -1.8299 Log Likelihood = 43.4512 F-Statistic = 89.0477 (0.000)	

Durbin-Watson = 1.704	Durbin-Watson = 1.5114
Diagnostic Tests-statistics Serial Correlation F-stat = 1.1212 (0.3411) ARCH Test = 0.1518 (0.6994) Heteroscedisticity Test = 1.6460 (0.1582) Normality J-B Value = 0.5449 (0.7614)	*Diagnostic Tests-statistics* Serial Correlation F-stat = 0.9192 (0.4118) ARCH Test = 0.4793 (0.4938) Heteroscedisticity Test = 0.7611 (0.6727) Normality J-B Value = 0.5975 (0.7418)

Note: t-values are given in parentheses

Political instability is inversely linked with economic growth at 1%. The revolution, coups, and political assassinations evolve the unfavorable impacts of political volatility on property rights and hence on private investment. This tends to decline the economic growth. Inflation affects the growth negatively at 1%. Inflation is inversely linked with economic growth. It shows that Rise in inflation is frequently linked with various forms of financial suppression as government takes protective initiatives to save infant real sectors of the country. For instance, interest rate ceiling and credit allocation are common in high inflation. It may be documented that producers are motivated to do better in the economy during a period of inflation but at the same time consumers' purchasing power declines.

Financial instability is inversely linked with economic growth. It is pointed out that a 10 percent rise in financial crisis lowers growth rate by 1.3 percent. After the comparison of both estimates of finance-growth relation without and with financial instability variable, it is noted that financial instability weakens the finance-growth relationship by hurting the whole economy. The efficiency of financial sectors' capital is wrinkled by continuous financial instability. In such a state of affairs,

banks experience bankruptcy and are black listed by monetary authorities. This leads the whole financial system to perform negatively. Further it is explained that instability in financial sector declines the confidence of both local and foreign investors. The confidence of investors plays a vital role in the process of economic activity. The fall in confidence due to financial instability causes private investment to decline that in turn affects economic growth adversely. This empirical evidence suggests that financial instability weakens not only finance-growth relationship but also has a bad impact on economic growth as shown in Table-3. The signs of other variables are according to expectations and significant at 1 %. The short run impacts of independent variables on dependent one are being modeled as following:

$$\Delta LGDPC = \beta_1 + \beta_2 \Delta LFD + \beta_3 \Delta INF + \beta_4 \Delta LTR + \beta_5 \Delta LINV + \beta_6 \Delta PL + ecm_{t-1} + \varepsilon_t \quad (9)$$

$$\Delta LGDPC = \delta_1 + \delta_2 \Delta LFD + \delta_3 \Delta FNS + \delta_4 \Delta INF + \delta_5 \Delta LTR + \delta_6 \Delta LINV + \delta_7 \Delta PL + ecm_{t-1} + \varepsilon_t \quad (10)$$

The ECM version of equation-1 and equation-2 perform quite well and coefficients for the error-correction terms (**-0.3327**, **-0.4227**) are significantly different from zero. The significance coefficients of lagged error correction terms further proves the cointegration relationship among variables as suggested by Banerjee et al. (1998). The lag of dependant variable is included to remove the problem of autocorrelation which is also significant at 10% affecting the economic growth positively. The coefficients for the error-correction terms imply that deviations from economic growth in short run to long span of time are acceptable by (33.27% & 42.27%) for every year.

Tabble-4: Error Correction Model (ECM)

Dependent Variable = ΔLGDPC				
Variables	Coefficients	Prob-value	Coefficients	Prob-value
Constant	-0.0105 (-0.819)	0.4206	-0.0071 (-0.556)	0.5830
$\Delta LGDPC_{t-1}$	0.4595	0.0064	0.4281	0.0215

	(2.987)		(2.466)	
ΔLFD	-0.4728 (-3.285)	0.0031	-0.4596 (-3.158)	0.0044
ΔLFNS	-	-	-0.0863 (-0.504)	0.6191
ΔINF	-0.1237 (-6.756)	0.0000	-0.1289 (-6.657)	0.0000
ΔLTR	0.1208 (0.972)	0.3406	0.1723 (1.340)	0.1931
ΔLINV	0.0111 (5.049)	0.0000	0.0119 (5.409)	0.0000
ΔLINV$_{t-1}$	-0.0043 (-1.590)	0.1247	-0.0062 (-2.351)	0.0276
ΔPL	0.0149 (0.843)	0.4070	0.0136 (0.776)	0.4455
ecm$_{t-1}$	-0.3327 (-2.512)	0.0191	-	-
ecm$_{t-1}$	-	-	-0.4227 (-2.733)	0.0118

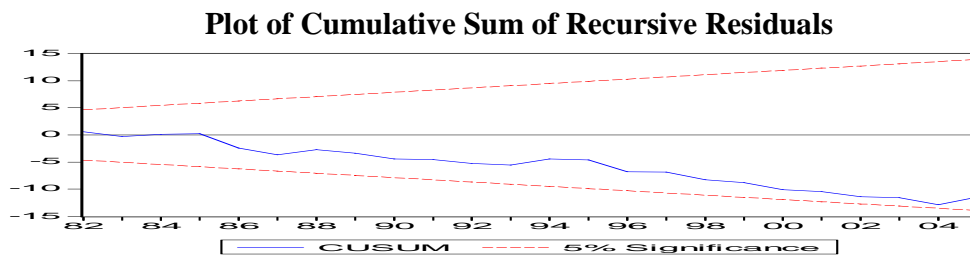|	
R-Squared = 0.78608 R-Squared Adj = 0.714779 F-Statistics = 11.02423 (0.000) Durbin-Watson = 1.975	R-squared = 0.8018 R-squared Adj = 0.724 F-statistics = 10.3386 (0.000) Durbin-Watson = 1.997
Short-Run Diagnostic Tests-statistics Serial Correlation F-stat = 0.2663 (0.76859) ARCH Test= 1.6852 (0.20412) Heteroscedisticity Test = 2.7309 (0.0246) Normality J-B Value = 1.2494(0.5354)	***Short-Run Diagnostic Tests-statistics*** Serial Correlation F-stat = 0.5072 (0.4838) ARCH Test = 1.7895 (0.1911) Heteroscedisticity Test = 2.0807 (0.0802) Normality J-B Value = 0.8819(0.6434)

In both models economic growth is influenced positively by its differenced lagged terms. This poses that economic policies in previous periods are also a key indicator for economic growth in future. Dynamics results of short-run model also reveal that financial development is negatively associated with economic growth and is significant. It indicates that economic growth could not attain benefits from financial development. This enlightens that financial development may take time to stimulate economic growth. Financial instability is inversely and insignificantly

related to economic growth. Inflation is appeared to be inversely correlated with economic growth. Trade openness and economic growth move in the same direction but in short-run trade contribute to economic growth positively with no significance. Private investment is linked positively with economic growth and contributes to growth by 0.111% and 0.119% with 10% increase in private investment. Finally, lagged differenced term of private investment is declining the economic growth.

The short-run diagnostic tests reveal that serial correlation does not seem to exist. The estimates of Jareque-Bera tests suggest the normality of data. ARCH test-statistics also confirm that there exists no autoregressive serial correlation in short-run models. The short-run model shows the presence of heteroscedesticity having no effect on the estimates. It is natural to detect heteroscedisticity in the models of time series data due to mixed order of integration of variables (Shrestha and Chaudhary, 2005).
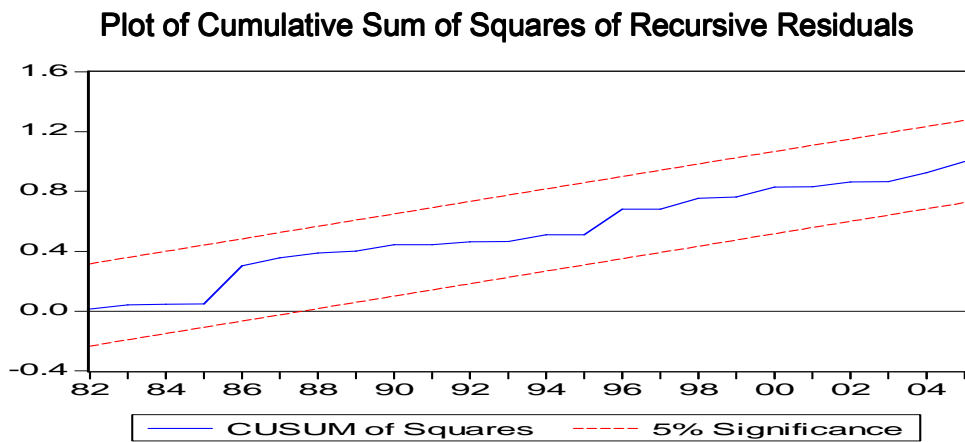
Model 1
Figure-1

Plot of Cumulative Sum of Recursive Residuals

The straight lines represent critical bounds at 5% significance level.

Figure-2

Plot of Cumulative Sum of Squares of Recursive Residuals

The straight lines represent critical bounds at 5% significance level.

Model 2
Figure-3

Plot of Cumulative Sum of Recursive Residuals

The straight lines represent critical bounds at 5% significance level.

Figure-4

Plot of Cumulative Sum of Squares of Recursive Residuals
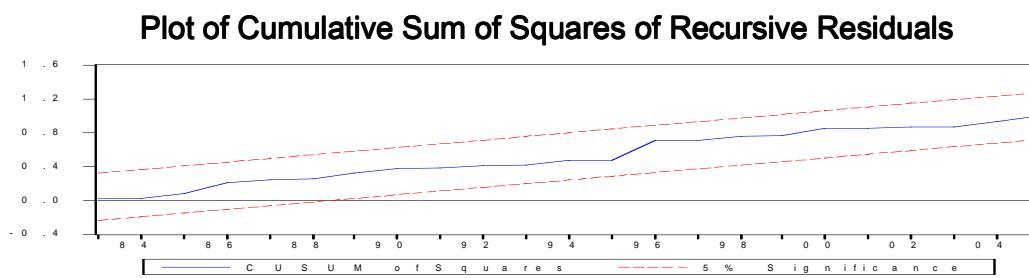

The straight lines represent critical bounds at 5% significance level.

Bahmani-Oskooee and Nasir, (2004) seem to argue that correct specification can be checked by the application of **CUSUM** and **CUSUMsq** tests. The null hypothesis may be accepted if the plots of both statistics lie inside the critical boundaries at 5 % level of significance. This means model is correctly specified. The plots of both **CUSUM** and **CUSUMsq** clearly verify the reliability of the long run and short run coefficients of regressors which impact economic growth in Pakistan.

IV. Conclusions and Policy Implications

More than three decades ago, Goldsmith (1969) discussed the relationship between financial sector development and economic development. Theoretical work very carefully illustrates different channels through which the emergence of financial markets and institutions affect economic growth.

The present study has attempted empirically to investigate the question of whether financial instability weakens the finance-growth nexus in Pakistan. The empirical evidence indicates that financial development enhances growth. Financial instability is inversely related to economic growth. This implies that financial instability weakens the positive impact of financial development on economic growth. Trade openness shows positive affect on economic growth. Private investment stimulates economic growth and inflation reduces economic growth. Political stability enhances the stability and reliability of economic policies that promotes the growth in the country.

The study suggests that financial liberalization should be done slowly and carefully. Stress tests should be performed to establish the extent to which banks are vulnerable to shocks. Furthermore it is suggested that, where financial crisis threatens financial institutions and systems, government and central bank should actively decisive. They should provide lender-of-last-resort facilities and they should bail out failing financial institutions. They should set up public institutions to absorb and restructure financial assets. Financial institutions are responsible for managing their own affairs and ensuring that they operate according to the regulatory rule. But government and Central bank are responsible for managing the system and defining and implementing rules under which participants in the system operate. System failure is responsibility of central authorities and they should bear at least a portion of the cost of failure. There is need to establish a commitment to abstain from excessive risk-taking and concentrated lending does not only afflict financial institutions but also it affects regulators central bank, and fiscal authorities.

Public intervention is still needed to correct this market failure – although this could take the form of risk insurance, support for debt securitization and market making rather than traditional bank credit. The relaxation of regulatory restrictions without adequate institutional provision plus fiscal reforms and balance of

payments stability may engender serious financial crisis and create systemic risks. Greater rather than less public intervention is thus needed in emerging markets, geared to raising levels of productive private investment and thus economic growth.

Policy makers must ensure that, while encouraging the expansion of financial systems, no excessive inflation and sub-standard loans are created as negative externalities along the development process. The private sector's effectiveness in credit evaluation, public sector surveillance, stringent accounting standards and auditing practices, as well as a sound legal framework are all essential and must be properly shaped when financial deepening is taking place. Government efforts should be directed in creating an environment which makes Pakistan an attractive destination for foreign direct investment. This includes establishing a stable macroeconomic and political environment, provision of adequate property rights, stringent accounting and audit control, and sufficiently trained work force. With all these in place, a well-functioning financial system can play an important role in the process of economic growth.

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