Domestic Investment in Pakistan: An Analysis Across Different Political Regimes

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ABSTRACT

This study has been conducted to find out the impact of political and economic variables on domestic investment of Pakistan. For this purpose secondary data for 35 years has been collected according to the variables of this study. To analyze the data ARDL bound test procedure has been applied to assess long run relationshipand ARDL based ECM applied to check short run associationof political and economic variables on domestic investment whereas augmented dickey fuller test is applied to check stationary of data. Our findings declared that gross domestic product, foreign direct investment, foreign debt and domestic credit to private sector positively affect domestic investment in Pakistan whereas interest rate, foreign aid, inflation and non-democratic government have negative relation with domestic investment in long run. Dictatorial dummy and credit to private sector has insignificant influence in long run whereas in short run, non democratic dummy influences domestic investment significantly. Results are accordant with classical and Keynesian views. Overall it is concluded that domestic investment decisions have no concern to regime type but political and economic stability and law and order conditions are necessary to promote domestic investment.

Keywords: Political Regime, Gross Domestic Product, Foreign Debt, Domestic İnvestment, Interest rate
JEL Classifications: O1, O2, O4, A3, E62

1. INTRODUCTION

Investment is an important factor of economic growth; it is also used to scrutinize the country's economic performance. Investment is the main source of good's production that can be used to manufacture other goods (Sial et al., 2010). Investment is a phenomenon of using available resources such as time, money and effort with the hope of earning profit or gets money, actualized within a specified date or time frame. Country's economic growth depends on investment of that country. Investment enhances productive capability of a country and promotes technological advancement by embodiment of innovative techniques (Ahmad and Qayyum, 2008). Total domestic investment can be divided into private and public investment (Saghir and Khan, 2012).

1.1. Political Regimes and Investment Climate in Pakistan

There are two dominant political regimes in Pakistan's history, autocratic and democratic. In democratic regime elected representative ruled the country but in autocratic regime country ruled by a dictator (Hashim, 2013). Average growth rate of economy was 6.3% annually in military rule but under democracies GDP remained below 5% annually (Azam, 2014).

In 1947 Quaid-e-Azam became the first governor general of Pakistan. Later on, his successors Liaquat Ali Khan during (1948-51), Malik Ghulam Mohammad in (1951-55) and General Sikandar Mirza (1955-58), worked hard to control the pathetic socio economic situation of the country but their efforts were not fruitful.Basically Pakistan was an agrarianand underdeveloped country withinconsequential and infant industrialized base. There

were twenty seven basic industries during 1950s, but public sector could invest only in four industries (Ahmad and Qayyum, 2008). Ayub khan took the control of country in 1958. During his 11 years rule, he focused on economic and social development. In 1960s private sector has controlled over major areas like banking, insurance and also over certain basic industries (Ahmad and Qayyum, 2008). The GDP growth and per capita income was recorded annually 6.5% and 3.5% respectively (Monshipouri and Samuel, 1995).

In 1972 Zulifqar Ali Bhutto was elected as governor of Pakistan. The economic growth during his regime was recorded 4.5%. Due to the separation of Bangladesh and political uncertainty, investors moved their capital to foreign countries. He nationalized the institutions and industry, which has worst affect on private investment (Monshipouri and Samuel, 1995). Private domestic investment was 5.6% of GDP for the period of 1970s (GOP, 2012-13).

Zia-ul-Haq came to power in July 1977. The economic growth rate (GDP) during his era (1977-88) was recorded 6.3% and reasons behind this immense growth were,the huge inflow of remittances, remarkable financial foreign assistance and US aid. Domestic investment was recorded at 17% of GDP (Khana, 2003). Domestic private investment reached to 7.8% of GDP in 1980s (GOP, 2012-13). Benazir Bhutto came to power in 1988 after Zia-ul-Haq. In 1990 Mian Nawaz Sharif got an opportunity to take charge of country. The economic growth (GDP) was 5.97% per annum during his span. He adopted liberalized policies (reduced trade barriers), privatized industries and gave incentives to local and foreigner investors, which restore investor's confidence. Under his government domestic investment was 19.3% of GDP (Hashim, 2013). After Nawaz, in 1993 Benazir again took the control of country. Annually 4% economic growth was recorded during second tenure of Benazir (1993-1995). During (1993-1996) domestic investment of country was 19.2% of GDP (Khana, 2003). From 1996-1999, the second regime of Mian Muhammad Nawaz Sharif started. On March 28th, 1997, Minister of economic revival program was announced, to stimulate private sector investment and to promote investmentenvironment. In 1998 a policy for independent power projects (IPPs) was declared for the creation of competitive power market (Ahmad and Qayyum, 2008). From 1988 to 1999 nine different governments (four elected, four interim-appointed, and one succeeding military coup of 1999) governed Pakistan, due to high political instability so this era (1988-1999) is known as "muddling nineties" (Husain, 2009). During 1990s private domestic investment recorded 9.1% of GDP (GOP, 2012-13).

Musharraf ruled out democracy and took the control of country by implementing Martial Law on October 12, 1999. In 1999 military government announced an economic revival plan under the IMF's PRGF (poverty reduction and growth fund) framework (Ahmad and Qayyum, 2008). Domestic private investment during 2000s averaged 11.8% of GDP whereas reached to its climax (13.5%) in 2005-06 (GOP, 2012-13).

After Musharraf's resignation on 9th of September, 2008 Asif Ali Zardari was nominated as president. Under his era (2008-2013)

total investment was recorded as 14.22% of GDP, whereas in 2007-08 it was 19.21% of GDP. Fixed investment has decreased in 2012-13 to 12.6% of GDP, from17.61% in 2007-08. Private and public investment in 2012-13, also contracted to 8.7 and 3.9% of GDP compared to 12.8 and 4.8% of GDP respectivelyin 2007-08 (GOP, 2012-13).

In 2013, Mian Nawaz Sharif took charge of country. Total investment was 15.21% of GDP in fiscal year 2015-16 comparatively to 2014-15 it was 15.12%, whereas fixed investment rose to 13.61% of GDP, though its share was 13.52% in 2014-15. During 2015-16 contribution of private investment in gross domestic product is documented as 9.79%, while it was 9.66% in 2014-15. Share of public investment to gross domestic product grew by 3.82 in fiscal year 2016 while in 2014-2015 recorded as 3.72%. Total Investment in fiscal year 2014-15 was Rs. 4256 billion, but in fiscal year 2015-16 it has reached to Rs. 4502 billion (GOP, 2016).

1.2. Objectives of Study
1. To analyze the relationship between government type(democracy/dictatorship) and domestic investment
2. To evaluate theexplanatory significance of political and economic variables in making investment decisions.

2. LITERATURE REVIEW

2.1. Theoretical Review
Fisher (1930) presented that interest rate is only determinant of investment. Keynesian theory of investment (Keynes, 1936) reconstructedinvestment function and involved marginal efficiency schedule (demand schedule) of invested capital stock. Keynes also observed that investments decisions are highly affected by underlying uncertainty, attached with the expected outcomes of investment project. Chenery (1952) and Goodwin (1951) reintroduced the flexible accelerator principle, which implies that investment depends on real interest rate, rate of capital depreciation, firm output and price of capital. Tobin (1969) presented, Tobin's Q-theory of investment, this theory included investor's expectations and adjustment costs. Main focal point of this theory is that investors have choice among prevailing financial markets, real estate and uncertainty (Francis and Buyinza, 2013).

2.2. Empirical Review
Foreign direct investment influences the growth of a country by increasing fixed capital formation of a country. Agosin and Machado (2005) assessed the positive as well negative influence of FDI on domestic investment for twelve countries over 1971-2000. Tang et al. (2008) have done the same work in context of China, by applying co integration and ECM. They concluded that, FDI and GDP have positive and significant influence on domestic investment of China. Similarly Hanif and Jalauldin (2014) demonstrated positive and significant short run relationship between FDI and local investment of Malaysia,whereas foreign direct inflows displaced domestic investment in long run. Morrissey and Udomkerdmongkol (2012) also evaluatedthat FDI displaced

domestic private investments. Kindly provide these author details in the reference list

By using the time series data of Pakistan from 1981 to 2008, Ghazali (2010) concluded bidirectional causal association between growth and domestic investment, and between domestic investment and FDI. Foreign investments in Pakistan act as a sign of reliability for local investors. Shah et al. (2010) have been reported that FDI contributes in the economic growth of Pakistan by supplementing domestic investment. Shah et al. (2011) stated that increase in domestic investment will attract more foreign direct investment and more foreign direct inflows encourage more domestic investment in Pakistan. Irfanullah and Anwar (2014) concluded that both foreign direct and domestic investments in Pakistan induce one another.

By applying serial-correlation, Ndikumana (2000) scrutinized positive effect of GDP growth and negative effect of inflation on domestic investmentof thirty (sub-Saharan African) countries. Frimpong and Marbuah (2010) find out that private investment in Ghana ispositively determined by real GDP growth, depreciation of real exchange rate, inflation, trade openness, political regime (constitutional rule/democracy) and real interest rate. Francis and Buyinza (2013) experienced positive relation between gross domestic product (economic growth) and firm's investment inUgandan economy. They also explored the effect of interest rate, exchange rate volatility, savings and inflation rate on private investment.

Hyder and Ahmed (2003) found inverse relationship between private investments and interest rate in Pakistan. Ahmad and Qayyum (2008) also explored that interest rate and inflation affect private investment negatively in services sector of Pakistan,by using time series data of Pakistan over 1972-2005.

By using error correction and co-integration, Saghir and Khan (2012) examined the determinants of private and public investments in Pakistan for time period of 1970-2010. Foreign aids, government revenue, gross national product and private investment affectgovernment investment positively. On the other hand interest rate and government investment have negative and significance influence on private investment. Mitra (2006) also investigated negative impact of government investment on private outlays in short run,whereas positive effect in long run for India, by using a sample period of 1969-2005.

By using ARDL approach, Khan and Ahmed (2007) also analyzed negative and insignificant influence of foreign aid on economic growth of Pakistan. They suggested that foreign direct investment, export growth and domestic investment stimulate economic growth of Pakistan. Negative and insignificant relation between foreign aid and public investment also found Ajaz and Ellahi (2012), by employing co integration technique. They evaluated that GDP growth affects both private and public investment in Pakistan. Interest rate and credit availability to private sector affect private investment negatively but inflation exerts negative impact on both investments. More recently Awan and Moeen-ud-Din

(2015) investigated non-positive and significant influence of foreign aid on Pakistan economy by using OLS technique over time span of 1980-2012.

Chaudhry et al. (2009) explored positive effect of GDP and foreign debt on investment during 1973-2006, by conducting multivariable regression. They also foundinterest rate as negative determinant of nvestment. Ali (2013) also assessed positive impact of external debt, remittances and foreign direct investment on domestic investment of Pakistan,by employing co integration technique over time period 1972-2007.

Nasir and Saima (2010) explored the negative impact of inflation on investment, by using annual data of Pakistan for time period 1961-2008. Hafeez and Safdar (2015)also investigated negative impact of inflation and interest rate, while positive and significant impact of GDP on investment, by applying ARDL bound testing approach on time series data over 1980-2011.

Pastor and Sung (1995) exposed that democracy has positive effect on private investment in developing countries, because democracy reduced property risk and social conflict and also give freedom of choices that encourage private investment. Tavares and Wacziarg (2001) evaluated that democracy enhances human capital formation and government consumption, whereas reduces physical investment, democratic institutions are more responsive to society demands.

According to Monshipouri and Samuel (1995) dictatorial regimes have brought remarkable economic growth in Pakistancomparatively to democratic but failed to achieve sociopolitical equality. Iqbal et al. (2008) also found positive linkage between economic growth and autocracy in Pakistan; they demonstrated that macroeconomic variables grow in more compatible way during autocratic regimes than democratic. Controversial findings assessed by Mahmood et al. (2010), by Applying ARDL on Pakistan's annual data set (1970-2007). They explored that democracy promotes economic growth by rising confidence and security of investors and also by encouraging social and political sectors.

Odedokun (1995) argued that under dictatorial rules, inflation rate and government's expenditures increases but capital formation, FDI and economic growth shrinks. Controversially Khan and Saqib (2011) investigated positive association between democratic regime and inflation by using data over period 1951 to 2007. Haider et al. (2011) also noted high inflation, low rate of investment; bureaucratic corruption and poor economic growth in Pakistan during democratic rule.

3. DATA AND METHODOLGY

Time series data of GDP, FDI, inflation, interest rate, external debt, foreign aid, credit to private sector and domestic investment is being used in this research work, ranged from 1980 to 2014. Data retrieved from world development indicator (WDI) and international financial statistics (published by IMF). Generally time

series data is available in nominal form. So to convert data into real form, it can be deflated with GDP deflator (Angmortey and Offin, 2014). In this study, all variables are transformed into real form, and then into log form by taking natural log, except real interest rate because lag of non positive values could not exist (Chaudhry et al., 2009). This lag conversion is undertaken to normalize variables, and to reduce hetroskedasticity problem by squeezing the measurement scale of variables (Angmortey and Offin, 2014). Nominal interest rate is converted into real by subtracting inflation rate from nominal interest rate (Chaudhry et al., 2009). This study used gross fixed capital formation percent of GDP as proxy to measure domestic investment (Ali, 2013).

3.1. Model Specification and Methodology

Investment is second component of national income identity. Total domestic investment can be divided into private and public investment (Saghir and Khan, 2012). By following (Ajaz and Ellahi, 2012) and (Saghir and Khan, 2012) public and private investment functions can be specified as:

$$\text{Private investment} = f(GDP, RR, FDI, INF, CPS) \quad (3.1)$$

$$\text{Public investment} = f(GDP, FDI, INF, AID, ED) \quad (3.2)$$

Equation (3.1) shows private investment is function of GDP, real interest rate (RR), foreign direct investment (FDI), inflation (INF) and domestic credit to private sector (CPS). Equation (3.2) illustrates public investment is determined by GDP, inflation, foreign direct investment, flow of aid (AID) and external debt (ED) into the country. Both democratic and non democratic governments rely on internal and external borrowing to finance developmental and non-development projects (Ajaz and Ellahi, 2012).

Domestic investment function can be written as:

$$DI = f(GDP, RR, FDI, INF, AID, CPS, ED, D) \quad (3.3)$$

Theoretically both investments are positively related to the GDP, as GDP accelerate investment activities. Domestic credit available to private sector gives incentives to private sector and real interest rate is borrowing cost, directly affects private investment as well as domestic investment. Inflation also influences both private and public investment. According to (Angmortey and Offin, 2014) foreign inflows (aid and debt) could be used as substitute of domestic savings to finance investment projects. Foreign inflows make possible for a country to finance investment expenditures beyond the level of available domestic resources (Ali, 2013). So foreign aid and external debt are used to finance public investment and to bridge saving investment gap as well. A dummy (D) of non democratic government is introduced in model, to capture the effect of political regimes on domestic investment activities.

Domestic investment model incorporates accelerator, neoclassical, macroeconomic and political variables. Prior research showed that these variables have significant influence on domestic investments. Equation (3.3) can be specified into domestic investment model which is similar to the models of (Frimpong and Marbuah, 2010 and Saghir and Khan, 2012).

$$\ln DI = \beta_0 + \beta_1 \ln GDP_t + \beta_2 \ln ED_t + \beta_3 IR_t + \beta_4 \ln FDI_t + \beta_5 \ln CPS_t + \beta_6 \ln AID + \beta_7 \ln INF_t + \beta_8 D_t + \varepsilon_t \quad (3.4.)$$

Pesaran et al. (2001) designed ARDL bound testing approach to check relationship among variables, when included variables are integrated at different orders (at level and at first difference). Two steps are involved in this estimation procedure, first test long run association between variables by computing F-stat. If long-run relationship exists, then move toward next step and estimate short and long run parameters. This approach used t and F-statistics, F test is used to check the existence of long run relationship among variables. Whereas t-test to verify the significance of individual variable (to test null hypothesis). Two bounds (upper and lower) are designed in bound testing, when F-stat becomes greater than upper critical values, it provides strong evidences to reject null hypothesis i.e., no co-integration. This approach can estimate both long and short run coefficients of model simultaneously. Furthermore, ARDL eliminate problems related to autocorrelation, endogeniety and omitted variables as a result estimated coefficients are unbiased and efficient. One most important advantage of this technique is that model can be estimated even when independent variables are endogenous (Al Khatib et al., 2012).

$$\Delta \ln DI_t = a_o + \varphi_1 \ln DI_{t-1} + \varphi_2 \ln GDP_{t-1}$$
$$+ \varphi_3 \ln INF_{t-1} + \varphi_4 IR_{t-1} + \varphi_5 \ln FDI_{t-1} + \varphi_6 \ln ED_{t-1}$$
$$+ \varphi_7 \ln CPS_{t-1} + \varphi_8 \ln AID_{t-1} + \sum_{i=1}^{p0} \alpha_1 \ddot{A} \ln DI_{t-i}$$
$$+ \sum_{i=0}^{p1} \beta_i \Delta \ln GDP_{t-i} + \sum_{i=0}^{p2} \gamma_i \Delta \ln INF_{t-i} + \sum_{i=0}^{p3} \chi_i \Delta IR_{t-i} \quad (3.8.)$$
$$+ \sum_{i=1}^{P4} \omega_i \Delta \ln FDI_{t-i} + \sum_{i=0}^{p5} \phi_i \Delta \ln ED_{t-i} + \sum_{i=1}^{P6} \rho_i \Delta \ln CPS_{t-i}$$
$$+ \sum_{i=1}^{P7} \phi_i \Delta \ln AID_{t-i} + \eta D_t + \varepsilon_t$$

Domestic investment model includes (p^0, $p^1 . p^2$, p^3, p^4, p^5, p^6, p^7) order of ARDL model for above mentioned seven variables, where $\phi_1, \phi_2, \phi_3, \phi_4, \phi_5, \phi_6, \phi_7$, and ϕ_8, are long run elasticities and $\alpha, \beta, \gamma, \chi, \omega, \phi, \rho$ and ϕ are short run dynamics.

$$\Delta \ln DI_t = \sum_{i=0}^{p1} \beta_i \Delta \ln GDP_{t-i} + \sum_{i=0}^{p2} \gamma_i \Delta \ln INF_{t-i}$$
$$+ \sum_{i=0}^{p3} \chi_i \Delta IR_{t-i} + \sum_{i=1}^{P4} \omega_i \Delta \ln FDI_{t-i} + \sum_{i=1}^{P5} \phi_i \Delta \ln ED_{t-i}$$
$$+ \sum_{i=1}^{P6} \rho_i \Delta \ln CPS_{t-i} + \sum_{i=1}^{P7} \phi_i \Delta \ln AIS_{t-i} + \eta \Delta D_t + vecm_{t-1} + \varepsilon_t$$

This model is used to estimate the short run coefficients for domestic investment. Where ECM represents error correction term, whereas υ indicates speed of adjustment.

4. RESULT AND DISCUSSION

Before processing time series data it is necessary to check out stationary of data, because generally time series data is non stationary,such as mean and variance of data does not remain constant over time. Variations in data mean and variance (non-stationary), presented spurious results, provided high R-squared which gave the confirmation of significance of unrelated explanatory variables, but in actual this relationship is worthless. So to avoid such type of situations, unit root (non-stationary) problem is removed before employing time series analysis.ADF test introduced by Dickey and Fuller (1979) is applied to check stationary of data. Results of ADF tests declaredthat FDI and IR become stationary at level, whereas GDP, DI, ED, INF, CPS and AID are stationary at first difference (Table 1).

Akaike information criterion is used for lag selection. Auto regressive distributed lag model of order (1, 1, 1, 2, 1, 1, 2, 1, 2) is estimated for domestic investment by using lag length two.

Value of F-statistic is 4.900 which is greater than upper bound and give confirmation of long run relation by rejecting null hypothesis (no co-integration) at given levels of significance (Table 2). Long run relationship has been found between explanatory and explained variables (Table 3).

ARDL results of domestic investment model for long run are illustrated in Table 4. The coefficient of GDP, IR, AID, INF, ED, CPS and FDI are in line with the previous literature. The GDP coefficient is found positive and highly significant at 1% level of significance. This suggests that 1% increase in GDP, when other variables are considered constant, guides to 0.82% increase in domestic investment in long run. This positive association between GDP and domestic investment confirm the existence of accelerator effect. So this outcome is in accordance with the accelerator theory which stated that when GDP of country increases accordingly investment will boost up. Ghazali (2010) and Sohail et al. (2014) also assessed similar findings in Pakistan's context.

Coefficient of interest rate is negative and shows its significance at 1%. This indicates that 1% increase in interest rate on average discourage domestic investment by 0.02% when other variable supposed zero value. Interest rate is consider cost of capital of capital so when cost of capital increases it become expensive for investors to finance investment activities so consequently investment drop off. Same finding was established

by (Hyder and Ahmed, 2003; Hafeez and Safdar, 2015 and Muhammad et al., 2013).

Coefficient of FDI depicts positive relation with domestic investment. This shows that foreign direct investment creep up domestic investment in Pakistan. Two approaches can be used to address this phenomenon, as when multinational corporations flourished accordingly country's supplementary industries would boost up. And second approach is, foreign investors give confidence to local investors to make investment, as a result investment increases in country. The result exhibits that foreign direct investment crowded in domestic investment in Pakistan. The outcome is in line with the finding of Shah et al. (2010), Ghzali (2010) and Irfanullah and Anwar (2014).

Inflation is found negative and significant in our model. One percent increase in inflation on the average discourages domestic investment about 0.30% in long run, when all other included variables are assumed constant. The reason behind this is, volatility in prices depress investors confidence.Hafeez and Safdar (2015), Nasir and Saima (2010), Ahmad and Qayyum (2008) also estimated inflation as negative determinant of investment.

Credit available to private sector depicts positive relation with domestic investment. It can be construed as 1% increase in credit availability to private sector encourages domestic investment about 0.213%, but this impact is statistically insignificant. Available credit is not properly used by investors and cost of credit also affects its significance. This outcome is similar to the findings of Mahmood and Chaudhary (2012) and Al Khatib et al. (2012). Kehinde et al. (2012) also observed insignificant impact of credit on domestic investment.

External debt stimulates domestic investment significantly, as it is considered a funding source of government spending, so an increase in funds enhances public investment. This outcome is in accordant with the findings of Chaudhry et al. (2009) and Ali (2013).Coefficient of aid suggests that when aid flow increases by 1%, in the result domestic investment decreases by 0.10% in long run. As foreign aid discourage domestic savings, in the result investment decline (Ahmad and Ahmed, 2002). During Zia's era despite of heavy aid flows domestic savings squeezed (Khana, 2003). Similar finding has been assessed by Awan andMoeen-ud-Din (2015) and Ajaz and Ellahi (2012). Poor policies, corruption, mismanagement and misuse of foreign aid, affect country's investment activities negatively.

Table 1: Result of unit root test

Variables	At level		At 1st difference		Specification
	Intercept	Trend and intercept	Intercept	Trend and intercept	
LFDI	−3.75	−4.20	−4.78	−4.69	I (0)
LGDP	1.36	−1.67	−4.89	−4.86	I (1)
LINF	−2.40	−2.45	−5.91	−5.84	I (1)
LDI	−1.36	−2.10	−5.12	−5.10	I (1)
LED	−0.19	−1.98	−4.24	−4.68	I (1)
LIR	−2.25	−3.59	−9.63	−9.58	I (0)
LCPS	−0.24	−1.06	−4.54	−4.77	I (1)
LAID	−2.73	−3.21	−8.13	−8.02	I (1)

Table 2: ARDL bound test

F-statistic	4.900708	
Critical value bounds		
Significance (%)	**I 0 Bound** (lower bound)	**I1 Bound** (upper bound)
10	1.95	3.06
5	2.22	3.39
2.5	2.48	3.7
1	2.79	4.1

Table 3: Long run estimates

Variables	Coefficient	Standard error	T-ratios
LGDP	0.8264	0.1613	5.121
LIR	−0.0201	0.0056	−3.539
LFDI	0.0654	0.0323	2.023
LINF	−0.3005	0.0995	−3.020
LCPS	0.2133	0.2418	0.882
LED	0.2794	0.0833	3.352
LAID	−0.1094	0.0355	−3.079
DUM	−0.1530	0.0921	−1.661
C	−14.7312	3.1183	−4.724

Table 4: Short run estimates for DI

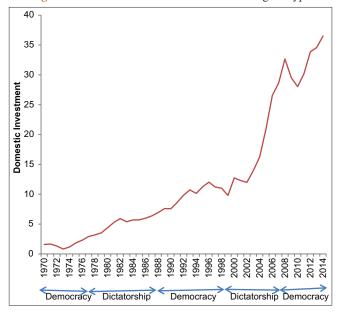| Variables	Coefficients	Standard error	T-Stat
D (LGDP)	−0.0980	0.2370	−0.4136
D (IR)	−0.0045	0.0029	−1.5253
D (LFDI)	0.0604	0.0292	2.0617
D (LFDI(−1))	0.0460	0.0250	1.8395
D (LINF)	−0.1034	0.0487	−2.1208
D (LCPS)	−0.3653	0.1805	−2.0235
D (LED)	−0.0702	0.1706	−0.4118
D (LED(−1))	−0.2813	0.1060	−2.6537
D (LAID)	−0.0334	0.0221	−1.5076
D (DUM)	−0.0798	0.0431	−1.8483
D (DUM(−1))	0.0890	0.0440	2.0190
ECM	−0.9011	0.2031	−4.4359

R^2=0.86, R^2-adjusted=0.63, F-Statistics=3.74, DW-statistic=2.19, RSS=0.017

Coefficient of dummy variable demonstrates that authoritarian regime has negative and statistically insignificant impact on domestic investment. Various studies have been probed negative relation between dictatorial rule and investment. Negative relation indicates that dictators did not provide free and friendly environment to the investors, while they forced investors to make investment in specific projects. Investors lost business freedom during non democratic regimes (Frost, 2014).Due to interference of dictators, it is hard for entrepreneurs to achieve the optimal level of production, consequently profits goes down thus investment starts to decline. Odedokun (1995) argued that during autocratic regime capital formation and economic growth shrink.

The main finding of above mentioned tables is, coefficient of ECM has correct sign (negative) and is also statistically significant at 1% level, with speed of convergence to equilibrium of 90%. It signifies a stable long run association between endogenous and exogenous variables. It indicates yearly 90% of correction or adjustment toward equilibrium (Table 4).

GDP has positive but insignificant influence on domestic investment in short run;it means in short run domestic investment is irresponsive

Figure 1: Domestic investment in Pakistan in regime type

to any change in GDP (Mahmood and Chaudharry, 2012).Interest rate shows inverse relation with domestic investment similar to long run. FDI has supplementary effect on domestic investment in short run (Sohail et al., 2014). One year lagged FDI also has significant and positiveeffect on domestic investment in short run. Inflation exhibits negative and highly significant relation with domestic investment in short run. Macroeconomic instability (inflation) affects investment decisions negatively in short and long run as well. In short run credit available to private sector has negative and significant influence on domestic investment (Ajaz and Ellahi, 2012). External debt shows negative and insignificant impact on investment activities in short run. One year lagged external debt coefficient exhibits negative and significant association with domestic investment in short run (Waheed, 2015). As government usesexternal debt to finance non development projects in short run, which displaces private investment, as a result domestic investment declines (Mitra, 2006). Increase in foreign aid discourages domestic investment; similar result has been assessed by Khan and Ahmed (2007). Slope coefficient of dummy variable suggests that non-democratic government has negative but significant effect on domestic investment in short run.

4.1. Diagnostic and Stability Test
Different diagnostic tests such as Harvey (P-value, 0.314), Jarque-Bera (0.639) Brush-Godfrey (0.167) has been applied to check heteroscedasticity, normality and auto correlation respectively. P-values of all tests suggest that data is homoskedastic, not serially correlatedand normally distributed.

Structural stabilityof model is examined by applying CUSUM test. CUSUM plot suggests that model is structurally stable.

5. CONCLUSION AND POLICY SUGGESTION

In this study secondary data (1980-2014) of Pakistan for GDP, domestic investment, interest rate, FDI, external debt, credit to

private sector, foreign aid and inflation is used. Augmented Dickey Fuller test is applied to check stationary of data, ARDL bound approach is employed to check long run association between explanatory and explained variables, ARDL based error correction method is used to check the short run relation. ARDL estimates reveal that domestic investment is affected by GDP, interest rate, foreign direct inflows, inflation, foreign aid and debt. Results are accordant with classical and Keynesian views. Such as GDP accelerate investment (accelerator effect) and negative relation between interest rate (cost of capital) and investment, uncertainty (inflation) influence investment decisions negatively. While credit to private sector and non-democratic dummy found insignificant in long run but dummy shows significant impact in short term. These results conclude that domestic investment decisions are not influenced by regime type but political and economic stability and law and order conditions are necessary to promote domestic investment (Figure 1). Government should provide constructive and friendly environment to investors. Government should try to enhance foreign inflows in FDI form despite of foreign debt and aid, as FDI effectively stimulate domestic outlays. Investment oriented environment should provide to foreign investors because foreign investment stimulate domestic investment.

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