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Economic Analysis on Pakistan

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World Economic Survey Expert Group, Pakistan

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1.
Revisiting Determinants of Money Demand Function in Pakistan

By
Umbreen IFTEKHAR
Dawood MAMOON
Muhammad S. HASSAN

Introduction

The basic element in conducting monetary policy is demand for money. It makes possible for monetary authorities to effect expected changes in besieged macroeconomic variables such as interest rate and income by correct changes in monetary aggregates. The demand function is an imperative mean to meet the liquidity needs of economic agent (Handa, 2009). Because of its significance, the money demand has been the object of attention by researchers. Initially, research was limited to only developed modern countries but now work on developing countries gained great momentum since mid 1980's. The vector error correction model (VECM) and other estimation techniques gave greater momentum to the work on money demand. The Autoregressive distributed lag modeling (ARDL) approach has given unique results to work on demand for money. In this study we use ARDL approach to investigate the long run relationship between money demand and other macroeconomics variables used in this study. This approach will investigate the co-integrating property of demand for money in Pakistan using the method of vector error correction model (VECM). We use M2 monetary aggregate to measure money demand as dependent variable. The independent variables include per capita GDP, real interest rate, exchange rate, fiscal deficit and rural and urban population. Another issue in the determination of money demand function is its stability which has been investigated by many other researchers. Due to difference in estimation techniques, the results had been mixed and researchers could not come to the same conclusion. The other reason of dissimilar results is different data time spans. Fisher (1911) initially presented the Quantity theory of money demand which is also known as transaction demand for money. In his theory, the income was the only determinant of money

demand and interest rate was ignored. The general form of money demand function is stated as:

$$MV=PT \quad (1)$$

Another classical approach of money demand was presented by Marshall (1923) and Pigou (1917). This approach is labeled as Cambridge cash balance approach and it concentrates on individual income which they want to hold. The individuals do not undergo from institutional limitations i.e. credit card. Keynes (1936) presented money demand theory comprises of three motives in his famous book. These are transaction demand for money, speculative demand for money and precautionary demand for money. Keynes theory is also labeled as *liquidity preference theory*. Keynes added another variable affecting money demand i.e. interest rate. Portfolio theories emphasized that the prime function of money is store of value. Friedman (1956) and Tobin (1958) initiated the portfolio theories of demand for money. They argued that the money which people hold is necessarily a part of their portfolio assets.

Inventory theories of money demand primarily focused on money as used for the purpose of transaction. Baumol (1952) and Tobin (1956) provided foundation to inventory theoretical approach or transaction theories of money demand. Caporale &Gil-Alana (2005) described the significance of stable money demand function. According to him, the policy makers lose major pre-requisite for conducting an effective anti-inflationary monetary policy if money demand is not stable. Monetary policy plays ineffective role without a proper and stable functioning of money demand. Bahmani-Oskooee & Rehman (2005) investigated the function of money demand for seven Asian countries. The results exposed that the money demand (M1) was stable in case of India, Indonesia, and Singapore while in Malaysia, Pakistan, the Philippines and Thailand, stability of money demand (M2) was scrutinized. An efficient monetary policy is needed to identify money market characteristics. Particularly, in implementing effective monetary policy, the money demand function plays very significant role. Eventually the formulation of an optimal monetary policy is not practicable without the reliable estimate of money demand function.

In developing and developed countries, researchers are much concerned to investigate the relationship between money demand and its main determinants. In conventional theories, the main determinants are income and interest rate. Currently the efforts have been carried out to find other determinants of money demand. In Pakistan many studies have been carried out to estimate the function of money demand by various techniques of co-integration see (Akhtar, 1974; Qayyum, 2005; Azim *et al.,* 2010; Faridi & Akhtar, 2013). Conclusively, the money demand is an important variable used to determine the level of aggregate economic activity in any economy. Examination of the money demand function for Pakistan is sole purpose of our study and to search those main factors like

per capita income, real interest rate, exchange rate, fiscal deficit and rural and urban population; determine economic activity perilously. For analysis, this study employs time series data for the period ranges from 1972 to 2013.

The empirical analysis of demand for money is most disputed issue in developing countries and stable money demand function is a necessary condition in implementing monetary policy. When any economy deals with depression/ recession, the interest rate rises in this situation. At this stage monetary policy, especially, money demand plays important role effectively. Can money be used as a tool to boost growth empirically in developing countries? The above question requires appropriate working of monetary policy, mainly the money demand function. The quantity of money decides that how much this quantity can be used to stimulate economic growth in developing countries.

Significance of the Study

The quantity of money demanded is vital and crucial variable to determine economic activity in any economy. Whenever the issue of monetary policy is discussed then the estimation of money demand can't be ignored. In other words, the stable money demand function is needed to attain macroeconomic objectives by monetary authorities. This is informed by the fact that monetary policy works with economic policy to influence better on level of employment and national income.

When the money demand function is specified properly, it makes the desired quantity of money to be supplied that may guarantee the stability in the economy. For this purpose monetary policy is formulated and implemented with measured precautions, this target is fulfilled by the Central Bank. Inflation and interest rate can be handled by applying the monetary policy as effective tool. This study will also cast a considerable impact in tracking the interest rates, exchange rate and other macroeconomic variables. Furthermore this research would give considerable knowledge to those researchers who take interest to explore the main determinants of money demand function in Pakistan.

Theoretical Foundation of the Study

In this study, income, interest rate, exchange rate, fiscal deficit and population have been considered as explanatory variables which may affect money demand function in Pakistan.

The positive impact of income on money was found by the studies like Bhatta (2013); Dritsakis (2011); Arize & Nam (2012); and Sarwar *et al.* (2013). Therefore, we have used income as an independent variable to determine money demand function in Pakistan. Some other studies like Khan & Sajjid (2005); Tang (2007) and Arize & Nam (2012) explored negative impact of interest rate on money demand function whereas, interest rate exerted positive impact on money demand as suggested by Narayan *et al.* (2009); Abdullah *et al.* (2010) and Abdulkheir (2013). Therefore, in this study interest rate has been taken as one of the factors which could affect money demand function in Pakistan.

Afterwards, exchange rate is also considered as one of the important factors of money demand function and according to Khan & Sajjid (2005); Sahadudheen (2011) and Arize & Nam (2012), exchange rate leaves positive effects on money demand function whereas Azim *et al.* (2010); Dharmadasa *et al.* (2013); Anwar & Asghar (2012) and Okonkwo *et al.* (2014) found opposite results. Moreover, it is also evident that fiscal deficit has positive effect on money demand [Vamvoukas (2010) and Khrawish *et al.* (2012) whereas Al-Towaijri & Al-Qudair (2006) witnessed negative effect of fiscal deficit on money demand function and Faridi & Akhtar (2013) also captured the impact of population growth on money demand function in their study. Considering the significance of exchange rate, fiscal deficit and population, in the present study, all these factors have been taken as explanatory factors of money demand function for a country like Pakistan.

There are various macroeconomic factors which effect money demand function. These factors are exchange rate, interest rate, real income, fiscal deficit, inflation, external and internal debt, tax revenue, energy crises, oil shocks etc. The relationship between money demand and above mentioned variables has ever been of vital importance for the researchers. Mundell (1963) argued that exchange rate could affect money demand. He further said that exchange rate is a major determinant of money demand along with income and interest rate. Another variable like fiscal deficit can also affect money demand. The two major approaches like Keynesian proposition and Ricardian equivalence provide explanation to investigate the relationship between money demand and fiscal deficit. These approaches were tested empirically. Vamvoukas (2010) also tested the relationship between fiscal deficit and money demand empirically. In our study, we incorporate fiscal deficit as an independent variable along with income, interest rate and exchange rate. Faridi & Akhtar (2013) investigated the link between population growth and money demand and concluded that population growth affects money demand positively. Here we would also include the population factor in our model. We incorporate urban and rural population as independent variables to get some interesting results using ARDL bound testing approach. We take real income, interest rate, exchange rate, fiscal deficit urban and rural population as independent variables and money demand as dependent variable for our model. We apply ARDL bound testing approach to test the relationship between dependent and independent variables empirically for Pakistan. This would be a new addition in the previous literature of money demand function.

Method and Procedure of the Study

Model Specification

The functional relationship of variables is given under.

$$LMON_t = f(LFISCDEF_t, LGDPPC_t, LEXCR_t, LINT_t, LURB_t, LRUR_t)$$

Whereas

LMON = log (Money demand (as a percentage of GDP))
LEXCR = log (Official exchange rate (LCU per US$))
LGDPPC = log (Per Capita GDP)
INT = Real Interest Rate
LFISCDEF = log (Fiscal deficit as a percentage of GDP)
LURB = log (Urban population as (% of total population))
LRUR = log (Rural population as (% of total population))

Data Source

The data on official exchange rate, GDP per capita, urban population, rural population and money demand (M2) is obtained from Word Development Indicators (2015), World Bank. However, the data on fiscal deficit is collected from Pakistan Economic Survey (Various Volumes and Issues) and data on real interest rate is collected from International Financial Statistics (2015), International Monetary Fund. The sample ranges from 1972 – 2013.

Estimation Techniques

Ng-Perron for Unit Root Problem

Ng & Perron (2001) unit root test will be used to test unit root problem. The null hypothesis of the test suggests series is stationary whereas this hypothesis will be accepted or rejected on the basis of the calculated value of MZa. If it lies in critical region then we will reject null hypothesis otherwise we will accept it.

Estimating Co-integration using Autoregressive Distributed Lag Model (ARDL)

The autoregressive distributed lag (ARDL) model will be applied in this study. This model was developed by Pesaran *et al.* (2001). This approach is single equation model. This is applied in case when data series follows mixed order of integration. If the calculated value of F test turns larger than its upper critical value then cointegration between dependent and independent variable will be confirmed otherwise cointegration will not exist between dependent and independent variables. The equation of ARDL for the proposed model is crafted as below:

$$\Delta LMON_t = m_{10} + m_{11}LMON_{t-1} + m_{12}LFISCDEF_{t-1} + m_{13}LGDPPC_{t-1} + m_{14}LEXCR_{t-1} + m_{15}INT_{t-1} + m_{16}LURB_{t-1} + m_{17}LRUR_{t-1} + n_{11}\sum_{i=1}^{p}\Delta LMON_{t-1} + n_{12}\sum_{i=0}^{p}\Delta LFISCDEF_{t-1} + n_{13}\sum_{i=0}^{p}\Delta LGDPPC_{t-1} + n_{14}\sum_{i=0}^{p}\Delta LEXCR_{t-1} + n_{14}\sum_{i=0}^{p}\Delta INT_{t-1} + n_{15}\sum_{i=0}^{p}\Delta LURB_{t-1} + n_{16}\sum_{i=0}^{p}\Delta LRUR_{t-1} + \gamma_{11}$$

The equation will guide to find long run relation between dependent and independent variables and this equation will also provide long run coefficients. Furthermore, after modifying this equation we will be able to find short run coefficients for this study. The modified equation for short run is given as below:

$$\Delta LMON_t = n_{10} + n_{11} \sum_{i=1}^{p} \Delta LMON_{t-1} + n_{12} \sum_{i=0}^{p} \Delta LFISCDEF_{t-1} +$$

$$n_{13} \sum_{i=0}^{p} \Delta LGDPPC_{t-1} + n_{14} \sum_{i=0}^{p} \Delta LEXCR_{t-1} + n_{14} \sum_{i=0}^{p} \Delta INT_{t-1}$$

$$+ n_{15} \sum_{i=0}^{p} \Delta LURB_{t-1} + n_{16} \sum_{i=0}^{p} \Delta LRUR_{t-1} + \omega_{11} ecm_{t-1} + \delta_{11}$$

The coefficient of first period lagged error term will confirm whether the proposed model in this study follows convergence hypothesis or not. If the coefficient is negative and significant then if will provide evidence of convergence hypothesis and vice versa otherwise.

Data Analysis and Interpretations

In descriptive statistics, the probability of Jarque – Bera test will guide whether all the variables follow normal distribution or not? As the probability values for all the variables except fiscal deficit are insignificant for Jarque – Bera test therefore, all the selected variables other than fiscal deficit of this study follow normal distribution. The results are given in the Table 1 which is given as below:

Table 1. *Descriptive Statistics*

Series	LMON	LRUR	LURB	INT	LGDPPC	LFISDEF	LEXCR
Mean	3.7453	4.2278	3.4389	8.7730	10.5221	0.4280	3.3063
Standard Deviation	0.0918	0.0513	0.1122	2.4208	0.2683	0.3046	0.8100
Jarque-Bera	0.3195	1.8644	1.7494	3.4548	2.2907	1015.2320	3.7663
Probability	0.8524	0.3937	0.4170	0.1777	0.3181	0.0000	0.1521

In the Table 2 the results of Ng – Perron unit root test are presented. The results show that at level specification per capita GDP, fiscal deficit, exchange rate, interest rate and rural population are witnessed as stationary but all other variables are witnessed as nonstationary variables. However, all the variables at first difference specification are found as stationary variables. The results are given as below:

Table 2. *Ng – Perron Unit Root Test*

Variable	Ng- Perron Test Statistics			
	At Level			
	MZa	MZt	MSB	MPT
LMON	-4.59671	-1.42883	0.31084	5.49788
LFISCDEF	-18.1398	-2.93544	0.16182	1.62387
LGDPPC	-11.3219	-2.19931	0.19425	2.84360
LEXCR	-20.5386	-3.06263	0.14912	1.68150
INT	-6.90629	-1.76603	0.25571	3.86559
LURB	1.46534	1.19933	0.81846	53.0730

LRUR	-14.3149	-2.45888	0.17177	2.50677
Variable	At First Difference			
	MZa	MZt	MSB	MPT
ΔLMON	-18.3008	-3.01511	0.16475	1.37444
ΔLFISCDEF	-15.1034	-2.74629	0.18183	1.62876
ΔLGDPPC	-17.0622	-2.90616	0.17033	1.48986
ΔLEXCR	-15.1630	-2.75279	0.18155	1.61829
ΔINT	-19.7926	-3.14538	0.15892	1.23947
ΔLURB	-10.6406	-2.30293	0.21643	2.31681
ΔLRUR	-21.5759	-3.06180	0.14191	1.88145
Asymptotic Critical Values				
Level of Significance		1 Percent	-13.8000	
		5 Percent	-8.10000	
		10 Percent	-5.70000	

As the unit root test confirms presence of mixed order of integration therefore, ARDL test is applied for finding long run relationship between money demand and its determinants. The estimates of cointegration method are shared in the Table 3 which provides evidence of long run cointegration between money demand and its determinants in Pakistan on the basis of the value of F – test which is 3.87 and it exceeds the value of upper critical bound at 10 percent level of significance which is 3.5833. Moreover, the results are robust to the diagnostics such as serial correlation, functional form, normality and heteroscedasticity tests. The results are presented as below:

Table 3. *Autoregressive Distributed Lag Estimates*

Estimated Model	$LMON_t = f(LFISCDEF_t, LGDPPC_t, LEXCR_t, INT_t, LURB_t, LRUR_t)$			
Optimal lags	(1,0,0,1,1,0,0)			
F – Test	3.8700			
W – Test	27.0903			
Level of Significance	Lower Critical Bound	Upper Critical Bound	Lower Critical Bound	Upper Critical Bound
At 5 %	2.7790	4.2045	19.4530	29.4318
At 10 %	2.3208	3.5833	16.2455	25.0834
Diagnostic Tests				
R-Bar-Squared	0.4673	Serial Correlation		0.5022 [0.479]
F – Stat F (9,31)	4.8985[0.000]	Functional Form		0.5384 [0.463]
Akaike Info. Criterion	50.2653	Normality		2.8351 [0.242]
Schwarz Bayesian Criterion	41.6974	Heteroscedasticity		0.0806 [0.776]

The long run coefficients are reported in Table 4 which demonstrate that interest rate has negative and significant effect on money demand in long run in Pakistan. This finding is consistent with Sarwar *et al.* (2013) and Azim *et al.* (2010) who concluded the same result. Moreover; the real GDP has negative but insignificant effect on money demand in long run in Pakistan. Abdullah *et al.* (2010) found the similar results for Malaysia, Indonesia, Philippines and Thailand. The following Table 4 contains long run coefficients:

Table 4. *Long Run Coefficients using ARDL Approach*

Dependent variable is LMON

Variables	Coefficients	Standard Errors	t - Statistics	Prob. Value
LFISCDEF	0.28823	0.29602	0.97367	0.338
LGDPPC	-0.9094	0.8059	-1.1285	0.268
LEXCR	-0.9663	0.4337	-2.2283	0.033
INT	-0.0014	0.0008	-1.8513	0.074
LURB	-0.1140	0.1129	-1.0096	0.320
LRUR	-0.7903	0.4406	-1.7937	0.083
C	391.5035	227.9075	1.7178	0.096

The results further expose that both exchange rate and rural population have negative and significant effect on money demand. The negative effect of exchange rate is aligned with Azim *et al.* (2010). This study also shows that money demand increases if budget deficit increases however, the coefficient is insignificant. The positive coefficient of budget deficit is supported by Khrawish *et al.* (2012). The coefficient of urban population insignificant reduces money demand in long run in Pakistan. After discussing long run coefficients, the results of short run coefficients are estimated using error correction representation for the selected ARDL model and results are shared in below Table 5.

Table 5. *Error Correction Representations for the selected ARDL Model*

Dependent variable is ΔLMON				
Variables	Coefficients	Standard Errors	t – Statistics	Prob. Value
ΔLFISCDEF	0.1830	0.1930	0.9483	0.350
ΔLGDPPC	-0.5774	0.4947	-1.1673	0.251
ΔLEXCR	-0.6135	0.3043	-2.0161	0.052
ΔINT	-0.0009	0.0005	-1.9063	0.065
ΔLURB	5.009	2.4933	2.0089	0.053
ΔLRUR	13.0657	6.5845	1.9843	0.056
ecm_{t-1}	-0.6349	0.1482	-4.2847	0.000
R-Squared		0.4876	R-Bar-Squared	0.3388
S.E. of Regression		0.064	F-Stat. F(7,33)	4.2139[.002]
Mean of Dependent Variable		-0.006	Residual Sum of Squares	0.12694
S.D. of Dependent Variable		0.078695	Akaike Info. Criterion	50.2653
Equation Log-likelihood		60.2653	DW-statistic	1.7939
Schwarz Bayesian Criterion		41.6974		

The results of error correction model disclose that both interest rate and exchange rate significantly reduce money demand whereas both rural and urban population shares significantly increase money demand in Pakistan. Whereas, both fiscal deficit and real GDP per capita are found as insignificant factors for short run which affect money demand. The negative and significant coefficient of one period lagged error term provides evidence of convergence of money demand function from short run disequilibrium to long run equilibrium. After discussing short run coefficients, now the stability of money demand function is tested during the period from 1972 to 2013. For this purpose both CUSUM and CUSUM square graphs are used. The Figure 1 shows that both mean and variance of the error term are with critical bounds therefore, both mean and variance of error term are stable therefore, the estimated long and short run coefficients are also stable during the period from 1972 to 2013. The Figure 1 is presented as below:

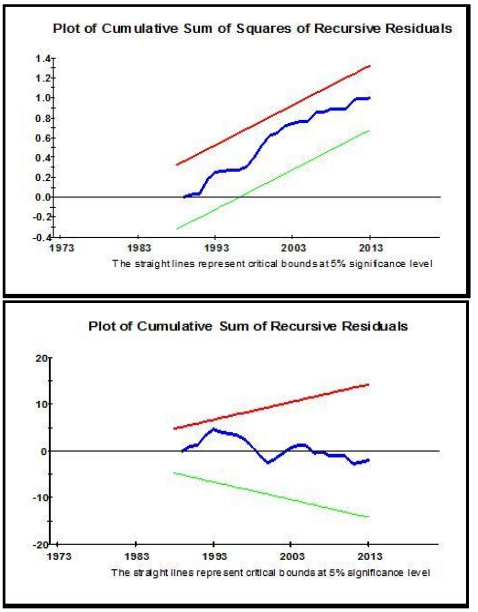

Figure 1. *Stability Test*

Conclusion and Policy Recommendations

The main purpose of our study is to investigate those factors affecting money demand function for Pakistan over the period from 1972 to 2013. We select money demand (M2) as dependent variable and real income, interest rate, exchange rate, fiscal deficit and urban and rural population as independent variables. The data for all variables are taken from World Development Indicators (WDI) except fiscal deficit. The data of fiscal deficit is taken from Pakistan Economic Survey.

The process of estimation initiates from applying unit root tests i.e. Ng-Perron test and KPSS test. These two tests are useful for estimating small sample size and the above both unit root tests give superior estimations. After applying unit root tests, we are able to observe stationary at level or at first difference. If some of our data is stationary at level and first difference then it will be necessary to apply ARDL test. The ARDL bound testing approach is employed to observe the co-integration in variables. The results revealed that all variables are co-integrated and have stable long run relationship with money demand except fiscal deficit, real income and urban population. The interest rate, exchange rate and rural population exert negative and significant effect on money demand in the long run. In case of short run, all variables exert significant effect on money demand except fiscal deficit and per capita GDP. The urban and rural population affects positively money demand in

short run. The money demand function is found stable over time in Pakistan.

The policy implications emerging from our study can be summarized as follows. First, our estimations suggest that monetary authorities may use monetary targeting (M2) in implementing monetary policy. W found a stable money demand function for Pakistan. In our model, we have considered interest rate and per capita GDP along with exchange rate, fiscal deficit, urban and rural populations as control variables to test money demand function. It distinguishes our model from the previous studies which only considered interest rate and real income only and ignored various controls together that we have taken in our study. Conclusively, this model provides wide range of variables used as determinants of money demand.

Policy makers are able to understand three things: depreciation of exchange rate leads to currency substitution or not; change in income and interest rate make any change in money demand or not; whether fiscal deficit affects significantly money demand or not. The stable money demand function needs in the execution of monetary policy for our economy. In Pakistan, there is need to control unskilled population in rural areas, high interest and exchange rates. This will stabilize money demand function and will promote economic activities and real sector of the economy in Pakistan.

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2.
How climate and agriculture fares with food security in Pakistan?

By
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Introduction

Food security is a concept oriented in the mid of 1970s since then food security concept was familiarized. Now the issue related to food insecurity has been very serious in the world including Pakistan but unfortunately Pakistan has not done any consideration over food security. According to Food and Agriculture Organization (FAO) of the United Nations (2009), when households' caloric intake goes below the minimum dietary energy requirement malnourishment exists (FAO, 2010). The world food production has doubled during the past three decades whereas the number of malnourished people is soaring above 900 million around the globe. Pinstrup-Andersen (2009) defines that the word food security means having sufficient quantity of food at national and individual level.

There are multiple definition of food security, According to (Maxwell & Smith, 1992) round about two hundred definitions of food security have been developed and then considering the issue of food security from inventive fact. However, the most comprehensive definition, of food security comes from FAO (2010) "food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life." Food security contains four components food availability, access, utilization and stability. When the supply of food in the country covers the food stuff demand of its growing population that situation is called food security in a country.

On contrary, food insecurity is known to be the absence of any of the conditions stated in the above description about food security at any level i.e. household, regional and national level. When individuals continuously take insufficient amounts of food to meet their daily dietary energy needs

it is considered as severe food insecurity. This severe food insecurity may lead to hunger, the most severe stage of food insecurity (FAO, 2010). Hunger can also regarded as food insecurity situation, which is defined by different authors in literature differently. Food security has been checked at different stages like national, international, individual or household over the period of time but one stage of food security cannot measure the assurance of other stage Maxwell & Smith, (1996), Clay (2002).

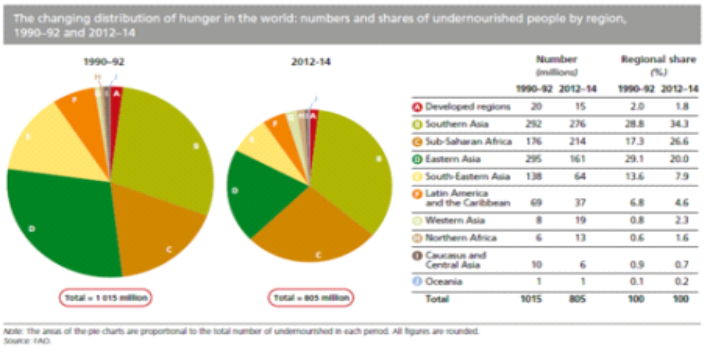
Food security problem is receiving more consideration by the world nowadays. Although, Pakistan is able to produce food for their growing population but still there is deficiency of food stock for domestic needs. Scarcity in food production is a general thing in Pakistan due to some economic, climatic, infrastructure and technological reasons. To meet the deficiency in food stuff, our government should import food and increase the food prices. The government has been actively following the policies of support pricing, storage and allocation still even the basic necessity edibles are available at a very high cost. Food security is an important factor which is generally ignored (Fullbrook, 2010). Pinstrup-Andersen (2009) explored that a country which has no power and resources to produce the desired food stuff or not having enough money to import food from international markets is called food sovereign state.

In order to improve food security of urban and rural population is by enhancing agriculture productivity in Pakistan as agriculture sector is the back bone of Pakistan. There are many economic, climatic and infrastructure factors that affects food security in Pakistan. The most important factor is growing population. Total area under cultivation has decreased due to the increase in population. The current rate of population growth is considered a bit too high and it is anticipated to be twice the number by 2050 which is likely to make the Pakistan the fourth largest country among the six most populous nations of the world. Attaining the aim of nourishment safety particularly for meager populace becomes problematic outcome of weather variation (Gregory *et al.,* 2005).

According to Malthus (1992) increases in population growth also increase the pressure on agricultural possessions and this burden can reduce agricultural efficiency and food production. Kumar & Sharma (2013) analyzed 13 major agricultural states of India show the impact of climate change on food security index from the period of 1985 to 2009.They also showed the relationship of food security index with Socio economic factors and other non-climatic factors such as gross sown area, irrigated area, agricultural labor, tractors, and government expenditures on agricultural and related activities. Their results show that in different Indian states climatic change badly affected food security index.

Timmer (2004) defines that it is an essential requirement of economic development to overcome food insecurity and poverty concern. Food security and financial growth both support each other in developing process. To indemnify food security of the country facing different challenges postured by climate change such as augmented unpredictability of rains temperature strain on garners and livestock etc. in planning and applying suitable edition procedures in the separate areas.

Food security is a main apprehension in developing countries because the livelihood of a large number of populations in rural areas is depends on agriculture sector this make it an important sector in any economy. For both the developed and developing countries food insecurity is an important matter which unfortunately is generally ignored. However, the situation in developing countries is ever deteriorating. According to figure1 805 million undernourished people live in developing countries out of the total 805 million undernourished people of the world. In Asia and Africa the situation is getting even worse where 780 million undernourished people abide. In the given figure share of undernourished people in the year of 1990-92 shows the starvation in the world and this is the share of undernourished people in the era1990-92 and 1012-14 and changing the number of malnutrition in the world and share of undernourished people by the region 1990-92 and 2012-14 (FAO, 2014).



	Number (millions)		Regional share (%)	
	1990–92	2012–14	1990–92	2012–14
A Developed regions	20	15	2.0	1.8
B Southern Asia	292	276	28.8	34.3
C Sub-Saharan Africa	176	214	17.3	26.6
D Eastern Asia	295	161	29.1	20.0
E South-Eastern Asia	138	64	13.6	7.9
F Latin America and the Caribbean	69	37	6.8	4.6
G Western Asia	8	19	0.8	2.3
H Northern Africa	6	13	0.6	1.6
I Caucasus and Central Asia	10	6	0.9	0.7
J Oceania	1	1	0.1	0.2
Total	1015	805	100	100

Note: The areas of the pie charts are proportional to the total number of undernourished in each period. All figures are rounded.
Source: FAO.

Figure1. *The changing distribution of hunger in the world Number and share of undernourished by region, 1990-92 and 2012-14.*
Source:FAO, 2014.

The study of Farquhar (2011) shows that the prices of major food items have increased to record levels consequently at start of 2011. Khan & Schimmel pfennig (2006) checked the causes and consequence of rising prices in Pakistan by economic and supply characteristic. In the long run along with medium run wheat charges influences the inflation in Pakistan and there is a long-run association with Consumer price index and private sector credit. According to the World Bank report (2012) Pakistan's economy is the 26th biggest economy of the world and agriculture sector is one of the world's most important producers of main agricultural commodities (FAO, 2011a) but the percentage of the hungry population is 26% that is more than high (FAO, 2011b).

Increases in food prices have made it difficult for the poor population of developing countries to get sufficient food. High food prices are challenge for the poor because they have to spend a large part of their income on food items. Hanif (2012) states that during the last two years Pakistan most horribly hit by the worldwide foodstuff inflation in 2008

pursued by the shocking down pours in 2010 and rainfall in 2011. All such inequities affected the food price which is chiefly connected to unpreserved foodstuff substance. Food security is strongly interlinked with the issues such as rising prices, international environment and climate changes, water, energy crisis and agriculture growth (Gustafson 2013,Hanumankar 2014). According to (Ahmad *et al.*, 2011) any inconsistency in climate change issues can directly affect a country's ability to nourish her population that's the reason climatic variation and food security are directly related to each other.

This particular study aims at clarifying food security and its determinants and also investigate the factors that influence food security and food production in Pakistan from the period 1973-2014. This study depicts the awareness about food security and food insecurity situation in Pakistan. Most of the literature is on the household determinants of food security not discussing food security at national level this study also fill this literature gap. On the other hand we focus on the four pillars of food security access, availability, utilization and stability. These food security indicators will be explained by different economic, climatic and agriculture input variables. This research also provides the descriptive method to create food security index and also provide food security index of Pakistan. In this study we used annual data of Pakistan over the 1990-2014 periods.

Literature review and theoretical background

Theoretically this study was based on Amartya Sen's theory of scarcity (Sen, 1981) defines all approaches of food security theoretically and measure food security. According to Sen Deficiencies occur not because there is not enough food, but because people do not have access to enough food. Of course, the availability of food near to the household is a requirement of food security. Availability of food is affected by different issues such as a community's proximity to centers of production and supply, or by market forces, restrictions on trade and international policies that affect food supplies. Stability is about secure of food all the time. This includes times of natural shock like floods and droughts, and focuses specifically on the continuity of supply and demand of food grain product. Utilization of food refers to food safety, quality, and nutrition. All of these are keys to food-security analysis. Sen's work was however a fundamental advance before him, the availability of food was supposed to be the dominant determinant of famine. According to (Sen, 1981), people's 'exchange entitlements' (or their livelihood sources) reflect their ability to acquire food.

On the basis of food production it's right of the people to explain their particular strategies and plans for the defensible production, consumption and supply of food which assure the right to food for the whole population. By the world wide announcement of human right in 1948 food security is the right to food and it was acknowledged as a central component of standard of living. According to a survey almost 450

indicators and 200 definitions are available in existing literature. Pinstrup-Andersen (2009) explains that the term "food security" states the access to sufficient food that fulfils the desired amount of food. It also defines that when a country achieves stability between demand and supply by the production of food domestically then they said country is independent in food production. But in a developing country majority of the population cannot reach this situation because the focus of national and global food security is generally on the supply side.

The other dimension of food is availability of food but it cannot guarantee the access of food to the people. To ensure food security at the household or individual level all aspects of food security needs to be addressed. World Food Summit in 1996 redefined food security as 'food security exists when all people, at all times, have physical and economic access to sufficient safe and nutritious food to meet their dietary needs and food preferences for a healthy and active life'. In the above definition there are the four facets of food that are access, utilization, stability and availability of food. These four aspects are prejudiced by economic, political, physical and social situations inside the societies and also weakened by sudden shocks such as natural calamities and wars.

Theoretical framework of food security index

The concept of food security was firstly defined in 1948 by the acceptance of the United Nations Universal Declaration of Human Rights. In the world food discussion in 1974 the concept of food security was just availability of food and it was measured to be the single factor of food security. According to the World Bank in 1986, food security is defined as Access of food by all people at all time for healthy life. In this definition of food security availability and accessibility considered the components of food security. FAO 1996, defined food security as "Food security exists when all people at all times have physical or economic access to sufficient safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (FAO, 1996). In this definition discuss three components of food security that are access, availability and utilization of food during Rome declaration on World Food Security in 2002. Finally, Food Agriculture Organization FAO clarified the meaning of food security as: "all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life." In this definition food security contains four components of food security as we discussed (ADB, 2012; Kumar & Sharma, 2013). Now we may discuss the four dimensions of food security one by one for more clearance about food security.

The above conversation covered different extents of food security like availability, stability, accessibility and utilization of food position and their preferences. Generally in Pakistan achieving food security is very difficult and complex statistic. It's a challenging phenomenon in Pakistan. According to Fullbrook (2010) the flow in food prices and strategy changes in various countries flashed off insecurity. Established nations

think of "whether their own food security is in peril". Furthermore, the countries lacking food production not fulfill their food needs and also they are food insecure countries. The attentions of the world are largely restricted to promising stable stock of inexpensive healthy nutrition. The absence of the important problem of 'food security' is essentially vitality for people deprived of which "we are all dead" and thus should be regarded as a "security good" Fullbrook (2010).

Population growth will decrease the food security because it leads to decrease the availability of food. This decrease is intensified by problems of access and utilization of foodstuffs (Ehrlich & Ehrlich 1991; Ophuls & Boyan, 1992). Therefore, sustainable methods of food production and economic development are essential. Boko *et al.,* (2007) studied that the increase in population growth and inflation will negatively effect on food security. However, the increase in GDP per capita has positively affected on food security.

According to the author Malthus in (1992), population growth is a burden on agriculture sector and it can also reduce the food production and agriculture sector productivity. But according to some other author's population growth is not a problem to food security because it can reassure mechanical development as well as increase in productivity.

Felix & Kinda (2009) use two indicators of food security food production and undernourishment. They used panel data from the period of 1960 to 2008 and apply modern econometric technique for estimation. Firstly, they find that rainfall is a food insecurity factor in developing countries because instability in rainfall reduces the food production and increases the number of undernourished people. Secondly, they find that some regions of African countries are badly affected by rainfall uncertainty.

Boserup used different kinds of techniques and strategies for land usage and its enlargement to elaborate the issues of over population in developing countries. For the determination of relationship between security of food and increasing rate of population growth many writers used to justify socio economic factors by applying different technologies. Cohen (2008) disclose the ways to show economical and dogmatic tricks to minimize the risk of anxiety of food by using technologies that are responsible for the better source and yield of food.

Bashir, Pandit & Schilizzil (2013) investigate the provincial compassion of food security at household level in three districts of Punjab Pakistan, by using the primary data of 1152 households which are located in 12 districts in those regions used. They found that food insecurity was 31% which is highest in Central region of the sample households as compared to 13.5% in south and 15% in North regions, respectively. Econometric analysis revealed that livestock, education and number of income earner positively affected on food security while family size and household heads' age have negative effect on food security. Timmer (2004) studied the duty of any government to speed up the growth which increases the food security and stabilizes the food prices. The strategic plan by central governments emphasis the satisfactory requirements for

food security because it can promote trade and industry enlargement. In developing countries paradoxically especially rice-based economies of Asia the public access of food security quickly slips from its essential role as an economic encouragement.

Timmer (1980) explore the function of economic development with food security and food prices. According to Classical, food prices are not significantly impacts to the long term growth while neoclassical believes that food prices may be significant issue. This paper discusses different views on food prices and their effects in Indonesian economy and also debate the role of food prices in the policy procedure. Mariano & Giesecke (2014) explored the open economy inference and food security of three of the main policies. We check the effects of eliminating the plans of by using open economy model with complete management of farming actions, land use, and food security measures and also locate plans which produce a small involvement to food security.

Wang (2010) empirically estimate the determinants of food security in which it is expressed as a function of different factors, cultivation adversity area, and food retail price index, and per capita disposal income, urban and rural areas saving. and sown area by using dynamic panel data analysis and sample of 27 provinces and time period is 1985–2007 in China and found climate change will affect the food security significantly in the current year. D'Souza & Jolliffe (2013) investigate the relationship between conflict in food prices and food insecurity in Afghanistan by using the survey data of nationally representative household. This survey data shows the dissimilarities and divergence in the food insecurity levels and prices all across the country. They used simple vicariate regression model of conflict on food security and find mixed associations.

Climate change and food security

Due to increase in rainfall and temperature in any country may have negative or insignificant effect on the areas with vast food creation? The regions that are already undernourished in the world can have shocking effect of climate instability. There is a negative impact of climate change on food exports in Australia and it represented that worldwide food security would be affected due to viable contribution to international trade in wheat, meat and dairy products of Australia Qureshi *et al.,* (2013). According to Ahmad *et al.,* (2011), climate change and food security are directly related to each other because any change in climatic aspect directly distress a country's capability to provide food to its people.

Demeke *et al.,* (2011) use a household survey in Ethiopia and find the impact of climate change factors and other economic factors on food security index. Ayinde *et al.* (2011) states that climate change variables rainfall and temperature both have positively effect on food production in Nigeria. Dell *et al.,* (2008) and Mendelsohn *et al.,* (2006) find that climate change or inconsistency in climate has negatively affected on economic growth in the developing countries.

According to (FAO, 2008) Climatic changes distress all the approaches of food security. By Greg *et al.*, (2011) Availability is directly

affected by climate change through its impact on agricultural production and its effect on crop harvests and crop shells is negative. Stability is also negatively affected by climate change variables access and utilization may also affect by the variation in climate because it may decreases the actual nourishment of food and also growth the numerous health problems. So at the end we can say that climate change would become a serious problem for hunger, poverty and food insecurity in any country. By Schmidhuber & Tubiello, (2007) Economic growth of a country is also affected by climate change indirectly by its impact on money supply and cultivated demand. Gregory *et al.,* 2005; Rosegrant & Cline, 2003; Cline, 2007; Parry *et al.,* 2005 to achieve food security in poor countries is too much difficult as a result of climate change in any country. Climate change may also decreases the crop productivity attached with other problems such as growing population, scarcity in water accessibility and land deprivation. Furthermore, climate change is also linked to a decline in crop productivity and Pakistan is badly affected by this. Adjusting to climate change factors can shrink the destructive effect on farming production (Di Falco & Chavas, 2009).

Climate change is an important variable to be included in the food security model. Alam, Siwar. In the study of Murad & Toriman (2011) examine the issues about the climate change occurrences in Malaysia. Due to natural disasters, floods and pest attacks changing the crop cycle, agriculture productivity, choice of crops and food security in Malaysia.

Different studies that have cited above defined the impact of climatic variables on food security in different economies. But in Pakistan we find a few studies that focusing on the impacts of climatic change factors on food security empirically. Contribution of the present study is that it determines the impact of climate change variable on all approaches of food security empirically. In the case of Pakistan, there is no comprehensive study on climate change and food security in Pakistan. At macroeconomic level, there are some issues that describe the complications of studying the effects of climate change and its impact on food security.

Climate change effect on food availability

Climate change directly effects the food production by the changes in natural conditions and indirectly affected the economic development, income and demand for cultivated crop. There is a direct effect of climate change on food availability because of the changes in temperature, rainfall and water supply. Availability of food indicates the physical presence of food or domestic production of food grain from agriculture or allied sector in a particular region or place in certain duration and with given technology inventory levels, local and international trade, commercial imports or food aid and this mainly focuses on food production (ADB, 2012). Changes in temperature and precipitation associated with continued emissions of greenhouse gases will bring changes in land suitability and crop yields (Schmidhuber & Tubiello, 2007).

Climate change effect on food stability

Stability of food has also affected by the changes in climatic factors because of increase in the regularity and cruelty of risky occasions such as storms, water scarcity, overflows, and famines bring greater variations in crops and it damage the food production. These climate change effects are a certain risk to the stability of food. The increasing in Weather conditions is expected to become more flexible than at present. More instability in harvests of crops and resident food stores can badly disturb the stability and food security in Pakistan. Mostly in sub-Saharan Africa and South Asia are the poorest regions with the maximum levels of continuing hunger will be visible to the uppermost degree of instability.

Mostly rural areas depends on rain water for crops production but the changes in the frequency, timing and quantity of rainfall inside the period and an increase in climate inconsistency are likely to worsen the instability of indigenous nourishment structures (FAO, 2008).

Climate change effect on food utilization

Food utilization also effected by climate change variables. This part of food security is usually narrates to dietary features of food intake. According to Rosenzweig & Binswanger in (1993) climate can form the choices to growers about what crops to cultivate. Climate change may initiate a vicious circle where infective illnesses, including water-borne diseases, cause or compound hunger, which in turn makes the affected population more susceptible to those diseases. Results may include declines in labor productivity, water scarcity and an increase in poverty, sickness and death.

Climate change effect on food accessibility

Access to food refers to the ability of individuals, communities and countries to purchase food in sufficient quantities and quality. Falling real prices for food and rising real incomes over the last 30 years have led to substantial improvements in access to food in many developing countries. Possible food price increases and declining rates of income growth resulting from climate change may reverse this trend.

Model Specification

The functional relationship of variables is given under.

Model 1. *Food security index = f (GDP, Area under cultivation, Mechanical inputs, Average Rainfall (mm per year), Population growth)*

Model 2. *Food production index = f (GDP, Road kilometers, Total water supply, Credit to agriculture sector, Biological and mechanical inputs, Food imports)*

In the first model we take food security index as dependent variable and in model 2 we take the proxy of food security food production index as dependent variable. There are some other variables that have slight effect in determining food security. We cannot include all those variables

in our model that's why error term is used in econometric models which capture and also account for the effect of minor variables in analysis.

Construction of Food Security Index

Food security is a multifaceted and complex issue and it is affected by many economic, agricultural, climatic and infrastructural factors. Agriculture productivity of any country directly or indirectly affects the food security. Index means relating and summing many measures of a variable into a single score or variable. To identify the food security index we have studied different literature and follow z-scored method for the aggregation of all food security pillars equally for a country's prospective. This method was used by Shakeel *et al.,* (2012); and Rukhsana (2011) Ajay Kumar and Pritee Sharma, for India's prospective. Demeke *et al.,* (2011) alsousez-score method for constructing food security index and also investigate the impact of agricultural production and climatic factor on food security index, using primary survey of households in Ethiopia separate variables. Thismethod is based on the descriptive analysis and includes all the components of food security as availability, access, stability and utilization. All components of food security are equally important for measuring food security situation in a country. We have also follow Anand & Sen (1997), suggestion for choosing the power of all components. By using these methods we contain or combine all indicators of food security.

There are many types of indexes for generating index we must careful about every substances of an index. In this study descriptive analysis is used for creating food security index of a country Pakistan. This method is also used for constructing global food security index.

Food security index (FSI) can be calculated by the given below formula.

$$FSIs = \Sigma CIi/n$$

FSI states food security index, *s* denote to state and *n* is total number of parameters. By taking different indicators and combine all of them and create state wise index of food security.

In this method food security can be calculated by two ways either we can aggregate each dimension of food security it means rely on equal weighting means all variables have equal weight. The other way is to construct food security index by the aggregation of all dimensions because all are important for measuring food security of a country. Literature approves that by this method we can give greater or lesser weight of any dimension by giving the different power. The functional form of model is given below:

$$(FSI)\, t = \beta 0 + \beta 1\, (AVAF)\, t + \beta 2\, (STAF)\, t + \beta 3\, (ACCF)\, t + \beta 4\, (UTIF)\, t + \phi t$$

Where, *FSI* is food security index. *AVAF*, *STAF, UTIF* and *ACCF* are availability, stability, utilization and accessibility of food respectively *t* is time period respectively and $\beta 0$ is constant coefficient; and $\beta 1$, $\beta 2$, and $\beta 3$ are the regression coefficient for respective variables. $\Phi t$is the error term in the model.

Econometric Model for Food Security Index

To find the Inter linkage between food security index and its components, simple multiple regression model is applied for time period, 1990 to 2014. Created food security index as a reaction function is degenerated with its components such as availability, stability accessibility and utilization of food. This study follows Sen's suggestion to choose power = 3 as it places greater weight of all dimensions (Anand & Sen, 1997, p. 16).So we use weighted formula for constructing food security index of Pakistan. This given below formula used to compute the FIMI for a country. Given below formula is used to calculate food security index for Pakistan,

$$FSI= (1/4(AVi3 + ACi 3 + UT i3 + STi 3) 1/3$$

FSI is food security index. *AV,* AC*, UT* and *ST* are availability, accessibility, utilization and stability of food respectively. By using Sen's suggestion we give power 3 to all indicators of food security it means all measures of food security are equally weighted in this analysis. Summing all the measures of food security availability, accessibility, utilization and stability construct or generate food security index into a single measure of food security. And then we reduce the value of index by, selecting a base year and put it equal to 100 and then scale all the index accordingly.

Description of variables

Food security index

To find Food security index used z-score method and FIMI method of aggregation of all dimensions are used for a country it's also used by Anand & Sen, (1997) and this Z-score method is used by Shakeel *et al.,* (2012) and Rakshasa (2011) in India. By using these methods we contain or combine all indicators of food security such as availability, access, utilization and stability of food.

Most of the studies on food security in Pakistan measured food security as availability of food and used food production index as proxy of food security because availability is the most important pillar of food security. But no one used all indicators of food security for measuring food security in Pakistan. In this study we attempt to construct food security index of Pakistan by taking all indicators of food security and convert all indicators into a single value. So we can portion food security by taking all measures of food security. So question is which approach of food security is important for measuring food security?

In our model we can easily solve this problem. We converted all indicators of food security into single measure by generating food security by using idea of "FIMI (2011)". All measures of food security are important for measuring food security such as availability, access, utilization and stability of food. We follows Sen's suggestion to choose power = 3 as it places greater weight of all dimensions (Anand & Sen, 1997). So we use weighted formula for constructing food security index of Pakistan. We collect data on all indicators of food security from FAO (food agriculture organization) and World Bank Indicators.

Food production index

Food production index is the net production of agriculture sector of a country including all eatable products excluding coffee and tea. It covers also all crops production in Pakistan. Food production index is a measure of food security indicator availability. Availability of food is essential indicator of any food security model and it is only indicator for long time due to ultimate reason. In model 2 we take food production index as proxy of food security indicator availability and narrow down our research from all indicators to single important component of food security. Availability of food indicates the physical presence of food or domestic production of food grain from agriculture or allied sector in a particular region or place in certain duration and with given technology inventory levels, local and international trade, commercial imports or food aid and this mainly focuses on food production (ADB, 2012).

GDP

Real GDP is a measure of total output of Pakistan's economy. This variable is measured Economic growth and it has been considered as it's a most powerful engine that pulls the people out of the clutches of the poverty and raises their standard of living. Variations in Gross Domestic Products also create the instabilities in the Employment level, food production, Price level of a country and many other economic factors. Food security is to be a great point pretentious by economic growth and income distribution. Economic growth and food security jointly strengthen each other in developing process in the present study we used GDP per capita as (constant 2000 US$). By Torero (2014), the UN Food and Agriculture Organization assume that increase in the rate of undernourished people it may also damage in gross domestic product (GDP) of as much as 4 to 5 percent per year. This variable shows the correspondence with food security in Pakistan. The use of GDP is consistent with previous literature using income as one of the factor that influences food security.

Population growth

Population growth variable is one of the major factors that affect the food security in Pakistan. Population growth have mixed effects on food security, but in general, it is expected to have a negative effect Thomas Malthus underwrites that population growth is another reason of food insecurity in Pakistan. The Malthusian "approach is focused on the (dis)equilibrium between population and food. According to Malthus (1992), population growth causes an increase in burden on agricultural

resources. Increase in population is a major factor of food insecurity in developing countries such as Pakistan. In this study we use the variable population growth in our analysis.

Area under cultivation

Total area under cultivation is a key factor that impact on food security situation in Pakistan. Due to increase in population, cultivation area decreases by the population pressure in Pakistan and food insecurity situation also occur because of the insufficient food for growing population. According to literature the total population is doubled but the cultivated land 40% it cannot meet the food requirement of growing population. Total cultivated land is a constant variable and it was measures by hectare. Some of the literatures have considered total cultivated land is connected with food security Garrett & Ruel, (1999); Grootaert & Narayan, (2004). If cultivated land increases, the possibility that people get more output and less chances of food insecurity.

During the past 60 years, there was more than 4 times increase in population with urban growth of over seven-fold resulting into mega-cities as well as rising population pressure on cultivated land. Despite that wheat production a major food crop, has increased by five-fold the country is still marginal importer of wheat if a country has developed financial market. In the present study we see the relationship of this economic variable with food security.

Climate change

Due to change in climate food production decreases in Pakistan and prices are also rises due import food items. We have used rainfall as a proxy to measure the climate change in Pakistan**.** We collect monthly data on rainfall from world climate data center (WCDC) and metrological department and then take average of all data and convert data into yearly basis. Edame, *et al.,* (2011) examined the impact of climate change on major components of food security such as availability, accessibility, affordability, preference, utilization, and nutritional value and food system stability. Mee & Keong (2011) have estimated the economic impact of climate change on food security.

Mechanical and biological inputs

The use of technology and fertilizer in agriculture sector may contribute major change in food production. Uses of biological and mechanical inputs in production process cause the high food production in Pakistan. In this study we use number of tractors as proxy of mechanical inputs and use of fertilizer as proxy of biological inputs and determine its impact on food security in Pakistan. The use of fertilizer increases the total productivity of cultivated land. Increase in technological inputs like number of tractors and biological inputs like usage of fertilizers may increase in food production in developing countries such as Pakistan.

Food imports

Imports of different food is basically refers the food production of a country at national level. An increase in food imports of a country will divert the intention in the more production of import food for the

requirement of growing population. Food imports are discouraging the domestic food producers, because food imports might be cheaper than the domestic production.

Road kilometers in Pakistan

A Road distance kilometer is a major infrastructural factor that effects food production in developing countries. A Road kilometer is actually proxy for farm market connectivity more the roads faster the food will reach to the market and more chances that it will be sold cheap and fresh.

Total water supply in Pakistan

A great amount of water is required for food production and food production is directly related to ensuring sufficient water. 1000 liters water is required for producing one kilogram wheat and rice. Water supply is also a climatic factor and mostly in rural area producers depends upon rain water for food production. Drinking water supply and agriculture sector water supplies in Pakistan faces many challenges due to high population growth. Poor quality drinking water causes major diseases more than 3 billion Pakistani infected by the water diseases in Pakistan every year.

Credit access to agriculture sector

Credit to agriculture sector is essential for production in Pakistan because food production is concerning farming productivity with formal credit and other independent variables including land and water. The expected effect of access to credit on food security is positive. Access to credit means enhancement in agriculture production and it will increase the income creating activities as well and also achieve food security. Credit to agriculture sector acts as an important contribution beside with modern machinery for advanced production. Credit requirement for agriculture will increase the productivity. There are some formal and informal sources of credit in Pakistan. Formal sources are ZTBL (Zaria Taraqiati bank limited) and Agricultural Development Bank of Pakistan (ADBP), Commercial Banks, and Federal Bank for Cooperatives. Recently, some non-government organizations (NGOs) are also advancing agricultural credit to the rural communities.

Sampling and Data Source

In model 1 there are 24 observations from 1980 to 2014 annually. Less number of observations is due to unavailability of data. In second model 41 observations from 1973 to 2014 we use food production index as proxy of food security. The data on rainfall is a proxy of climate change attain from "world climate data center (WCDC) and metrological department Islamabad. While the data on real GDP, population growth, area under cultivation, total water supply, credit to agriculture sector, road kilometers in Pakistan, food imports, biological and mechanical inputs are attained from WDI have been taken from Pakistan Economic Survey and Pakistan bureau of statistic (PBS). Data on food security index was collected from Food and Agriculture Organization (FAO). For constructing index of food security index we use all indicators data of food security and made index by the help of Sen's formula. Some other

useful sources that are also visited for sample are international food policy research institute (IFPRI), metrological department Pakistan.

Results

In the above table all the p values are greater than 0.05 which depicts that the statistics of the data are normal. In descriptive statistics, we analyze the values of JarqueBera the value of variables have found to be insignificant it means all data series are normally distributed. The value of kurtosis and skewness are near to 3 and 0 which indicate the normality of data.

Table 1. *Model 1- Descriptive Statistics*

Variables	LFSI	FPI	LGDP	POP	RAINF	LTUEBWEL	LTRCTR	AGRILAND	TWS
Mean	12.3487	91.5525	1.40351	2.29297	23.3678	13.41302	10.26344	34.68913	131.540
Std. Dev.	0.165063	18.86980	0.58035	0.264726	4.58219	0.425945	0.620207	0.559986	6.09903
Skewness	0.36860	-0.0037	0.50155	0.74730	0.19644	-0.287580	-0.145248	-0.544099	-1.03220
Kurtosis	2.04473	1.799828	2.89505	2.348387	2.92397	1.628207	1.735854	1.941671	2.90932
Jarque-Bera	1.45601	1.44046	1.01724	2.65846	0.16014	2.212626	1.682452	2.304237	4.27002
Probability	0.48287	0.48663	0.60132	0.26468	0.92304	0.330776	0.431181	0.315967	0.11824
Sum	296.369	2197.260	33.6843	55.0314	560.827	321.9125	246.3225	832.5390	3156.96
Sum Sq. Dev.	0.62665	8189.59	7.74678	1.61184	482.919	4.172874	8.847095	7.212445	855.550
Observations	24	24	24	24	24	24	24	24	24

Stationary of data is also required for good analysis. There are four popular tests that can be applied to check unit root in data series. ADF, Phillips-Perron (PP), Ng-Perronand KPSS these all test are equally valid for unit root. These tests actually reports about integration order of variables. KPSS and Ng-Perron tests are often used for small sample size and these tests give more superior results. In this study we used all given tests. These tests give us same results that conclude order of integration is mixed. We find that some variables are found to be stationary at level and some are at 1st difference. So when we find I (0) and I(1) order of integration then we apply Auto Regressive Distributed Lag (ARDL). Output of unit root tests are given in Table.

Table 2. *Stationary by using ADF*

	With Intercept		With Intercept and trend	
Variables Name	T-value	P-value	T-value	P-value
LFSI	-3.049109	0.0458**	-4.962939	0.0638**
LGDP	-3.415191	0.0210*	-3.530119	0.0021*
RAINF	-3.722904	0.0107*	-3.756510	0.0385*
AGRILAND	-4.014998	0.0058**	-4.014678	0.0007**
LTRCTR	-4.542588	0.0023**	-3.319970	0.0947*
POP	-2.696078	0.0913*	-6.991775	0.0001**

Notes: Where; the sign * indicates variable is stationary at level and ** shows variable stationary at 1st difference. Here LGDP, Rain Fall and Population are I (o) and all other variables are I (1)

Auto Regressive Distributed Lagged Model Approach (ARDL)

Outcome of unit root tests shows all variables have different order to integration I(1) and I(0) so we will apply ARDL because of OLS is best if all variables are I(0) and Johansen & Juselius (1990) and Johansen (1998,1991) can be applied in case of only I(1).

Optimal Lag Length

After checking the stationary of series, we have to see optimal lag length. Optimal lag length indicates that how many lag should be use in model. The results of above table shows four lag should be used in model.

Table 3. *Optimal Lag Length*

Lag	*LogL*	*LR*	*FPE*	*AIC*	*SC*	*HQ*
0	-21.92365	NA	2.00e-08	2.157383	2.572154	2.227280
1	92.23331	155.9415*	1.75e-10*	-2.589512*	0.004717*	-1.876986*

Notes: * indicates lag order selected by the criterion; LR: sequential modified LR test statistic (each test at 5% level); FPE: Final prediction error; AIC: Akaike information criterion; SC: Schwarz information criterion; HQ: Hannan-Quinn information criterion.

We select optimal lag for our model on the basis of lowest value of H-Q Criterion. After selecting lag length criteria, we evaluate long term dynamics of variables under consideration.

Table 4. *Outcome of ARDL Approach, ARDL Bounds Testing Approach*

Estimated Models					
Optimal lags				(1,1,0,1,0,0)	
Statistics for W				24.6092 *	
Statistics for F				4.8349 *	
Significance Level	Critical Bounds For F– Statistics			Critical Bounds For W – Statistics	
	Lower Bound	Critical	Upper Critical Bound	Lower Critical Bound	Upper Critical Bound
5 per cent	3.4088		4.9081	20.4527	29.4486
10 per cent	2.7484		4.0364	16.4905	24.2185
DIAGNOSTIC TESTS					
Serial Correlation	0.23276[.629]		R^2	0.93	
Functional Form	.072433[.788]		Adjusted - R^2	0.90	
Normality	2.2776[.320]		F – Statistics	26.11[.000]	
Heteroscedasticity	2.0000[.157]		DW – Statistic	1.78	

Notes: Asterisks are the indication of significance of values, ***, **, and *, and shov significance at 1%; 5% and 10% levels respectively. The Probability Values are given in { brackets

After lag length criteria, now we are going to see the long run relationship among food security index and its determinants by using latest co-integration approach. As the null hypothesis of the test state that there is "No co-integration" and it is only rejected if calculated value of F- statistics is higher than upper critical bound value. The above Table reveals that the calculated value of F-statistics higher than its upper critical bound at 10% level of significance: 4.8349 > 4.0364 so then null

hypothesis is rejected and alternative hypothesis has been accepted and value of W- statistics is also higher than its upper critical Bound at 10% level of significance: 24.6092 > 24.2185. It means the model has long-run relationship in other words food security index has stable and long run link with independent variables. The diagnostics reveal that there is no problem with Heteroscedasticity and the error term is normally distributed. Serial correlation and the functional form of three models are also correct.

Long Run and Short Run Dynamics

ARDL (1, 1, 0, 1, 0, 0) selected based on Schwarz Bayesian Criterion is dependent variable, while, are independent variables. Long run and short run results are given below.

Table 5. *Short Run Dynamics*

Error Correction Representation for the Selected ARDL Model			
Dependent Variable:			
Name of Variable		Coefficient	P-value
		-.018958	-.97794[.343]
LFSI		-.27983	-2.1109[.051]
LGDP		.0034495	1.3404[.199]
RAINF		-.048586	-1.5650[.137]
AGRILAND		.034564	.63428[.535]
LTRCTR		-.54470	-3.6435[.002]
POP			
R-squared	0.60	Mean Dependent Variable	.013043
Adjusted R-squared	0.38	S.D. Dependent Variable	.063920
S.E. of Regression	.050154	Akaike Information Criterion	32.9045
Sum Squared Residual	.035216	Schwarz Bayesian Criterion	27.7947
Log Likelihood	41.9045	Durbin-Watson Stat	1.7821
F-statistic	3.6223	Prob. Value (F-statistic)	[.018]

Notes: *; **, and *** reveals significance level of test statistic at 10%, 5% and 1% respectively.

ARDL (1, 1, 0, 1, 0, 0) selected based on Schwarz Bayesian Criterion

Tablo 6.*Long Run Results of ARDL*

Dependent Variable:		
Name of Variable	*Coefficient*	*P-value*
LFSI	-.10196	-2.0496[.060]*
LGDP	-.51374	-1.8476[.086]*
RAINF	.019068	3.0889[.008]**
AGRILAND	-.089197	-1.4111[.180]
LTRCTR	.063454	.70155[.494]
POP	15.6771	4.5694[.000]

Notes: The P-values with * are significant at 10 % level and values with ** are significant at 5% level.

The above results show that coefficient of rainfall of is positively related to food security index and its impact on food security is statistically significant. Positive sign of rainfall shows that rainfall at other period positively affected but at the time of harvesting crops its affect is negative at different regions. And the magnitude of the coefficient shows that one percent change in rainfall will increase food security by 0.1906 percent. So as the magnitude of coefficient is strong it would have more influence on food security index. Our results match

with Ayinde *et al.* (2011) Demeke *et al.* (2011) Wang (2010) Aker & Lemtouni (1999). The other variable i.e. population is also statistically significant and has a negative impact on food security. In Pakistan population growth rate is very high and its effects on food security are negatively related. The magnitude of coefficient can be interpreted as one percent change in population growth will decrease food security by 0.513 percent in Pakistan see for instance (Malthus 1992;Wang 2010; Timmer 1980; Boserup 1965 and Boko *et al.,* 2007).

The coefficient of GDP is negative but statistically significant. In Pakistan food insecurity rate is very high that's why economic growth of Pakistan is negatively affected. The magnitude of coefficient is very small as it can be interpreted as one percent change in GDP will impact food insecurity by 0.1 percent. However economic growth of developing countries influences by the food insecurity. There are number of studies that support this negative relationship see for instance (Dell *et al.,* 2008; Mendelsohn *et al.,* 2006; Wang; 2010; Timmer, 1980; Boserup, 1965 and Boko *et al.,* 2007). According to Torero (2014), the UN Food and Agriculture Organization assume that increase in the rate of undernourished people it may also damage in gross domestic product (GDP) of as much as 4 to 5 percent per year.

The coefficient of technology is positive and statistically significant. We can interpret as one percent increase in technology will increase the Food security by .063 percent. In other words we can say country with more advance method of farming like increase the number of tractors and tube wells, possibility to secure more food for growing population. In case of Pakistan old methods of farming used for cultivation that's why food insecurity issue exists. Literature suggests if country uses more advance technology it will increase the food security as well as increase the economic growth of the country. Pakistan is a developing country and it has not enough resources to make more advance technical inputs to increase agriculture production in Pakistan.

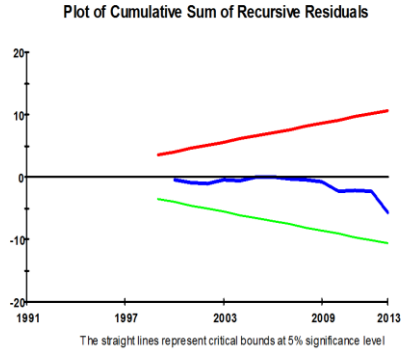
The coefficient of agriculture land/cultivation land is negative in our case but statistically insignificant. In Pakistan population growth rate is very high and its effects on cultivation land and food security are negatively related because agriculture land cannot fulfill the food requirement of growing population in Pakistan. The magnitude of coefficient can be interpreted as one percent change in agriculture land .089 percent towards food security in Pakistan. According to literature total population is doubled but the cultivated land40% it cannot meet the food requirement of growing population. However agriculture land ratios influences the food security in developing countries. There are number of studies that support this negative relationship see (Mendelsohn *et al.,* 2006).

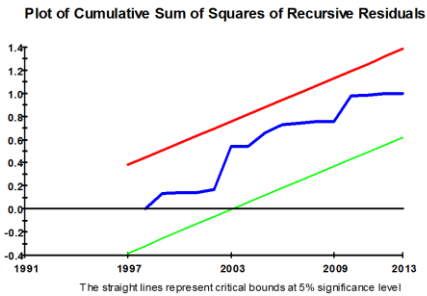
In the above table R-square value is 0.67 which shows that our model is moderate fit for the analysis. The DW value is 1.7 which is within the tolerance level and we can say that there is no auto-correlation in our model.

Diagnostics for CUSM and CUSUM Square

Stability test

Stability of long run coefficient has been shown with the help of cumulative sum of recursive residuals (CUSUM) of cumulative sum of squares recursive residuals (CUSUM SQUARE) test.





The diagnostics of CUSUM and CUSUM squares confirm the stability of our model. The above figures (6.1 and 6.2) show stability at 5 percent level. Here we are satisfied with the CUSUM and CUSUM squares because estimated lines are in the given limit of upper and lower critical lines. On the other hand if estimated lines positioned out of critical bounds then our model is not stable. So, now it is clear graphically that there exist long run and stable link between food security index and its determinants that are used in this study. We can conclude as; food security index is sure for Pakistan over the estimated period. In other words, there is no structural break in model policy maker can use it for policy options.

Measure food security as availability component

Data series should be normally distributed in the first step of econometric analysis. In descriptive statistics, we check the values of JarqueBera test; the value of variables has found to be insignificant it means all data series are normally distributed.

Table 7. *Model 2 - Descriptive Statistic*

Variables	FPI	TWS	LBIOL	LGDP	LCAS	LFIMP	LTRC	LRKP
Mean	71.10732	117.0146	12.92897	10.54671	9.900323	2.715881	10.01627	11.58203
Std. Dev.	28.27669	19.81017	0.721912	0.271218	1.848961	0.279632	0.728785	0.846045
Skewness	0.159255	-0.527908	-0.012318	-0.289155	-0.183307	0.324639	-0.145248	-0.092894
Kurtosis	1.663863	1.771785	1.601217	1.886718	2.274800	2.481078	1.735854	1.255678
Jarque-Bera	3.223132	4.481403	3.343551	2.688640	1.128047	1.180190	11.74511	5.256841
Probability	0.199575	0.106384	0.187913	0.260717	0.568915	0.554275	0.431181	0.072192
Sum	2915.400	4797.600	530.0877	432.4151	405.9132	111.3511	410.6670	474.8632
Sum Sq. Dev.	31982.85	15697.71	20.84626	2.942361	136.7463	3.127762	21.24511	28.63171
Observations	41	41	41	41	41	41	41	41

The estimated values of Kurtosis and Skewness indicate that data is normal. Stationary of data is also required for good analysis. There are four popular tests that can be applied to check unit root in data series. ADF, Phillips-Perron (PP), Ng-Perron and KPSS these all test are equally valid for unit root. These tests reports about integration order of variables. KPSS and Ng-Perron tests are often used for small sample size and these tests give more superior results. In our study we use ADF test. These tests give us same results that conclude that order of integration is mixed. We find that some variables are found to be stationary at level and some are at 1st difference. So when we find I (0) and I (1) order of integration then we apply Auto Regressive Distributed Lag (ARDL). Output of unit root tests are given in appendix.

Table 8. *Statistics of ADF*

Name of Variables	Intercept		Intercept & Trend	
	t-Stat	Prob.	t-Stat	Prob.
FPI	-5.841488**	0.0000	-5.895668**	0.0001
TWS	-4.913020**	0.0003	-4.994559**	0.0012
LBIOL	-4.957280**	0.0002	-5.242212*	0.0006
LGDP	-9.087338*	0.0000	-10.18124**	0.0000
LCAS	-8.420254**	0.0000	-8.178662**	0.000
LFIMP	-4.065941*	0.0029	-4.039901*	0.0149
LTRC	-3.333364*	0.0200	-5.144743*	0.0025
LRKP	-5.968391**	0.0000	-5.890628**	0.0001

Note: * is indication of having stationary on level and ** indicates having stationary on first difference. Where; the sign * indicates variable is stationary at level and ** shows variable stationary at 1st difference.

Auto Regressive Distributed Lagged Model Approach (ARDL)

Outcome of unit root tests shows all variables have different order to integration I(1) and I(0) so we will apply ARDL because of OLS is best if all variables are I(0) and Johansen & Juselius (1990) and Johansen (1998,1991) can be applied in case of only I(1).

According to the above results we select Akaika information criteria for optimal lag lengths and we know how AIC picked these lags. There are many models but the above table shows the top 20 models result so

we select first model of ARDL (3, 2, 2, 3, 2, 0, 3, 2). After selecting lag length criteria, we evaluate long term dynamics of variables under consideration. You can also get the full summary of the AIC, SC, Hannan-Quinn, and adjusted R^2 statistics for all models if we select criteria table rather than graph.

Table 9. *Outcome of ARDL Approach - ARDL Bounds test to know about long run relation*

Estimated Models			
Optimal lags			(3, 2, 2, 3, 2, 0, 3, 2)
Statistics for F			3.8519*
Critical Bounds For F– Statistics			
Significance	Lower Critical Bound		Upper Critical Bound
10%	2.03		3.13
5%	2.32		3.5
2.5%	2.6		3.84
1%	2.96		4.26
DIAGNOSTIC TESTS			
Serial Correlation	3.25339{.101}	R^2	0.8735
Functional Form	0.42567{.528}	Adjusted - R^2	0.5975
Heteroscedasticity	1.2870{.340}	DW – Statistic	2.6519

Note: Asterisks are the indication of significance of values, ***, **, and *, and show significance at 1%; 5% and 10% levels respectively. The Probability Values are given in { } brackets

After lag length criteria, now we are going to investigate long run relationship among food production index and its determinants by using latest co-integration approach. As the null hypothesis of the test state that there is "No co-integration" and it is rejected if calculated value of F-statistics is higher than upper critical bound value. The above Table reveals that the calculated value of F-statistics higher than its upper critical bound at 5% level of significance: 3.85196 > 3.5 so then null hypothesis is rejected and alternative hypothesis has been accepted .It means the model has long-run relationship in other words we can say that food production index has stable and long run link with independent variables. The diagnostics reveal that there is no problem of Heteroscedasticity and the error term is normally distributed. Serial correlation and the functional form of three models are also correct.

Long Run and Short Run Dynamics

ARDL (3, 2, 2, 3, 2, 0, 3, 2) selected based on Akaika Information Criteria is dependent variable, while are independent variables. Long run and short run results are given. The long run results which are estimated through ARDL bound testing approach are shown in the above table. The above results show that the coefficient of GDP has positive and significant impact on food production index. The coefficient is interpreted as one percent change in GDP of Pakistan will increase food security by 1.8 percent. However economic growth of developing countries is influenced by the food insecurity. There are number of studies that support this positive relationship like Dell *et al.,* (2008) and Mendelsohn *et al.,* (2006) Wang (2010). The coefficient of Road kilometers in Pakistan has positive and significant effect on food production index. We can interpret as one percent decreases in kilometers it will be more the

food production 0.13256 percent. Road kilometers are actually proxy for farm market connectivity more the roads faster the food will reach to the market and more chances that it will be sold cheap and fresh.

Table 10. *Long Run and Short Run Dynamics*

Estimated Long Term Coefficients using the ARDL Approach			Error Correction Representation for the Selected ARDL Model		
Dependent Variable:			Dependent Variable:		
Name of Variable	Coefficient	P-value	Name of Variable	Coefficient	P-value
FPI	1.8083*	0.0049	FPI	0.1120	0.849
TWS	0.217422*	0.0106	TWS	-0.1035	0.534
LBIOL	-0.22809**	0.0231	LBIOL	-0.0004	0.995
LGDP	0.06846**	0.7951	LGDP	0.74652**	0.031
LCAS	0.13256 *	0.0095	LCAS	0.18684*	0.013
LFIMP	0.15220**	0.0369	LFIMP	-0.0786	0.326
LTRC	0.00410	0.9483	LTRC	0.13580**	0.064
LRKP	-18.8654	0.0021	LRKP	-1.4094	0.004

Diagnostics for ECM			
R-squared	0.873510	Mean Dependent Variable	0.026203
Adjusted R-squared	0.597533	S.D. Dependent Variable	0.048646
S.E. of Regression	0.030861	Akaike Information Criterion	-3.915381
Sum Squared Residual	0.010476	Schwarz Bayesian Criterion	-2.815715
Log Likelihood	95.47685	Durbin-Watson Stat	2.651984
F-statistic	3.165148	Prob. Value (F-statistic)	0.000000***

Note: *; **, and *** reveals significance level of test statistic at 10%, 5% and 1% respectively.

The coefficients of biological and mechanical inputs are positive and statistically significant. We can interpret as one percent increase in number of tractors will increase the Food production by 0.1522 percent and increase in fertilizer usage will increase the production 0.2174 percent. In other words we can say country with more advance method of farming like increase the number of tractors, tube wells and biological inputs will increase the possibility to secure more food for growing population. In case of Pakistan old methods of farming used for cultivation that's why food insecurity issue exists. Literature suggests if country uses more advance technology it will increase the food security as well as increase the economic growth of the country. Pakistan is a developing country and it has not enough resources to make more advance technical inputs to increase agriculture production in Pakistan.

The findings disclose that the coefficient of food imports is positive it means that government is successfully filling the gap of food supply and food demand assuming that food imports are expensive as compared to domestic food production. The credit to agriculture sector has negative and significant effect on food production. Coefficient indicates that one percent increase in credit to agriculture sector strength the food production by 0.22 percent. The coefficient of Total water supply to the food production index is negative but statistically insignificant. In Pakistan people have not access even clean drinking water and sanitation facilities. Farmers face a lot of problems in food production due to scarcity of water. The size of coefficient is also very small it can be

interpreted as one percent change in water supply in agriculture sector can change 0.228

In short run our main focus is value of ECM which is significant and negative as required. These three variables, and are significant in short run. The coefficient authenticate that 40 percent of the divergence will be converge to equilibrium in one year. The value of R square is 0.87351 in long run result which indicates our independent variables are able to explain 87 percent variation in dependent variable. In other sense we can interpret as the weightage of our independent variables is 87 percent to choose food production index under agricultural sector of Pakistan.

Table 11. *Robustness check of model 1*

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
LFSI	-.018958	-.070457	-.024893	-.072217	-.016796
LGDP	-.27983	.0053917	.22115	.037602	-.33864
RAINF	.0034495	.0083428	.0021385	.0079794	.0031669
AGRILAND	-.048586	-.044640	-.032441	-.066328	-.057835
LTRCTR	.034564	.037743	.028154	------	------
POP				.6902	
t		.30610	-.17309	.32788	
R2	0.93	0.93	0.94	0.39	0.93
DW	1.78	1.87	1.64	2.26	1.71
ECM(-1)	-0.54	-0.65	-0.94	-1.68	-0.48

Above table give us results of five regression models and in first model only two variables are significant and in model no two three variables are significant. Total water supply is used in model four but it remains insignificant. In model 4 and 5 we drop variable of and include remain significant so our results are robust. The diagnostics are also satisfied in all models.

Conclusion and policy Recommendation

This study has empirically analyzed the dynamic relationship between food security and selected macroeconomic variables (Pakistan's GDP, food imports, credit access to agriculture sector, rainfall, population growth in Pakistan, roads kilometers in Pakistan, agriculture land, biological and mechanical inputs, water availability) in Pakistan by using ARDL approach.

In our study we developed an index of food security for Pakistan by using all components of food security. Empirical findings of this study suggested that climate change, rainfall and technology have a significant positive impact on food security. On the other hand population and agriculture land entered the equation with negative signs. Our results are quite analogous to Demeke *et al.,* (2011) because his study also constructed an index for measuring food security and also investigate its linkages with climate change and socio economic factors.

Moreover, if the roads are faster, than the food will reach to the market on time and more chances that it will be sold cheap and fresh. Economic variables GDP is positively related to food security which can be beneficial for a country. Food imports entered the equation with positive sign which mean that government is successfully filling the gap

of food supply and food demand assuming that food imports are expensive as compared to domestic food production on the other hand credit to agriculture sector entered the equation with negative sign.

Our results are important for economic policies. An important step to reduce food insecurity would be to raise the purchasing power of the severely food insecure people. In order to be effective at reducing the negative consequences of price volatility, targeted safety-net mechanisms must be designed. In line with this, promoting measures that enhance the food production system thereby increasing the capacity to fulfill the dietary requirements of people is imperative. One approach would be to invest in agricultural research, extension, and methods for reducing food production losses related to climate variability. Investment to create a more productive and efficient agriculture sector will make food more affordable for the poor and reduce price volatility as well. Careful consideration should be given to major investments in infrastructure to support irrigation and water resources development in order to limit the effects of food production reduction.

The findings of this study also suggest that the need for the policy makers to expend more on government spending and rural development in Pakistan. It will encourage and enhance the agricultural development especially for food production in Pakistan.

Appendix

Physical availability of food	Food availability addresses the "supply side" of food security and is determined by the level of food production, stock levels and net trade (Export-Import).
Economic and Physical Access to food	An adequate supply of food at the national or international level does not in itself guarantee household level food security. Concerns about insufficient food have resulted in a greater policy focus on incomes, expenditure, markets and prices in achieving food security objectives.
Food Utilization	Utilization is commonly understood as the way the body makes the most of various nutrients in the food. Sufficient energy and nutrient intake by individuals is the result of good care and feeding practices, food preparation, and diversity of the diet and intra-household distribution of food. Combined with good biological utilization of food consumed, this determines the nutritional status of individuals.
Stability of the other three dimensions over time	Even if food intake is adequate today, it is still considered to be food insecure if there is inadequate access to food on a periodic basis due to adverse weather conditions, political instability or economic factors (unemployment, rising food prices).

Availability of food means the physical incidence of food in a specific region or place for positive period of time and with given record levels, local and international trade, profitable significances, or food assistance. Availability is not just quantity of food it also discussed the diversity and quality of food stuff. According to Dev and Sharma (2010) and Shakeel et al (2012) availability of food for intake in a particular time period and locale. Moreover complete national supply is also considered as food security.

Access means all the people have physical and economic access of food all the time. Due to poverty and lack of development FAO in 1983 added this factor. This factor is the most important factor of food security because it can prevent hunger. This approach of food security is directly related with a population's economic capability to afford the food desirable for their endurance. Both availability and access are interlinked with each other.

Food stability states that food is available regularly in uncertain circumstances and sometimes available in the domestic market. Stability is about the assurance of food all time. Food insecurity may also be the result of short term or temporary shocks due to the climate change and rising prices of food stuff. When prices rise, it is the poor who are most at risk because they spend a much higher portion of their income on food. At the time of usual shock like overflows and scarcities also emphases specifically on the steadiness of supply and demand of food grain product (FAO, 2009).

Food Utilization means the safety, quality and nourishment of available food. Utilization of food is generally connected with food nutritious importance and the contact of physical form and food security. It can also describe as a household's ability to fascinate and absorb the nutrients, and the capability of people's bodies to use those nutrients efficient.

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3.
Understanding 'Shared Valued' and Social Capital Link to Pave the Path of next Generation of Innovation

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Introduction

Porter & Kramer (2011) in his paper published in Harvard Business Review proposed a resolute direction to the debate on the link between business and society. In that paper, the idea of "Creating shared value" (CSV) is presented and they offered three distinct actions to bridge the missing link between business and society. These three distinct actions include: a) reconceiving products and markets; b) redefining productivity in the value chain; and c) building supportive industry clusters. Since the conception of CSV term spotlighted by Porter & Kramer (2011), majority of the scholars, academicians and practitioners acknowledged it as a key driver of economic growth, a new source of competitive advantage, new tactic to certify business legitimacy and emerging business-society reconciliation. However, others stream of scholars of view that CSV is just as a buzzword, extended form of strategic philanthropy, an old wine relaunched in new wineskins, it echoes more powerfully the idea of serving the market of "bottom of the pyramid (BOP)" or it is relaunching the idea of 'inclusive business'. These are the initial reactions and it is too early to jump in and join any one of the stream at time when debate is infancy phase and empirical evidences in support or against are still scarce. To contribute purposefully, an effort is required to develop in-depth conceptualization of CSV and proposed actions of Porter & Kramer (2011).

In this regard, the initial critical analysis of proposed course of actions of Porter & Kramer (2011) predicts that the path of these actions is progressive in nature and their scope apparently ranges from narrow to wider deliberations. Conceiving new products or services is a R&D activity of an organization, whereas redefining productivity in the value chain required holistic evaluation and realignment of strategies related to

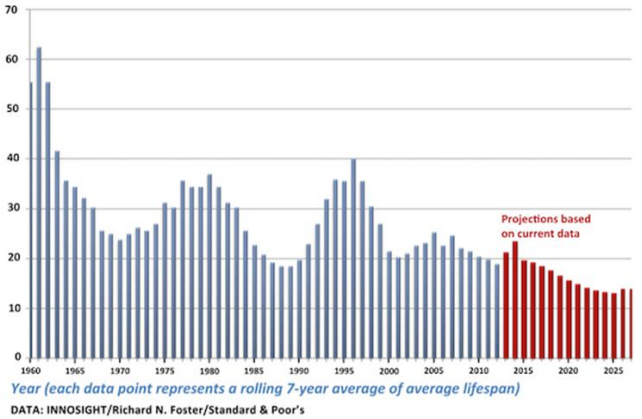
value chain's interdependent various business components and partners. The cluster development requires collaborative efforts of public sector as well as private players like suppliers, services providers etc. Keeping this variant scope of proposed actions, this paper will encapsulate only first course of action which indirectly indicativeof launch of new wave of innovation dissimilar from routine innovations often called myopic or suicidal (Pisano, 2015). To extract benefits of shared value embedded in new wave of innovation, rich information, novel skill sets and capabilities, alternative sources of inspirations, and new learning practices are required. To serve this precise purpose, the role of social capital is of prime importance which will be explored to determine the extent this capital can provide new sources of inspiration essential to derive the next wave of innovation. The new sources of inspirations will be instrumental for initiate of new generation of innovation and to access those sources there is a need that organizations build such social capital which is relevant and deep rooted in community.

Business and Society

The debate on the link between business and society is not new and abundance of literature is available in which one stream of scholars believe in profit maximization, free market and capitalism philosophies and clearly delimitate this divide. They argue that social and business objectives are distinct and social issues have no link with business problems and business entities must keep themselves apart from these social issues. The rationale behind this perspective is the conviction about business the scholars have and argued that as long as businesses remained within ethical and legal boundaries, there is no need to be apprehensive about big issues of society and businesses need to convince themselves that it is prior responsibility of governments to address these issues. This stream of scholars is influenced by the ontology "*doing things right*". However, other believe in stakeholder theory, ethical commitment and sociology perspectives of the business and argued that with the main purpose of a business, the scholars get confused by perceiving is as the sole purpose whereas, the complex business generally peruse multiple objectives (Williamson, 1985). Serving the society in totality is also attributed in multiple objectives of most of the business especially big corporations emphasize more on this aspect while defining their business objectives; however, the irony of these kinds of practices is that businesses keep such objectives on periphery and respond for short period. Such scholars believe that businesses are not operating in air rather embedded in the social structure and due to strong interdependence of both business and society, the obligations of business not limit to direct stakeholders only rather to whole society. It is not a matter of doing things right rather businesses need to *do right things*.

In spite of making claims about doing right things, the rising disparity and inequality in society, the profit maximization race among multinational corporations, the escalating concerns on global warming,

loss of business legitimacy, frequent emergence of economic crises and many other issues fueled the opinion that business is the core cause of many social problems. To tackle this emergent thought, it is imperative that companies have to reposition themselves, redefine their purpose, and reshape their corporate culture rooted with a mission derived from social pledge (Porter & Kramer, 2006). In this regard, an initial response to these mounting pressures of society and different stakeholders is observed in recent past. The companies started to get involved in umbrella activities like 'corporate social responsibly (CSR)' projects and tried to shift the focus exhibiting that companies had started to engage themselves in *doing right things* rather *doing things right;* however, in spite of pouring of too much money in CSR projects, intensity of social problems is on the rise and raising objections about *what are right things* or *what is the right way to do right things.* To search 'right things' and 'right way' to do these things, it is essential that distorted link between business and society must be restored. It can be done by eradicating 'strategic myopia' of businesses about value creation. Businesses suffering from this strategic myopia as they define value creation too narrowly, execute short-term strategic plans, and continuously reposition their outlook to ensure survival. With this strategic myopia, the pursuit of sustainable competitive advantage is blurry because until and unless, the businesses overcome the impaired vision and anticipate the big opportunities available once the missing link between society and business is re-established. In the vibrant and turbulent business environment, the most dire dilemma is sustainability because how long a business can remain profitable, generate enormous revenues or endure legitimacy. It is evident form Standard & Poor (S&P500) index or average life of Fortune 500 companies. A large number of companies that remained at top on S&P500 index are removed from list and are replaced by new companies. S&P500 indexidentifiedasharp negative slope of lifespan of companies during 1958 to 2012 as average lifespan is dipped from 61 years to 18 years (Figure 1). It is also predictable that with this rate, more than three-quarters of the S&P 500 companies would become part of history till 2027. Similar trend is also observable for Fortune 500 companies as 50% of the companies had disappeared from the list in less than 10 years from 1999 (Goodburn, 2015). Reasons like mergers, acquisitions, bankruptcy and many others one can identify causativeto this low life span of companies; however, the decline trend is also offering opportunities and indirectly it bears a resemblance with the idea of "creative destruction" - a term coined by economist Joseph Schumpeter, 1883-1950 - (Schumpeter, 1909) by reinventing new product, processes and adopting strategies fit-in with environment and society.



It is undesirable that businesses become a charity subscriber, rather businesses must evolve with new business models economically viable for both businesses and society and also address the growing issues of society. In these models, there is need that companies must consider stakeholders as business partners involve them in problem solving rather treat them as customers, economic beneficiaries or sources of productions only (Spitzeck & Chapman, 2012). The challenges to remain sustainable offer a drive to organizations to enter new phase of learning (Zadek, 2004), considering these challenges as opportunities and redefine or realign strategies and there is need to put a brake on such initiatives enfolded with risk-aversion persuasion to tackle such challenges.

It is not voiced by Porter & Kramer (2011) that business take care of all or selective ills of society as it is impossible for any business due to scarce resources and capacity. However, each business instead of getting absorbed into gigantic competition, can locate a particular mix of social problems and tried to fix with new business model ultimately can offer inimitable competitive advantage. Any effort to fix shortlisted social problems through charity or philanthropic activities will bear lack of strategic resolve, and will be distracted, reactive, short-term controlled, image building driven, and detached from real community issues. Because, whether these activities serve the purpose or not but it is evident that such activities strengthen nothing but firms' repute and public opinion. Such efforts to restore the missing link between business and society will remain considered deficient because of the invisible impediment mirrored as a mind-set which keeps societal issues at periphery instead of core and involved in activities like CSR to manifest businesses' keenness and response towards external pressure (Porter &Kramer, 2002).

To develop new business model, enrich information and awareness about societal issues is must. One way of getting awareness of various social issues is level of interaction any business keep with society. The level of interaction transcribed as social capital a business maintained;

purpose to augment such capital may vary from one business to other. The businesses integrate social capital and internal knowledge stock and serve existing markets with new products and services ensuring companies' long term success and meaningful progress. The organizations who extend these interactions at community level, the meaningful progress can be attributed in terms of business and societal revenues. The level and intensity of interaction and social capital is attributed from various perspectives in literature; for instance, among countries and geographical regions (Fukuyama,1995), societies and groups (Putnam, 1993a), organizations (Baker, 1990), and individual levels (Belliveau, O'Reilly, & Wade, 1996; Portes & Sensenbrenner,1993). Social capital is a major source of knowledge, acquisition, enhancement and sharing which can be done by enhancing interaction among network members through different means either physically or electronically to ensure access to knowledge (Chua, 2002).

Social Capital

In literature numerous definitions and manifestations of social capital are discussed. For instance, according to Tsai & Ghoshal (1998), societies, networks, organizations or even individuals represent different facets of social capital. The intangible nature and breadth of social capital concept reflects its popularity, multidimensionality and primordial feature of social ties. The spectrum of social capital notion become broader because of elastic nature of the term (Lappe & DuBois, 1997) and a conception perceived differently by many people (Narayan &Pritchett, 1999). It is also debatable to call it as "capital". For some scholars, the inclusion of economic terms in sociology has created this confusion (Baron &Hannan, 1994) and for them, the literature on social capital is just a specimen of "plethora of capitals". The use of term 'capital' is metaphorically correct and appropriate; however, if social capital is included in the heterogeneous list of resources and considered it as a source of economic gain then for someone it become hard to identify what damage such metaphorical uses produced because social capital bears a resemblance to some kinds of capital and varies from others (Araujo & Easton, 1999). To delimitate this umbrella concept (Hirsch & Levin,1999) by reducing overlapping aspects across different disciplines, the scholars form different fields like sociology, political sciences, economics and management are trying to conceptualize it to make it fit-in their domain and also making efforts to search answers of the questions raised in various studies. These scholars can be clustered on the basis of views they expressed about social capital. One group discussed social capital from internal-external lens (Burt, 1992) whereas other view social capital as individual vs. collective perspective (Coleman, 1994). Other viewpoints about social capital available in literature portrayed it as cognitive vs. relational and structural domain (Nahapiet & Ghoshal, 1998; Wu, 2008) expressive vs. instrumental ties (Ibarra & Andrews, 1993) and bonding vs. bridging (Putnam,1993b).

This diversity in the operationalization of social capital is because of changing perspectives; for instance, like other resources, human is considered as an important resource from economic point of view which shapes environmental factors. However, with change of perspective i.e. from sociological point of view, human is perceived as an actor that is shaped because of societal factors. Both actors and social capital's sources lie in same social structure and this capital as a resource available to actors as a function of their social relationships (Putnam,1993a, 1993b). The network of relationships is one of those factors used for the multiple purposesat micro level (individuals) or macro level (organizations, community, region and country). At micro level, actors tried to accrue potential benefits from formal/informal ties (Burt, 1992) but at micro-macro level (organizations), the actors tried to exploit this capital and engage network partners for collective action (Freel, 2000; Nahapiet & Ghoshal, 1998). But at more macro level (region, countries, societies), the social ties have the potential of generating value that can impact on the good fortune of collectivity (Bourdieu, 1986; Coleman, 1994; Putnam, 1993a, 1993b). In short, the social capital like other capitals is an enduring asset and to generate (non) economic benefits, individual or collectivity (firm, group, country etc.) can invest more resources or it can be deliberately constructible (Evans, 1996).

The generation of economic benefits is possible due to convertibility of social capital into economic capital, however its convertibility rate into economic or other form of capitals is low as it is stickier and has less liquefy rate (Anheier, Gerhards,& Romo, 1995). The social capital can expand efficiency of economic capital as it can play complementary role and can reduce transaction costs (Adler & Kwon,2002). To extract long-lasting benefits and to avoid loss in efficacy of social capital, maintenance plans are required to renew social bonding. With these plans and continuous interaction, social capital grow like human capital; however, the capital depreciated or become obsolete with least interaction or contextual changes (Sandefur & Laumann, 1998) and problem become adverse because depreciation rate is neither predictable nor measurable with conventional accounting models (Adler & Kwon, 2002). The social capital unlike public goods is not private property of the actors of social network who get benefited from it (Coleman,1988)as no one has exclusive ownership of such capital (Adler & Kwon, 2002) and such capital remained there and does not vanish for other actors of the network; however, the decision to give exemption to include or exclude other actors is dependent on the strength of the relationships (Hechter, 1988). In contrast to this, social capital is also perceived as private property of individuals or collectivity (DeFilippis, 2001) due to its uneven distribution and individuals or collectivity exploit it for their benefits depending on their position, interaction and network strategies (Leana & Van Buren, 1999). The differential benefits of individuals or collectivity supports this argument (Burt, 1997). The development and augmentation of social capital is not sole responsibility of any individual actor rather it

is collective commitment and cooperation of all actors to build social capital and location of this capital is likely in relations with other actors.

To build social capital, community and networks are considered as major sources. Networks facilitates knowledge flow and spillover across networks actors and that knowledge becomes a source to drive innovation. According to Lin (2002), social capital is an "investment" of network actors to build social relations can be used to gain access to information and embedded resources. At organization level, individuals remain connected with each other and with individuals outside the organizations (suppliers, customers, stakeholders, community) and this connectivity provides opportunities to extent their access to new resources. The connectivity different businesses maintained with outside actors appeared in the form of alliances (joint ventures, merger/acquisitions) whereas this connectivity sometimes emerged as "contact". The strength, worth and efficiency of social capital is dependent on the networks' structure closure i.e. the extent the actors remain connected with each other (Coleman, 1994) and are mobilized. The actors utilize this connectivity and mobility to enhance economic returns and competitive advantage. The connectedness promotes trustworthiness, cooperation and shared norms among actors. The level of connectivity, communication, cooperation and coordination between and within networks and social ties are key essentials to cultivate trust, a prerequisite for social capital. Any breach of trust and norms weakens social capital resulting damage any opportunity of mutual transaction among network actors.

Adler & Kwon (2002) summarized the literature on social capital systematically and argued that most of the deliberations are in fact manifestations of social capital. According to Adler & Kwon (2002), social capital is ''the goodwill available to individuals or groups. Its source lies in the structure and content of the actor's social relations. Its effects flow from the infor mation, influence, and solidarity it makes available to other actors'' (p. 23). The crux or common viewpoint about social capital discussed in literature can be concise into two points: first it refers to stock of social relations vested in such very relationships (Piazza-Georgi, 2002); and second it is developed to gain benefits by virtue of ones' connection in a social network (Portes, 1998). The nature of social structure is dependent on the type of relationship exist between actor and social structure.

Social Capital and Innovation

The shift of economy from capitalistic to knowledge-intensive outlook, the demand of critical appraisal of different facets of knowledge creation and transfer across various domains is increasing (Crosby, 2000) and innovation is most popular and dominant facet of knowledge creation (Collinson, 2000). Innovation is nothing but to create new possibilities with added value (Schumpeter, 1934) and it is also being acknowledged and is consistently representedas the *only* sustainable strategy for creating

long-term value (Drucker, 1994; Grant, 1996; Hamel, 1998, 2012; Hamel & Prahalad, 2013; Nonaka, 1994; Prahalad & Hamel, 1990). Initial wave of innovation is dominantly driven by the urge "how to innovate" and for this purpose, traditionally, the source of inspiration for innovation emerged either within the organization or within competitive arena however, in knowledge economy, there is need to expand the sources of inspiration as new and unique challenges demand fresh lens to address those challenges; societal issues contribute major portion of those challenges. Initial efforts were made to generate those innovations that can provide long-term value for business but with changing perspectives, now it is anticipated that there in need to redefine long-term value and it is argued that shared value of innovations is more sustainable and long lasting. This brushed up understanding about 'value proposition' is result of abundance of routine innovations which are becoming myopic or suicidal (Pisano,2015) and demand new sources of inspirations.

In capitalistic economy, the scope of inspiration was narrow as innovation is perceived as an isolated activity without any formal or informal interaction among various actorsand for this reason, companies hired insightful and contrarian professionals and thinkers (Birkinshaw, Bouquet, & Barsoux, 2011) who are anticipated to invent new idea wrapped with commercial value. During this isolation, innovation emerged as outcome of an abrupt flash of insight of such thinkers. In contrast to this isolative activity, innovation is currentlyperceived and propagated as a social process (Knack & Keefer, 1997) and as a result like other management disciplines the effectsof social capital on innovation are reported in literature (Burt, 1997; Inkpen & Tsang, 2005; Nahapiet & Ghoshal, 1998). The manifestation of this social process is "open innovation" or "social innovation". However, the question is still unanswered whether these innovations are able to bridge the gap between society and business. Companies tried to attract new ideas available beyond their boundaries and companies consider inter-organizational networks as a main source for information and resources. The market places and consumersare also attributed as social fabric of bigger structure of community; however, the whole societyor issues of common man as a source of information remain at periphery.

In spite of considering innovation as social process, the efforts like reaching customers deeply or introducing mass customization options in products/service are not sufficient (Simanis & Hart, 2009). The principal intention of organizations embracing such innovations is sharing 'risk and reward' or treating stakeholders as 'customers'. In such innovations, theimportant aspect "why to innovate" was either missing or too narrowly defined. The importance of this aspect is appreciated at time when burden of societal disorder is shifted towards business and due to low firm's life expectancy, the business world is trying to pursuit new derive to upsurge the pace and diversify the next generation of innovation. No doubt, the current innovations are made for the progress and to make this world enriched and value-added but it is not sustainable to use innovation as strategy to strive benefits of business and ignoring social progress or other

way round. It is imperative to keep balance between both business and social progress and it will help to restore missing link between business and society. As a result of this balance, a window of opportunities for innovation and growth can attract companies seeking sustainable social and commercial returns. According to Prahalad & Hart (2002), businesses should explore societal needs to exploit unmatched opportunities (products and markets) for competitive differentiation. The new sources of competitive advantage are embedded in those opportunities. Porter & Kramer (2011) also proposed that businesses have to transpire with a new mental model that can drive next wave of innovation and CSV has the potential to serve the purpose and become a fresh mental model for eventual wave of innovation.

The access to information required for new generation of innovation is dependent on the extent an organization socially connected with community. The acquired information is then combined with organization's knowledge stock and experience to produce new product/service. The rate of innovation and organizations' capability to combine and exchange information are linked together (Smith, Collins, & Clark, 2005). According to study of Akçomak & Ter Weel (2009), the pace and high yield of innovation is dependent on high stocks of social capital. According to them, to attain economic progress from social capital, innovation is a central mechanism for such transformation (Akçomak & Ter Weel,2009). In their study, trust is identified as a proxy for social capital, a prerequisite and core component of social capital for social exchange, commination, and to outline shared social norms. The excessive level of trust reduces control mechanisms and monitoring costs (Knack & Keefer, 1997). It is also categorized as a driver of innovation at the societal level (Dakhli & De Clercq, 2004). The reduction in uncertainty, growth in communication and interaction among individuals is possible due to generalized trust i.e. interpersonal facet of trust (Beugelsdijk & van Schaik, 2005) because the role of trust in social ties is like a lubricant used to eliminate unavoidable friction of social life and also key driver to reduce transaction cost (Fukuyama, 1995). The actors with strong social ties are prone to share resources like experience, skills and knowledge because trust as a glue keep reciprocated tie long-lasting (Doh & Acs, 2010). Networks which are also considered as a sources of social capital, the tendency to join such setups is more in those social structures where trust, shared norms and mutual support is available (Putnam, 1993b). In dense networks, the prospects to get know-how about new technologies and ideas rise due to increased connectedness and interaction (Fountain & Atkinson, 1998). The passive membership in such networks may result in lost opportunities of information access (Doh & Acs, 2010).

Shared norms and values attributes are also usedto describe the culture of a society. According to Hofstede (1980) cultural inventory predicts that cultural differences exist among countries and micro analysis of this difference explains that level and pace of innovation are most common consequences of this difference among countries. The societies more

inclined toward individualism and non-hierarchal or willing to deal with uncertainty instead of uncertainty-aversion are more prone to innovation (Shane, 1992, 1995). The organizations of such social structure with risk-aversion mind-set tried to operate in an environment having less uncertainty, less dynamism and remained in low profile in terms of innovation. The adoption or adaption of various strategies, novel ideas, practices and drive to innovation are influenced by external environment (Damanpour & Gopalakrishnan,1998; Zaltman, Duncan, & Holbek, 1973). In stable and rather predictable environment, the pace of innovation remained low because of less competitive posture from competitors, adequate time to think and plan, whereas in dynamic and unpredictable environment, the tendency to adopt new strategy and pace of innovation transpire with brisk rate to absorb the fluctuation of environment (Damanpour & Gopalakrishnan, 1998). However, Freel (2005) argued that it is not a matter of certainty/uncertainty of environment rather more precisely it is the perception top management who proclaim such status of environment due to lack of enough information. The perception and deficient in information due to lack of access to different sources exist in external environment resulted in their inability to make opportune decisions like to innovate (Daft & Becker, 1978) and unable to predict fluctuation adding uncertainty in the business environment (Miles & Snow,1978; Miller & Friesen, 1982). To respond long lasting survival and sustainability intentions, it is essential to react expeditiously to block unforeseen environmental shocks and innovation in terms of new products, services or process is the precise reaction (Freel, 2005) as by ascertaining the attached cost of alternative decision threat to collapse can be avoidable (Taalikka, 2002). Such response is also anticipated by Miles & Snow (1978) and according to their proposed typology, the prospectors with rapid innovation drive and performance can outperform its competitors. Therefore, with such innovation drive and having sources of inspiration rooted in social fabric of community, both economic and social growth can be ensured with new wave of innovation.

Proposed Theoretical Framework

Like other forms of capitals, for instance physical capital (plants, equipment etc.), human capital (knowledge, skills, abilities etc.), if value of social capital is realized then it is also by and large considered important and efforts are made to find the effects of social capital on various management disciplines. The effects are measured in terms of economic or social exchange or both. Nahapiet & Ghoshal (1998) defined three interrelated dimensions i.e. structural, cognitive and relational of social capital that support the type of exchange.

Structural Dimension

This dimension of social capital described the connectivity, interaction, relationship orimpersonal configuration the actors or units of social ties keep. According to Burt (1992), it refers to the pattern of

relationships, i.e. to whom in social structure actors will remain connected and how actors will be reached out. The ability of an individual or organization to acquire relevant and opportune information from community is proportional to number of connections, interactions or social ties (Capaldo, 2007; Nahapiet & Ghoshal, 1998) however, the access to complex, richor private information is dependent on the strength of the social ties (Hansen, 1999; Levin, Cross, & Abrams, 2002). The density (frequency of interactions), diversity of relations (technical, operational), and level of interactivity (individual, organizational) offers multiplicity of opinions, experiences and knowledge and by connecting different nodes the actorscan produce specialized outcomes. Such relations are also used to validate the exchanged information that actors possess and thus increase reliability, consistency and non-redundancy of the information. According to Bourdieu (1986), such resources are embedded in social structure but it is the ability of actors (organizations) to exploit those resources and transformed into those innovations that can generate economic and social revenues. The diverse relations and connectivity leverage actors' learning capabilities and absorptive capacity to foster innovations (Shu, Wong, & Lee, 2005) to penetrateexisting or enter new markets. The in-depth social ties of R&D personnel in social and inter-organizational networks provide direct access to rich information (tacit as well as explicit) to create novel opportunities for economic growth (Uzzi, 1997). The scholars are convinced that socially embedded linkages and exchanges are an important mean to promote innovations (Holmen, Pedersen, & Torvatn, 2005). According to Tsai & Ghoshal (1998), increased number of interactions strengthens capability of organization to exchange and integrate resources which enhances innovation capacity of organization.

Proposition 1: *Socially embedded concentrated linkages of organizations with community will provide access to tacit and explicit knowledge necessary for innovation that can generate economic and social revenues.*

Cognitive Dimension

This dimension also called by Rindfleisch & Moorman (2001) as "knowledge redundancy", is about the extent shared understandings, interpretations, or perspectives the actors practice and Exchange (Nahapiet & Ghoshal, 1998). The most common tools that foster such sharing include common language, vocabulary, norms, symbols and narratives. Sharing common language ease the information understanding and percolation and limit information overflow. The access to relevant information is likely if actors interact in same language (Nahapiet &Ghoshal, 1998; Weber & Camerer, 2003). Not only common language, shared symbolsnarratives, codes and stories are also useful for transfer of knowledge and information. Acquisition and integration of new information received through shared symbols and narratives is contingent upon how differently new information is presented and context specificity of acquired information is defined by a heuristic (Zahra & George, 2002).

Shared understanding of language, symbols, and narratives is prerequisite for learning (Zahra & George, 2002). Due to shared symbols or narratives, capability of actors increases to learn collectively (Moorman& Miner, 1997) and also able tointerpret information to infer commonmeanings (Kogut & Zander, 1992) that promotes synchronized behavior towards issuesof community. According to Inkpen & Tsang (2005), cognitive dimension of social capital refers to develop common approach to accomplish shared missions and outcomes.The actors having deeper understanding about existence of relationships among them contribute required nature and level of efforts to achieve shared goals and targets (Jap & Anderson, 2003). Such relationships and understandings also limit the probability of rise of conflicts, if any. In short, the understanding of behavioral norms facilitates actors to work collectively and attain goal congruency such as developing shared innovative strategies to create value to safeguard long-term competitiveness. Due to such accumulated cognitive social capital, new mental models emerge that foster innovation and exploitation of new opportunities. In addition to this, the knowledge acquisition ability of a company continuously gets refined when company integrate its current unique knowledge stock with that knowledge assimilated from network and which is also available to all other actors of the network.

Proposition 2: *Socially embedded linkages of organizations with community based on shared behavioral norms and values will provide access to tacit and explicit knowledge necessary for innovation that can generate economic and social revenues.*

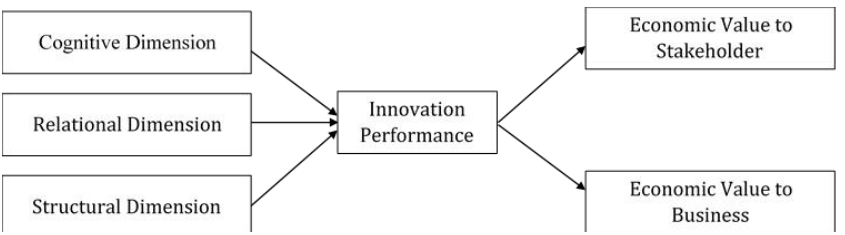
Relational Dimension

This dimension also called as "relational embeddedness" (Rindfleisch &Moorman, 2001), is about quality of connectivity the actors keep. The quality of connectivity is dependent on the interactions' history (Granovetter, 1985) which leads towards relationships of trust, commitments and reciprocity (Fukuyama,1995; Nahapiet & Ghoshal, 1998; Ring & van de Ven, 1992; Ring & Van De Ven,1994). To cultivate such relationships of trust, it is essential that actors maintain a certain level of communication, collaboration and coordination linkages. Such level of linkages develops over time through repetitive interactions expressing actors' willingness to share resources (Dyer & Nobeoka, 2000). Due to relational capital, the actors tend to engage in a strategic partnership and maintain long lasting economic and social relationships. The trust makes it possible to transfer tacit knowledge (Levin & Cross, 2004) because transparent behavior facilitates willingness among actors for social cooperation and exchange (Fukuyama, 1995; Ring & van de Ven, 1992; Ring & Van De Ven, 1994). The trust even facilities the exchange of confidential or private information (Knack & Keefer, 1997). With repeated contacts, interactions and transactions, the trust deficiency reduces and actors have a tendency to be least alarmed about the opportunistic intension and behavior of others. The tacit knowledge transfers when there is assurance, informal contact, and face-to-face

communication (Kogut & Zander, 1992; Levin & Cross,2004) because tacit knowledge obliges insights and beliefs and both are intertwined tightly with knowledge sources' experience (Polanyi, 1966). In case of explicit knowledge, the role of trust is not stronger as it is already codified and available for sharing but access and transfer of that knowledge is facilitated by trust. When actors attain a repute of trustworthiness and exploitation of opportunistic behavior is least, the exchange and combination of resources increase necessary of development of novel ideas and innovation.

Proposition 3: *Socially embedded linkages of organizations with community based on trust will provide access to tacit and explicit knowledge necessary for innovation that can generate economic and social revenues.*

These three dimensions of social capital explains the flow, extent and quality of the information and knowledge in the social ties. That knowledge is an important source and input to drive and foster innovation (Knack & Keefer, 1997). According to Lengrand & Chatrie (1999), the focus of various organizational measures is transformed; for instance, the productivity of a firm is now observed as "systemic productivity of relations" instead of "additional productivity of operations" and firms' interactions are now acknowledged as new source of competitiveness. Similarly, the outcomes of innovation are not restricted to business growth rather societal progress and economic value for social stakeholders is also essential. The performance and success of innovation is dependent on the shared value of innovation to target society and business. The success of most of the innovations is measured in terms of profit-driven ability and its return to society, business and particular group. But it is irony that the benefits of innovations appreciate only for those who either develop these or who can afford such innovation. The real shared value in not limit to providing solutions to societal needs through novel products and services rather the degree of adoption of innovation by society contribute substantial improvements in terms of economic and social revenues for both society and business.



Discussions

In this paper, the proposed model is based on the assumption that social capital is not limited to network theory only rather its origins are

deep rooted and relations with community are more important and relevant. To pave the path of new generation of innovation, new sources of inspiration embedded in community will become instrumental. However, if organizations emphasize more and invest in developing relationships with network actors like suppliers, customers and rivalry firms instead of community, then potential benefits of social capital might be unnoticed. Currently bulk of the literature accessible on social capital and innovation discussed the effects of inter-organizational networks on innovation. The concept of social capital is very narrowly defined because in such relationships through networks, firms collaborate for mutual commercial benefits like cost reduction, sharing and pooling resources, risk aversion etc. In these social relations, instead of encompassing in orthodox rivalry and exhaust resources to achieve short-term advantage, firms collaborate, complement resources and emerged with novel knowledge and products/processes to achieve multiplying or even exponential commercial gains but the effect of their relationships on novelty of product is least (Pérez-Luño, Medina, Lavado, & Rodríguez, 2011). The social capital is also used to nurture cartels to reap more profits, strengthen industry control and exploit community unethically (Ostrom, 2000). In these social ties, the economic value for social actors (community) is overlooked. Such narrow social ties lock organizations into carefully chosen but narrow network (suppliers and customers) which limits the sources of inspirations and increase dependency on small externalities reduces innovation and strategic flexibility (Capaldo, 2007; Collinson & Wilson, 2006; Pérez-Luño et al., 2011). Similar to defining value too narrowly due to strategic myopia, keeping the social circle of small radius also limit the organization's ability to exploit the embedded potential of social capital. According to Uzzi (1997), there exist a threshold in embedded relationships that can disrupt organizations' performance due to collective blindness (Villena,Revilla, & Choi, 2011) which keep organization insulated from knowledge and information available beyond their network. Such relations also have tendency to produce diminishing returns for actors involved in social ties due to high cost to maintain such relations (McFadyen & Cannella, 2004). The organizations invest to build long relationships with stakeholders like customers, suppliers etc. to ensure repeated trades, product customization, supply of resources and to reduce transaction costs. However, such relations generate curvilinear revenues and with passage of time the revenues declined as suchrepeated transactions tend to inclined towards homogenous knowledge stocks (Coleman, 1988) reducing innovation capacity of partners (Uzzi, 1997). The aim of such investments is knowledge acquisition to introduce strategic innovation that can generate economic value for both business and community but due to homogeneous thinking, routines and alike mental models reduce continuous learning and the identification of creative solutions become inconsistent (Villena et al., 2011). Such relationships increase dependency on existing suppliers/buyersand ultimately reduces the opportunity to switch and search new capable suppliers and markets (Kern, 1998) to

acquire new sources of inspiration, information and knowledge necessary to drive next wave of innovation. Therefore, it is essential that to exploit real benefits of social capital and to make innovation process easier and speedy, identifyactual target i.e. community as a new source of inspiration and build social capital around it.

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4.
Short Term versus Long Term Economic Planning in Pakistan: The Dilemma

By
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Introduction

Economic growth and development depend upon the short term and long term planning and strategies. However, the later one is used to get sustainable and consistent economic growth in this competitive world. To some extent, both economic planning have their own merits and demerits. As far as developing economies are concerned, solution for their economic disparities is to invest in long term economic projects. Nevertheless, it is not an easy task to plan and invest scarce resources in long-term planning specially for developing and under-developed economies. As a result, it is a dilemma for developing economies to go for short-term planning and projects to meet the current account deficit or even run the economy. There is no doubt that financial constraints is one of the major factors for the developing economies to go for short-term planning rather to develop or build a structure to support the economy in the long-run. In other words, in order to run the economy, developing economies have to use their scarce financial resources on short-term projects to run the economy.

Globalisation has changed the behaviour of international trading and business outlook. Now, every country strives to accomplish its competitive advantage over others especially in their traded sectors to strengthen their economic position in the international market (Buckley & Ghauri 2004). Here, it is very important to note that, short-term planning and strategy is not an unfavourable option for the under developed or developing economies. Instead, they have to make structural and technological change in quest of having consistent and sustainable economic growth in this competitive world.

It is also a fact that short-term projects do not benefit the economies especially developing and under-developed in the long run. Sustainable

economic growth is undermined by focusing on short-term planning and investment. It is also very important to note that short-term planning in developing economies is indirectly in the favour of developed economies. Importation of technology strengthen the industry at developed economies. As most of the developed economies are industrial based and one step ahead in technological advancement. In this way, developed economies find this favourable when developing economies make short-term planning and become a customer of their technological products.

In case of Pakistan, social, economic, financial and security barriers have diverted the attention of the policy makers to use the resources in short-term planning rather than long-term. Another major aspect in this chaos is that the short term planning in Pakistan indirectly favours the developed economies rather than itself. As a result, international donors instruct the Pakistan's government to focus on short term planning to meet their own goals.

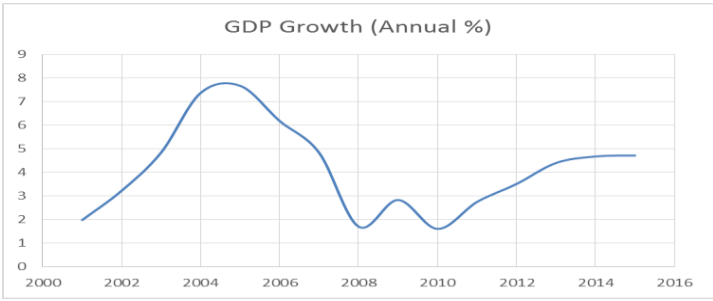
Case Study of Pakistan

Pakistan is facing political disputes, social constraints, international and national security pressure, economic inconsistency and submission to donors in finalising economic policies for more than a decade. These issues never let the government to take measures for long-term and sustainable economic growth. Developing economies like Pakistan need to make planning and strategies to get economic growth and development for long-term (Khan *et al.* 2005). But, the dilemma for this state is that its current economic, political and security issues never let the government to utilise its scarce resources for sustainable development projects and programs. Therefore, short term planning is made to run the economy at its slow pace (Zaidi, 2005).

Pakistan's government is focusing on short-term projects to deal with current economic challenges. This option can never be in favour of long-term and sustainable growth. Apart of financial constraints, this economy is going through various other issues i.e. poverty, slow economic growth, unemployment, energy crisis, inflation, illiteracy, foreign debt burden and strict policies of IMF and other donors. Pakistan is going through various economic issues which are hindering its pace towards economic development and growth.

Inconsistent Economic Growth

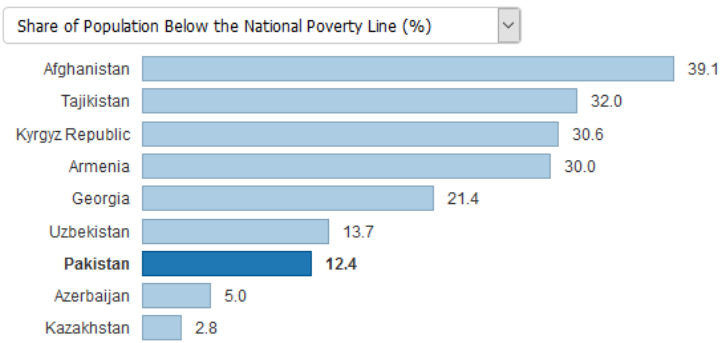
GDP growth rate shows the output of the economic activities of any economy. Below diagram shows the annual GDP growth rate of the Pakistan since 2001. It is evident that after the financial crisis of 2007, Pakistan's economy disturbed adversely. However, it is on recovery since 2010 but with a slow pace. Until now, the annual growth has never been more than five percent. Its current fiscal and monetary challenges have hindered its economic progress. Its economic planning and strategies are not suitable for getting long term economic sustainability and growth.



Source: [Retrieved from].

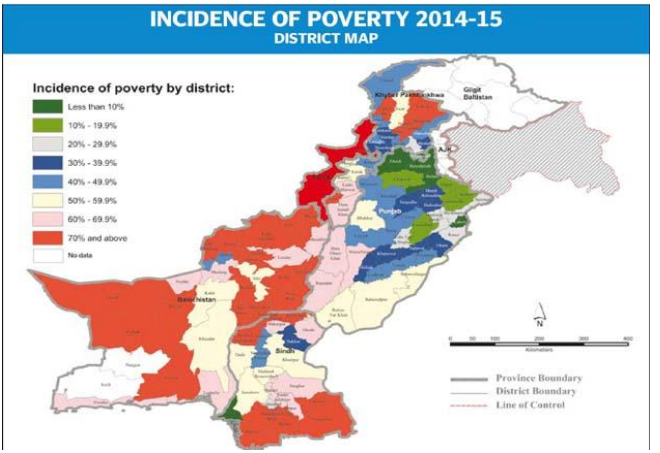
Increasing Poverty

Pakistan is one of those country who have high poverty rate. According to Asian Development Bank (2016), more than 12 percent of the population live below the national poverty line (Anon, 2014). Furthermore, according to Human Development Report (2016), as per Multidimensional Poverty Index (MPI), 40 percent of the Pakistanis live in poverty (Rana, 2016). This shows the adverse ecconomic performance and activity of this economy where human capital cannot be utilised effectively.



Source: [Retrieved from].

Below diagram shows the region wise poverty in all over the Pakistan. This shows that major portion of the population in Baluchistan lives in poverty. This also depicts how government is ignoring different regions of the country which creates discrimination among provinces. Inability of implementing sensible and long-term policies in the country shows such discouraging results in the economy.



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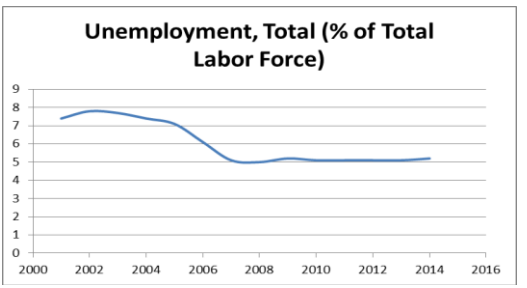
Unemployement

More than 5 percent of the labour force is unemployed in the Pakistan. Although situation has been improved since 2008 but it is still a very high as compared to its other neighbour countries. This issue also shows that Pakistan's economy is facing a tough situation for more than a decade. Unless effective economic strategies are formulated and implemented, government cannot properly utilise its human resource properly and efficiently.



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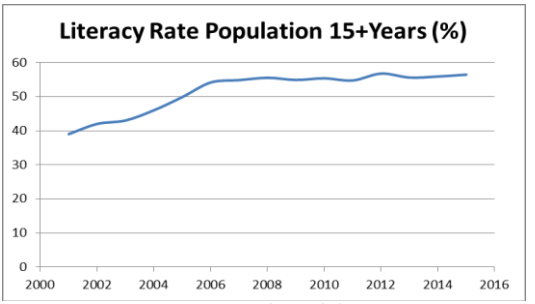
Low Literacy Rate

Iliteracy and unskilled labour are another major issue in Pakistan which are still ignored in the economic planning and strategy. More than 40 percent of the adult population are illiterate even in 2015. On the other hand, its neighbout country like China and India are having 96.35% and 72.2% literacy rates respectively. This unable it to compete well in the internaitonal market. In the below diagram, it is clear that the situation is improving gradually in the last few years, but still it is far behind than its neihbour countries.



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Inefficient Short Term Planning to Meet Long Term Goals

Short term planning and strategies are another shortcoming of this developing economy to survive in this competitive world. rather than investing in long term projects, goveernment is interested to invest in short term projects to stabalise the economy which is not an effective approach for long term growth. For instance, government gives subsidy and rebate to its industrial sectors especially textile to increase its exports. This is not a result-oriented approach of the government to support a traded sector. As, textile industry consists of outdated machinery and unskilled labour which, by any means, cannot compete well with the products of China, Bangladesh and India in the international market. As a result, economy is losing its market share in the international textile industry. Another short-term planning is to invest in improving internal security structure which can never be effective unless security at the borders is increased to cult human trafficking and smuggling. Another drawback in Pakistan's short term planning is to invest huge budget on developing infrastructure rather to invest in human capital.

Literature Review

The consequences of economic policies and programs are reflected on the lives of the people after a time-period. This time period may vary from economy to economy depending on the social, economic, cultural and political structure of the country. Sometimes, short term development or improvement in the macroeconomic indicators may stabilise the economy but appears to be adverse in the long run. Short term economic planning is a dilemma for developing economies to go for in quest of long term economic growth. However, various studies have been conducted to link the short term economic planning with the long term economic growth. Developing economies may gain sustainable and consistent economic growth by using effective short term economic planning and strategies.

Economic growth and economic sustainability are two different concepts. According to Higgins (2013), economic development and growth is linked with the nature of economic planning and strategies.

Short term planning, sometimes, gives aggressive economic growth rate at the beginning but lack in economic sustainability and consistency in the long run. On the other hand, sometimes, long term planning gives a slow or negative economic growth rate at the beginning, but ensures the consistent and sustainable economic development and growth in the long run. Furthermore, sometimes, short term planning may adversely impact the other core macroeconomic parameters of the economy which disturbs its consistency and sustainability.

There is also a misconception that economic growth is linked with the sustainability of the economic activity. However, this may or may not be true especially in case of developing economies. Economic planning and growth are two of the major problems faced by the developing countries. In case of developing economies, deteriorating macroeconomic indicators influence the policy makers to choose the short term planning over long term to run the economy. This approach, sometimes, disguises the economic growth by showing favourable growth rate in few sectors on the cost of other core indicators. Kerschner & O'Neil (2015) explained that in developing economies, this approach is either enforced or preferred by the economists to better deal with the current economic issues or problems.

Classical macroeconomists named Ward *et al.* (1972) studied that there is a very strong relationship between short term economic planning and long term growth. It is evident that if short term planning is wisely formulated, it can be linked with the long term economic development and growth. In case of developing economies, WB, IMF and ADB are few of those international financial institutes which cooperate with the developing and under developed economies to have sustainable and consistent economic growth by focusing on those short term projects which directly or indirectly link with the long term economic growth and development. According to the research works and studies of Bauer (2013), it has been highlighted that poverty, illiteracy, unemployment, technological backwardness, inefficient utilisation of resources and political instability are few of the major problems and issues faced by the developing and under-developed economies. All of these problems, somehow, tackled by those short term projects which are directly or indirectly linked with the sustainable development. Pearce *et al.* (2013) explained that in case of developing economies, sustainability and consistency of the economy for long run are major issues. Harting (2015) studied that after the financial crisis of 2008, stabilisation policies have become the priority of the countries to alleviate the effects of economic downturns and direct it to regain the growth and development. Therefore, economies, both developed and developing, are using short term economic planning to direct the economy towards sustainability and development in the long run.

According to Martin & Rogers (2000), there is no significant impact of short term shocks on the long run economic growth or development given that economic policies and strategies are well formulated and managed. From a theoretical point of view, the relation between short-term economic instability and long-run growth can be positive or

negative, depending on the mechanism or nature of the economic growth. This relationship can be explained by determining the relation whether economic growth and productivity generates growth in productivity is a complement or a substitute to production. In the case where they are substitutes, since the opportunity cost of productivity improving activities falls in recessions, a larger amplitude and frequency of economic activities may have a positive effect on long-run productivity and growth. In the case of complementarity, positive shock will have a positive long-term impact on productivity and vice versa. It is concluded that if economics' core problems are being addressed in the economic policies, short term economic challenges and hurdles may not impact the economy in the long run.

According to OECD Economic Outlook Report (2011), long-term planning is not an easy task to manage especially for developing economies which have economic crisis, particularly because of emergence of fiscal imbalances, poverty and unemployment. These economic issues have adversely affected the long-term growth and made the economic activities uncertain. Denton *et al.* (1997) explained that increasing population and labour force requires long term economic planning and development. As the population is increasing in the world, the economic structure should be stable, sustainable and strong to absorb the changing requirements of the population. However, same is not an easy task for the policy makers.

There are various emerging economies in this South Asian region which have developed sustainable and consistent economic growth and expansion. China, Bangladesh, Indonesia, and Uzbekistan are some of those developing economies which have invested in the long-term projects to gain consistent and secure economic growth (Wright *et al.* 2005). Their encouraging figures of literacy rate, inflow of FDI, exports share in GDP, HDI and trade agreements with other economies have directed the economy towards sustainable and long-run growth.

Wong *et al.* (2005) explained that after the industrial revolution in the West, structure and origin of economic growth and activity have changed significantly. As per Scherer (1986), a great economist named Schumpeter founded the base of innovation economies to transform the economic approach from traditional to innovation and creativity. His theory linked the creativity and innovation with long term economic development and growth. He explained that investments on innovation and research return the economy in the long run rather than short run. Therefore, today's developed economies invested in research and development to become innovative economies. Bilbao-Osorio & Rodríguez-Pose (2004) explained that this economic approach bestowed the sustainability and consistency of the economic activities for the long run. For these developed economies, long term economic growth and development have become the core objective.

There is no doubt that economic development is linked with the structural, technological and physical changes in all segments of the economy. When we look into the economic planning of thesedeveloped

economies, it is evident that these have developed strong infrastructure and invested in long-term projects to develop sustainable and consistent economy. Financial crisis of 2008 never let these economies to ignore the importance of long-term projects.

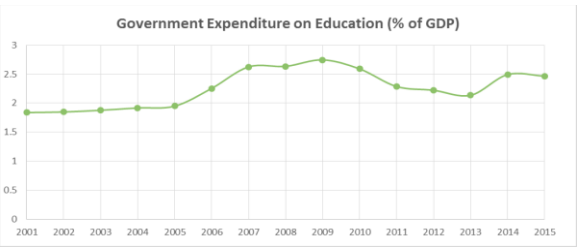
Data Description and Analysis

Pakistan's Short-term Projects and Impacts

Pakistan is focusing on short term planning and projects in quest of achieving long-term and sustainable economic development and growth. Here, we are discussing three of its short term projects and their impact on the economy in the long-run.

Importance to Education

Education is one of the most powerful parameters for eradicating the poverty, inequality and to build the foundation of sustainable economic development and growth. Pakistan's government is giving less importance to education and research and development. Government invests in higher education by ignoring primary and secondary education. Low women empowerment is also an issue which undermine the economic growth in this country. As a result, its competent and bright scholars leave this country in quest of getting higher living standard in developed economies (Memon, 2007; Malik & Courtney, 2011). For the last decade, when globalisation has fastened the pace of technology and advancement, the government's expenditure on education has never been more than three percent of the GDP. See below graph which shows the government's preference to invest in education.



Source: [Retrieved from].

Expenditure on Primary and Secondary education was made 57.81% of the total allocated budget in 2013 which increased to just 68.51% in 2014 given that the population is growing more than 2 present annually. The fact of the matter is total government expenditure on education is very low which cannot give the sustainable economic development in the long run. Literacy rate in 2015 was just 56 percent as compared to 61.5% in Bangladesh, 72.2% in India, and 93.35% in China. Without making human resource competitive, no economy can ever compete in this globalised world where competition never let the weak economies to survive.

Tax Exemption & Rebating the Tradable Sectors

Again it's a short term policy to rebate or give tax exemption to the tradable sectors like textile, dairy & livestock, cotton, rice and other agricultural products. Some of the schemes proposed by SBP to support these sectors are: Refinancing Facility for Modernization for SMEs, Export Financing Scheme, Financing Facility for Storage of Agricultural Produce and Long Term Financing Facility for Plant & Machinery. Although, these schemes have supported the agricultural and textile sector, but these schemes are not enabling the local businesses to compete well in the international markets. There are various barriers and deficiencies in these sectors which have undermined the productivity and efficiency of the human and capital resources. From the last few years, these sectors have badly affected by the out-dated machinery and processes and country's energy crisis. Government is facilitating the local businesses to rebate on importation of raw material and machineries to strengthen these tradable sectors. But, the fact of the matter is, these sectors are no longer competitive and their volume of exports is decreasing for the last few years. Below shows the decreasing exports of the country. Even though, government is paying attention to support its tradable sectors, but overall negative trend shows the failure of their efforts.

Source: [Retrieved from].

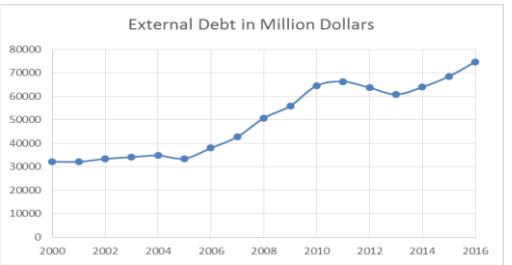
Below diagram shows the percentage growth in the exports of the country. Negative trend strengthen our argument of inefficient policies of the government to support those sectors that need restructuring or re-engineering.

Source: [Retrieved from].

Secondly, it invests in those sectors of the country which are not its core competencies. As a result, those sectors may have ignored which can help the economy to gain foreign exchange. For instance, Pakistan is an agricultural land but government focuses more on industrial and services sectors which require huge funds. As a result, its agricultural sector affected a lot in the last few years. More than 60 percent of the labour class belongs directly or indirectly to this sector. This has affected adversely to the working class of the country.

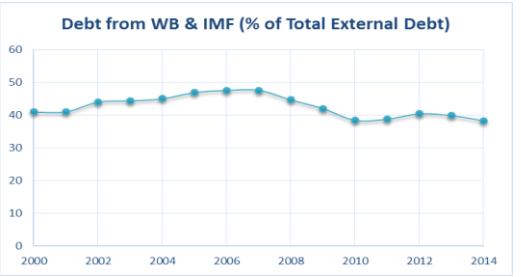
Foreign Debt to Run the Economy

Current account and trade deficit is one of the major reasons behind taking loans from international financial institutions i.e. IMF, World Bank and Asian Development Bank etc. According to SBP, foreign debt has been increased 75 percent in the last nine years. Pakistan government go for foreign debt to meet its foreign reserve demand rather than to increase the exports to support the economy. Below diagram shows the increasing trend of external debt of the country.



Source: [Retrieved from].

This is a short-term planning adopted by the government to take foreign loan rather to add new sources of earning foreign exchange. This option has increased the burden of interest payment on the economy. Economists are of the view that foreign debt will have adversely impact on the economy in the long run. Ideally, foreign financial assistance must be invested in developing infrastructure, education and other long-term projects to stabilise the economic growth. However, multilateral debts are given to developing economies for short-term projects which deteriorate the economic outlook in the long-run. In 2014, our multilateral debt consists of over 38 percent of our overall external debt (as shown in below diagram). As a result, IMF and WB dictates us to invest in short-term projects to run the economy. In other words, Tough terms and conditions of IMF, WB and ADB (donors) have adversely affected the economy and government sovereignty.



Source: [Retrieved from].

High debt to GDP ratio increases the inflation rate, tightens the monetary policy and creates high debt burden on the economy which destabilises the economic growth of the Pakistan. BOP or current account deficit cannot be met without focusing on those sectors which can earn foreign exchange. Pakistan is ignoring the deficiencies of its internal industrial and agriculture sectors which consist of major portion of its exports. Structural and infrastructural changes are inevitable for these sectors to perform well in today's competitive international markets. In case of Pakistan, foreign loans are utilised for importation of new technologies to develop these tradable sectors. In other words, imports further increases in the economy. For this, long-term planning is very important to strengthen the economic development and pace.

How Short-term Projects in Pakistan Favours Developed Economies

After the financial crisis of 2008, global long term planning and investment has been collapsed in especially developed economies. This let them to import assets from developing and under developed economies rather to develop their own. Same thing is happening with the case of Pakistan.

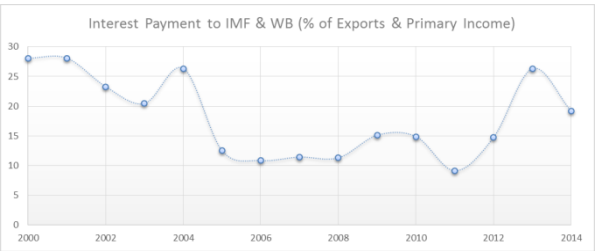
Brain Drain to Developed Economies

Developed economies have adopted rigorous immigration rules and regulations after financial recession, but determined to attract the best human resources from all over the world especially from developing economies. According to HEC report 2015, only six percent of our population enters in universities. 5,536 PhD degrees have been awarded in the last five years. According to Ministry of overseas Pakistanis and Human Resources Development, more than seven million Pakistanis are working abroad. Out of which, 48 percent are working in Middle East, 28 percent in Europe and 19 percent in USA. This exodus includes highly skilled human resource. Only in 2015, 220,411 skilled Pakistanis proceeded abroad for employment. This is an alarming situation for Pakistan to lose the skilled human capital to developed economies. Government of Pakistan is spending huge budget on Higher Education but ignoring to build international research development centres to provide employment opportunities and utilise these scholars. Research

and Development is being ignored as a result, these skilled human resource left this country and work for other developed economies.

Huge Interest Payment to Donors

Foreign debt indirectly in favour of developed economies and international financial institutes. It has been proved that developing economies need long term planning and strategies. In case of Pakistan, IMF, WB and ADB issue loans to Pakistan for short-term projects. These funds are disbursed with highly strict terms and conditions that suppress the sovereignty of the government. Huge interest repayments never let the Pakistan to grow its economy in the long-run. By these funds, Pakistan meets its trade and current account deficit and strives to run the economy. These funds are further used in repaying the interest of the loan and importation of goods to fulfil the needs of the country. Indirectly, these funds indirectly support the economy of developed economies. This vicious cycle never let this economy to have a stable and consistent economic growth in the long-run. Below diagram shows the interest payment to only IMF and WB in the last ten years. In 2014, over 18 percent of our exports and primary income went to IMF and WB in terms of interest payment.



Source: [Retrieved from].

Ignoring Reverse or Re-engineering

Rebating, financial assistance or tax exemption to tradable sectors are not going to help the Pakistan economy to increase its exports. These are the short term measures to run the economy. In fact, these things increase the imports of the economy (See below diagram).

Source: [Retrieved from].

Unless re-engineering or reverse engineering is introduced in these sectors, we cannot direct towards increasing the exports. With the wrong or short term policies of the government, textile and agricultural units are spending more funds on imports from the developed economies than to export. Furthermore, our products in the international markets are losing their competitive position. Unless these sectors adopt the strategies of reverse or re-engineering, we will remain the customers of developed economies one way or the other.

Conclusion

Pakistan is a developing economy with major issue of political economic uncertainty. Short term economic planning is its need to run the economy. Short term planning does not ensure long term economic growth and stability unless it is planned and implemented to achieve long term objectives. Pakistan needs to reformulate its economic policies to achieve sustainability and long term economic growth. For instance, rather to go for external loan, it needs to arrange funds from its local markets in shape of sukuk, bonds and other financial instruments to collect money for investing in long-term projects. Rather to invest in developing new industries, it needs to increase the efficiency and competencies of those sectors which are highly labour-intensive or employed a high portion of its human capital like Agriculture. Innovation and creativity at the university levels must be encouraged related to this sector to increase the labour productivity. In this way it will be able to regain its market position in the international market and increase foreign reserve. Another possible solution is to bring technological advancement in the inefficient and tradable sectors. In this way, it will increase its exports. Last but not least, Pakistan needs to formulate balanced economic policies and planning to deal with current issues and long term objectives. Both short term planning and long term sustainability are core components of the developing economies.

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5.
Effect of welfare and economic performance on good governance outcomes in Pakistan

By
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Introduction

Effective governance ensures equal participation from all the sectors. It also guarantees social justice and an orderly society (Prasad, 2008). Governance really matters for prosperity, economic development and improvement in social indicators.

Governance got a lot of importance during the last 10 to 15 years both in developed and developing economics. It is one of the key element for the human development for both of the partner countries and the donor agencies and donor countries. It is an international consensus among the nations regarding the effectiveness of good governance and significance of its essential elements. Combating corruption, Effective institutions, effective political and electoral process in the presence of democratization, human rights and its protection, participation of the civil society, and the attainment of justifiable economic, political and social marks are some ofthe main elements of the international consensus. While according to this consensus transparency, voice and accountability, rule of law are the core components of good governance. Declarations which have been made by the international community such as the Millennium Declaration, International Conference on development and finance, World Summit which was held in Johannesburg on Sustainable growth and long termDevelopmentandsome other related documents like the World Bank's Human Development Report (HDR) of 2002 or the report of 2005 presented by the UNO Secretary General "In Larger Freedom" which define governance and the human rights are necessary prerequisites forgrowthand development, reduction in poverty and they also confirms the interaction in between them.

Economic researchers and policy makers consider it to be a pre-requisite for sustainable development. Traditionally total factor

productivity, technology, physical, and human capital development and accumulation were considered the factors required for economic growth and sustainable development. But research shows that all these factors go to waste if the policies and institutions in a country are corrupt, inefficient, incompetent and non-transparent. The concept of good governance was emerged in 1980's. Social and economic scientists stress upon the importance of governance in a country. According to them, Development economists pointed out that growth requires government that facilitates the producers and provides them with proper information. World Bank starts structural adjustment programs in developing countries. Those developing countries are indebted and world bank wants to rehabilitate and reconstruction of the infrastructure of those countries but the question was arise that whether these nations can be easily paid their debts on time, or they have the ability of making sure that they could repay loans.

Characteristics that a good government should possess are transparency, accountability, strategic vision, rule of law and control over corruption. All these attributes work together to provide an environment that implements developmental programs efficiently, helps in taking new initiatives and boosts energy in creative minds. Governance should also accompany civil society, private sector, international investors and companies. It should be like a bridge that connects important institutions and sectors of the economy. It should provide facilities to every sector equally in order to increase the productivity. International financial institutions point out that governance is an institution that exercise authority in an economy, good governance is one that exercises authority in an efficient and transparent way.

According to international financialinstitutions the characteristics of efficient government vary from country to country but that attitude of the government should be positive and productive accepted that good governance can be achieved through democratic political system. Countries all over the world are analyzing the role of their government in providing basic facilities. For this reason governance indicators are introduced by World Bank. Transparency international and freedom house international for examining the working of the government in serving their people. Good indicators of governance guarantee a county's good institutions. They point out good governance ensure high quality economic conditions and sustainable development. This helps an economy to have strong credibility that attracts higher private and international investment.

Good governance is the concept used in the recent past by World Bank. It is a concept that gains importance because of the poor performance of the countries experienced in structural adjustment programs (SAPs). World Bank through SAPs provides loans to the developing world but sometimes attached heavy conditions with it. The reasons of the failure of SAPs is realized by the developing countries and the Bank is theinefficient management of the resources. They pointed out that it is not the structural adjustment loans but their implementation that

created problems. The role of the government not up to the mark in reaping gains from these loans. The donor country stress that there should be civil liberties and mu.,ti party democracy that indicate good government. In late 1980's WB feared to intervene in the member state as per its policy. But later in 1992 the policy statement on this issue came that World Bank has intention to work more and further on governance issue. It defines the governance as the manner in which a power and authority is exercised in a country. (World Bank, 1992). From their onwards they forced the importance of governance to world in general and developing countries in specific.

World Bank pointed out that governance means decision making and public policy formulations that is best in public interests. In other words it states that public affairs should be managed in such a way that ensures transparency, accountability and, modernization in public administration and privatization. International Monetary Fund (IMF, 1996) suggests some factors to increase the economic efficiency and prosperity which are related to good governance; such as

1) Rule of Law
2) Increasing the efficiency and improving the process of accountability
3) Tackling the corruption strongly.

United Nations suggested some factors related to human development and political institutions through which the reforms into the society could be made. Such as;

1) Consensus oriented
2) Participation of the society
3) Transparency
4) Equitable and inclusive kind of society

Objectives of the study

Efficient governance is necessary for development, how can the governance be improved? Some of the variables other that the government who takes part to improve the governance as well as better economic society. So according to this the objectives of the study are steeled.

1) It is to investigate that how improvement is the social variables influence governance.
2) To test that the economic variables have influence on good governance

Significance of the study

Universally it is recognized that the countries who indulged themselves in the process of the betterment of governance becomes the developed countries of the world. Governance has improved their economic performance and quality of individual's life of the country. So governance is no doubt one of the main determinants in the process of economic development and long term prosperity of the nation. Here I want to analyze that how the improvisation in the level of good governance can achieve through the socio-economic indictors in Pakistan. Pakistan is facing critical situation from the last many years. A number of studies have pointed out the effects of poor governance on the economy. This study is an attempt to investigate those factors that are affecting governance in an adverse manner. Only few studies investigated these factors but theoretically. So in present study effects of social and economic variables on governance are estimated empirically.

Organization of the study

The rest of the study is organized as follows. First chapter isconsisting on the introduction of the study and significance of the study. The second chapter defines governance conditions inPakistan. The third chapter represent the review of the literature related to governance and various social and economic variables. The fourth chapter presents data and methodology in order to estimate the impact of social and economic aspects of economy on governance. Fifth chapter presents the results of the study. While the sixth chapter consisting on the conclusion and policy recommendations.

Overview of governance in Pakistan

United Nations Development Program (UNDP) (1997) explained governance as the system of values, institutions and policies through which the society manages its economic, political and social affairs through the interaction within and among the state, society or for private sector. It is the practice of administrative, economic and political authority to manage country's affairs at all levels. It includes those mechanisms, institutions and processes through which citizens and groups eloquent their interest, and to exercise their legal rights meet their obligations and mediate their differences.

McCawley (2005) postulates issue of governance and categorizes it into macro and micro level. According to him macro level issues of governance include constitution, rule of law, size and resources available to the government, the relationship between legislators, power of judiciary and the military institutions. While at the micro level he

includes social institutions, awareness to the civil society and their affairs, and finally the commercial firms.

International Country Risk Guide (ICRG) developed an index which is used as a measure of governance. ICRG index includes 140 countries for the period from 1984 to the present analysis and it also used to forecast the risks or the degrees of uncertainty for international investors. This index comprises of 22 variables, these variables are grouped into three categories of risks. The categories are political risk, financial risk, and the economic risk. The assessment of subjective analysis on the basis of available information is taken through political risk. While the assessment of financial and economic risk is taken solely through objective data. In shaping these components 50% weight is assigned to political risk while the remaining 50% weight is equally assigned to economic and financial risk.

The performance of governance in Pakistan isgraphically illustrated in Figure 1 below.

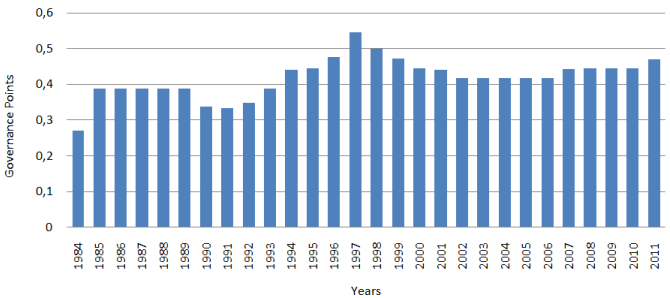


Figure 1. *ICRG Index Trends in Pakistan (Data in Points)*
Source: International Country Guide (ICRG)

The performance of governance in Pakistan for the last three decades is quite persistent, but it was between 40 to 50 points, which is not very much appreciable. In the recent decade overall governance showed downward trends. As far as governance is concerned Pakistan was more stable politically during the military dictatorship periods (Qureshi, 2011).

Review of literature

Literature on good governance is building day by day. Here we will attempt to highlight some social and economic aspects of good governance in this existing literature. Mamoon (2011) analyzed the impact of economic determinants on the welfare of an economy. These days countries are openings their economies to trade that thing brings high level of economic institutional development and reduction in poverty in countries like china and India but other countries have experienced adverse globalization in incomeinequality rises poverty also rises and they failed to accelerate economic growth. Even in china and India income inequality rises due toskilled based technological change that'swhy the poverty reduction was not sustainable. For getting social economic and

cultural progress the most important in institutional factor is democracy. This can be seen that all developed countries have efficient democratic system. He conducted a cross country study including both developed and developing countries. Different data set have been taken to capture the relationship of income inequality with openness, voice and accountability, democracy and autocracy. The results show thatvoice and accountability is more sensitive to income inequality whereas democracy and autocracy are less sensitive to income inequalities. It means politically stable economies face more equal societies. But the democratic government get more benefits from global markets this forces the developing countries population to ask for kore democratic setups. The people of these countries want to have efficient political institutions and government management. It can be seen that some social variables are not improving like income inequality and wage inequality. The countries with autocratic setup need to bring western models of democracy to their countries in order to get good result of transforming world. Good management of the government helps in an economy in which poor are provide with their rights.

Zhuang *et. al.,* (2010) analyzed the impact among governance, economic growth and income inequality. They discussed the direction ofcausality between institutional development and economic growth. They pointed out that Asia has been growing at impressive rate especially during 1990 to 2005.the annual growth was 5.6%. This reduce the extreme poverty from 52% to 27%. But this was the case of some regions of Asia namely countries like India, china and southeastAsia. Other Asian countries are facing extreme level of poverty and low levels of economic growth. It is pointed out that growth can be help to reduce the poverty to some extent but it is still unable to reduce income inequality. Government efforts to reduce income inequality by using external assistance in form of structural adjustment programs and other donor agency programs are often fail. The reason for the failure is the inefficiencies are related to the government, and undue intervention of internationalfinancialinstitutions country could not improve by only making macroeconomic policies, but it is more dependent on implementing and improving the policies that in return can improve the condition of the poor people of the society. Corruption and inequality has also got lot of attention. They pointed out in that particular situation the causality runs in both directions political institutions and governance impacts the income inequality as well as income inequality can also further can affect the political decision making. On the other hand corruption effects on income inequality and income inequality in return increase corruption. They concluded that governance and institutional quality on one hand and growth and income level on the other hand has positive association. A two way causal link has also been present in between these variables. Governance indicators viz. regulatory quality, rule of law and government effectiveness impact positively. Also governance got influenced by growth and income inequality.

Khan (2006) examined theoretically the impact of governance in economic development. There are two points of views regarding governance, one is about the state capacities that are necessary for speeding up development process and the other is about the importance of governance factor relative to other economic factors at early stage of development. He stated those capacities that keep competent markets and limit government failure. The government failure of many emerging countries is described by efforts of their states to do too much, consequential in the relating unproductive rent-seeking activities. Khan quoted in this study that relative importance of governance movements in accelerating development is challenged by Sachs *et al.,* (2004) who empirically analyzed that the difference in development performance among African economies is not due to the difference in quality of governance. Khan (2006) used two data sets: one was composite property rights as a proxy for market enhancing governance from 1980 to 2003 and the second was voice and accountability plus political instability from 1990 to 2003 by using World Bank data. For the data set of 1980s there was a strong positive relationship between growth and market enhancing governance. However, for the data set of 1990s, there was a weak relationship between growth and market enhancing governance. In both cases there was a positive relationship between market enhancing governance and growth due to high scores on governance indicators of rich countries that overcame those poor country, so for more comprehensive analysis there should be separate empirical check for rich and poor countries.

Jasimuddin & Joya (2007) studied the relationship between governance and economic development for south Asia. They provided the evidence with reference to recent literature that without improving the governance level it is not possible for developing economies to get satisfactory level of economic development. In South Asia, especially, in Bangladesh democracy, stable political regimes, accountability, control of corruption and government effectiveness are the crucial indicators required to improve social indicators. In their concluding remarks they were of the view that governance is a complex phenomenon but it is an essential element to improve economic activity and for achieving good levels of governance there should be the long term commitment of international financial institutions like IMF, World Bank and UNDP etc. to support the efforts to improve governance.

Elijah (2007) studied the Nigerian economic reform program and corruption situation. He discussed the corruption of the elite and beaurocracy on the socio culture of the economy. It is said that corruption hampers the economic growth, development and reduce the economic efficiency of the country corruption in the political institutions of the country slow down the progress of the economy and productive capacity of the economy. It impacts adversely on the national image and thus reduces the foreign direct investment FDI. In Nigeria corrupt regimes which cause monopoly, lesser accountability, and poor rule of law has stolen the resources of the economy. People in Nigeria indulged in

corrupt practicesdue to the extreme poverty, unemployment, lesser control of political and governing institutions, informal economy. They have caused higher rate of grass root corruption. To control these factors Nigeria needs to control corruption, for this reason they established anti-corruption units. The need of the hour in to control the corruption, especially the corruption which was prevail in the institutions. For this reason people should be educated which can accelerate them to play their role in the process of economic development. Also there is a need for the job creation. Which can also reduce the malpractices of the officials. Educated citizens can play effective role and thus ensures equality among different sectors and citizens of the economy.

Prichard & Leonard (2010) analyzed the impact of taxation in state building in African countries. It is pointed out that African countries can improve their administrative capacity through improved taxation. The data set has been taken from 1973 to 2005. A cross country empirical estimation showed that improved tax administration improves governance through accountability. Governments those depend on taxes for revenues spend on development work well in controlling corruption. The study provides evidence that improvement in tax collection can be a source of better administration and thus improved state capacity building. The finding of the study are weak but significant. The reason behind the result is that there was structural break in the data. The improvement in tax administration does not match with those improvements. It has been said that improved taxation can affect public administration but there is no guarantee for these results. On the other hand it has been argued that improvement can be because of tax reforms.

Chaudry *et. al.,* (2009) analyzed various factors that impact good governance in Pakistan. They have taken the macroeconomic variables and by using time series data from 1972 to 2007 explored their relationship. Using OLS technique they investigated the relationship between various macroeconomic variables and good governance. They used crimes reported in police station as a proxy for good governance in equation 1 and private investment in equation 2. According to them despite controversies in the concept and importance of good governance the concept is getting value. Economists. Policy makers, political scientists all considering it for theeffectiveness of society's institution. Good governance provides an environment favorable for investment no matter international or in local markets, people increasing their education and skill which can give them higher income and thus contribute towards better economic and social indicators. Throughdescriptive analysis they have given perceptive new proof to the literature on good governance and economic variables. The results of equation 1 shows that social and economicvariables strongly impact the good governance variables. Democracy has positiverelation with good governance. It can help in understanding the problems of the population and their point of view. Health literacy and openness all depict negative relation with good governance. It shows that higher crime is because of unhealthy and illiterate citizens. On the other hand second equation states that

democracy and openness positively.

Bhatti (2001) tested the relationship between poverty and economic growth in the presence of good governance in Pakistan. He tried to explore the role of good governance and economic growth for the reduction of poverty. According to his presented facts and figures that high levels of economic growth does not ensures the poverty reduction or equal distribution of income and resources due to the ineffective role of the government. In Pakistan government never give preference to the equal and justifiable distribution of resources among the individuals of the society, skill development, better education and health facilities, encouragement to the private sector, women empowerment. He was of the view that governance is an institution which handles the various sectors of the society, it gathers the moderate and working sectors of the society for the purpose of encouraging the process of sustainable development. It also ensures the active participation of the investor class and effective implementation of better investment opportunities. The term which he has used for equal participation of skilled and energetic individuals and societies this is Appropriate Governance. According to him the government must have the ability to looking inward and facilitate the domestic environment for the working class. So according to his findings not only the growth levels are but the government effectiveness or the good governance ensures the poverty reduction. There must be the equal opportunities of the individuals. Because of the equal participation in terms of gender encourages for the self-interest and ultimately they will become to engage themselves in the productive activities. This in return contributes towards better governance and for the growth of the economy.

Torres & Anderson (2004) declared that a state with poor governance is a fragile state. They provided a complete overview regarding the fragile states. Severe problems are attached with the fragile states, such as, poverty, violations of human rights, conflict issues, unstable state policy and regional security threats. The situations of fragility could also be observed by considering social environment of the country as well. In such a situation the effective utilization and mobilization of domestic as well as international resources becomes difficult. Domestic resources comprise of the revenue collections of government and control of corruption which reduces the overall cost of the economy. While the international resources consist of FDI, public or private, ODA Loans, IMF Credits and other international financial institutions funding the country.

Fayissa & Nsiah (2010) tested the significance of governance for economic growth for African economies. They used panel data of 28 African countries from 1995 to 2005. Six proxies (voice accountability, political stability, government effectiveness, and regulatory quality, rule of law and control of corruption were used to measure governance performance. The results showed that 10 percent improvement in voice and accountability index leads to 0.68 percent increase in real per capita income, 10 percent increase in political stability index causes 0.37 percent increase in real per capita income, 10 percent increase in govt.

effectiveness index makes 0.73 percent improvement in real per capita income, 10 percent efficiency index leads to 0.61 percent increase in per capita income. The 10 percent improvement in rule of law and control of corruption indices enhance real per capita income 0.21 percent and 0.15 percent, respectively. Finally, if governance index (based on above six indices) improves by 10 percent it brings 0.91 percent increase in real per capita income. On the basis of above results, they concluded that governance has significant as well as positive impact on economic growth.

Abdellatif (2003) studied the importance of democracy and economic development for achieving the good governance. He stated that governance is the system which ensures appropriate institutions. Only the good growth levels are not sufficient to achieve the levels of good governance but the better institutional setup free from corruption and also the democratic governance is necessary. So by governance it means that every component of good institutional setup play its part like democracy, social and cultural attitudes of the governments. All arrangements together provide economic growth. Health, education and employment facilities provided without any discrimination. An important finding of his study is thus that the value and importance of good governance is accepted universally but the characteristics of good governance may vary from country to country. So one policy may be appropriated for the particular region so the need of such policies which are made according to the requirement, environment and structure of the economy.

Khan (2009) analyzed poverty reduction as afunction of economic growth, income distribution and distribution changes, and governance could enhance both growth and distribution. The countries that concentrates on governance reform are not likely to made rapid economic growth, to achieve the goals of good governance there is a need of fiscal capabilities which are limited in LDC's. In order to develop fiscal capabilities LDC's need to address problem of market failure through governance reforms. There was a significant connection in between governance and income distribution. Improved income distributionhad an impact on poverty reductionthrough pro poor service delivery and providing protection of property rights, rule of law and control on corruption. On the one side, governance reforms enhance fiscal capabilities throughelimination market failures in LDC's. On the other side, helps in efficient income distribution through pro poor spending the government accountability. The study concluded that since both growth and efficient in come distribution have effect on poverty reduction, hence good governance have also significant effect on poverty reduction.

Sharif (2009) checked empirically the hurdles in achieving the goal of good governance in Pakistan. They identified six factors which were making effect on the governance; these factors were economic openness, literacy rate, total population, life expectancy, peace year, and unemployment rate. They constructed two models, in first model rule of law was used as a proxy variable for governance and, measured as crime reports in police stations, this variable was estimated as a dependent

variable with six independent variables. In second model private investment was used as a proxy for good governance and run as regressand with identified variables with further inclusion of two variables budget deficit and exchange rate. The crime, trade openness, literacy rate, total population, life expectancy, unemployment rate, budget deficit, private investment and exchange Rate are found normally distributed. Peace years, unemployment rate, budget deficit and trade openness have small effect on crime (governance) as comparewith that of literacy rate, totalpopulation and exchange rate. These findings of empirical test suggest that economic and social indicators have significantly effect on improvement of quality pf governance in Pakistan.

Khan (2006) examined the impact of governance on economic development since 1960. There are two point of views regarding governance one is about state capacities that are necessary for spending up development process and other is about importance of governance factor relative to other economic factors at early stage of development. The state capacities are those that keep competent markets and limit government failure. The government failures of many emerging states are describe the efforts of their states to do too much, consequential in releasing of unproductive rent-seeking activities. Khan quoted in this study that the relative importance of governance improvement in accelerating development is challenged by Sachs *et al.,* (2004) who empirically analyzed that the difference in development performance among African countries isnot due to the difference in quality of governance. Khan used two data sets; one is composite propertyrightsindexes as aproxy of market enhancing governance from 1980 to 2003 by using Khan IRIS and second is voice and accountability plus political instability from 1990 to 2003 by using World Bank data. In the data set of 1980's there strong positive relationship between growth and market enhancing governance. However ion the data set of 1990's there is weak relationship between growth and market enhancing governance. In both cases there is appositive relationship between market enhancing and growth data due to high scores of governance indicators of rich countries that overcome those of poor country so for more comprehens0ve analysis there should be separate empirical check for rich and poor.

Kaufman & Kraay (2003) provide justification with their empirical work that governance and national income are significantly related. The governance is also associated with infant mortality rate and literacy rate. And national income, infant mortality rate and literacy rate are inversely proportional with poverty. Hence, improved quality of governance is also inversely correlated with poverty. A study by World Bank 'The Voice of the Poor (2000)' which was conducted in 66 countries which was conducted in 66 countries also confirms that the poor are affected form one common element that is lack of power and voice (governance).

Girishankar (2001) defined governance as power to run economic, social and political institutions and mention those dimensions of this power which were (a) process of selecting government, accountability,

monitoring and replace of government (b) efficient management of resources, formulation and implementation of sound policies by government (c) respect of social and economic institutions. Poverty and governance were interrelated with each other, and if power was not used in right direction the poor who had least power, were most likely to be affected badly. Weak governance compromises inefficient delivery of services and the influence of powerful interest groups on policy making, less public spending on pro poor projects, lack of property rights and disadvantages of police protection and legal services to poor. Hence poor governance caused and reinforced poverty- and also made to improve the living standard of the poor. This research paper put answer of a crucial question "who gets benefits from poor governance". The answer was private interest groups obtain benefit from weak governance by involving public servants for their interest through corruption.

Panadiker (2000) made claim that there are two main reasons of poverty in case of South Asia which are structure of economy and framework of governance. This research work proves that the capacity of economic growth to reduce poverty is obstructed by the frame work of governance in South Asia. This kind of framework is making unequal distribution of resources, building hurdles in controlling govt. non development expenditures, and contracting the revenue base in the form of low tax to GDP ratio. And ultimately these problems are causing poverty in this region.

Knack (2002) argued that development and growth economists approve theoretical connection between good governance and sustained increase in living standards, however, the observed evidence for these connections have been stuck due to the lack of available of data and political and social institutions, and the quality of governance. Knack describe gradual build-up of indicators and evidence of governance and then made an empirical analysis of connection economic growth and governance indicators in six countries from 1980 and 1998. In the model, ICRG (quality of governance index) contract-intensive money (ratio will increase where governments better enforce and respect contracts and private property rights and vice versa), initial GDP per capita, educational attainment of over 25 population, log of inflation (average over 1980-98), variability of inflation (year to year variation in inflation), M2/GDP (proxy of financial development), exports/GDP were as independent variables on per capita income. The most significantvariable among these variables were initial GDP and ICRG, which give justification for improved governance foreconomic growth, however, problem with this quality of governance index was that it did not provide any comprehensive framework in order to formulate governance policies and to evaluate the performance of institutions in LDC's.

Kaufman *et. al.,* (2007) examined the governance mater and its indicators and in the present study. They elaborated the six different dimensions and indicators of the good governance in different countries and different time periods. The objective of the study was to measure the perception of governance at individual level. The study gathered the data

from twenty five different sources which were collected by eighteen different organizations in four different periods. The four time periods were 1996, 1998, 2000, 2002 to minimize the errors in the estimation and interpretation of the empirical results and policy suggestions. The study used the estimation technique applied by KKz 1999 to analyze the model. All the indicators were normally distributed showing the variance and the standard deviation. Finally the measured the relative performance of each indicator of governance in different time [periods and observed the trends of convergence of governance indicators in 199 countries.

Altunton & Thornton (2010) examined the relationship between good governance and tax revenue for the period from 1984 to 2006 for 117 developed and developing countries. By the methods of ordinary least square and instrumental variables they have tried to analyze the impact of taxes on the performance of good governance. The robust results shows that the tax collection improves the quality of good governance especially the direct taxes are highly feasible for the improvisation of good governance. Improved taxation brings more resources to the economy that makes the greater capacity of the economy. They pointed out that the countries who are facing poor governing has non-tax revenues like aid, grants and natural resources rents rather that tax revenues. As reduces the need for taxes and this government takes little interest in negotiating tax demands with citizens. Also this cause higher corruption as the check and balance on aid is money poor. On the other hand citizens also take less interest in taxation if the country will be getting foreign aid. The results shows of the tax system is good and country is earning a major part of its GDP from tax revenues then this will leads to improved governance as this increase the accountability of the government. This supports the argument that improved taxation system is important for good governance.

Detheir (1999) presented a framework for making analysis of importance of public governance for transitional countries and discussed that political rules limit and expand economic activity. In order to make easier understanding of interdependence of governance and economicactivities, political and legal institutions are taken into account. Model specification in the model was as two institutional indices, (Governance 1 = political right + civil liberties, Governance 2 = rule of law + corruption + govt. effectiveness), economic variables (investment, inflation, terms of trade, trade openness) were used as explanatory variables on per capita income. The data covered 59 countries and time period of 1970 to 1980. To determine true relationship between governance and growth, two models were run one for percapita income with economic variables and the other was run with governance indices, and finally estimated linear relationship between these two model's residuals. The procedure was done to decide that how much variation in growth was due to economicvariables and how much due to governance indices. The results showed the relationship between governance and growth was weak as compare with that of economic variables and growth. Malaysia was inhigher place than France in improving of governance

during that time period. Finally comments were given on the basis of results that the Bank was not to only provides the funds for development but also play his role for the improvisation of poor governance in these countries.

Haq & Zia (2009) developed a link between quality of governance and propoor growth in Pakistan for the period from 1996 to 2005. Pro poor growth is measured by three variables: income inequality, poverty (percentage of population below the poverty line) and growth. Two variables; voice and accountability and political instability were used to measure political governance. Government effectiveness and regulatory quality were used to measure economicgovernance, rule of law and control of corruption were used to measure institutional governance. The results showed that both indicators of political governance were significantly and inversely related with poverty, one economic governance indicator that is regulatory quality had negative and significant impact on poverty, finally institutional governance that is rule of law was also inversely related with poverty. So, on the basis of results it was concluded in this research work that improvement in political governance, economic governance and institutional governance was essential for pro poor growth in Pakistan.

Jalilian *et. al.,* (2006) analyzed the era of 1960's and 1980's due to market failure direct government participation in productiveactivities in developing countries was seen by encouragingindustrializationthrough import substitutions, spending directly in industry and agriculture, and by spreading public ownership of enterprises. This study discovered the role of re=gelation in economic development by an econometric model. Regulatory quality can also be measured in relations of principles for good governance. They provided the reference of Parker (1999; 224) that a well-functioning regulatory system, is one that equilibriums accountability, transparency and consistency. The the emphasis of this study was on regulation rather that governance therefor only two variables regulatory quality and government effectiveness indices were used as proxy of quality of regulation. The data used in the model that covers 117 countries for the cross-section regression and 96 countries for the panel version of the regression. There is positive sign of correlation coefficient of government effectiveness and regulatoryqualities with GDP percapita income (proxy for economic growth), so there is significance of government regulation and economic growth. There is negative correlation between inflation and government effectiveness plus regulatory qualities, providing the evidence that thosecountries with better regulation governance aremost likely to design sound stabilization policies to control inflation.

Turner (2011) on the other hand examined the relationship between good governance and sustainable growth of sub Saharan African countries. The data has been taken from 1996 to 2009. The panel data analysis on 8 SSA countries pointed out that sustainable development impact positively on governance of developing countries. He has selected variables in order to make account the effects on good governance of

growth. Economic growth brings resources that if spend on poor ensures equality as it give importance to poorest citizens of the society. It considers them in decision making process. As a result government consumption expenditure, control of corruption and government effectiveness improves and play a major role in bringing sustainable growth and development. The results indicate that inflation, private investment and military expenditure play less part in accelerating growth. He pointed out that some of these countries have wealth of minerals but still have worst social indicators. He concluded that sustainable growth and development can be achieved through working for poor, making them self-sufficient and thus help them to participate in decision making. It will improve governance of the countries as a result.

So from the above review we can say that with increasing the standards of rule of law and good governance plays important role for economic growth and help full to bring down poverty. All these models postulate that there are direct and indirect linkages of good governance and economic development. The above reviewed literature also indicates that there is hardly any empirically study that covered the Pakistani context with respect to linkages among good governance and socio economic variables. The present study is an attempt to fill this gap in literature.

Data and methodology

There is no specific definition of good governance. This is the combination of attributes that an economy possesses. These attributes varies from country to country. World Bank defined six major characteristics that are most important form an economy or in other words we can say that these are qualities which ensures good governance in an economy. Economic researcherspoint out that different economies have different requirements of governance. But it is evident that every country needs good governance for its successful existence. The study investigated those factors which influence the governance in Pakistan. It is necessary to improvethose variables that are adversely affecting governance. In this chapter the relationship between social and economic variables will be tested by applying suitable econometric technique.

Data

In order to check relationship annual time series data for the period from 1984 to 2012 has been taken from various issues of economic survey of Pakistan international country risk guide (ICRG) and world development indicators (WDI). The study in hand has taken data of governance from international country risk guide (ICRG).

Model specification and estimation technique

First we will check the stationarity of the variables. This means that the means and the variance measured over the period under consideration. If the variables are not stationary the problem of spurious regression

arises. ADF test is used to check the stationarity of the variables. There are many techniques that can be used to investigate the existence of long run relationship and short run relationship between variables. Some of them are Engel & Granger (1987) test, maximum likelihood base Johansen (1988), OLS procedure of Philips & Hansen's (1990). The major characteristics of these techniques are that they are used when order of integration among the variable is one. Also these are good for large data sets whereas ARDL can be sued for small data sets. As this data set is small so ARDL is much better to applied it. The number of observations are small due to the limitations in the availability of the data of governance. ARDL is being popularized by Pesaran & Pesaran (1997), its modified versions was introduced in by Pesaran *et al.,* (2001) the unique properties of ARDL technique are:

1) Firstly, it can be applied without considering for stationarity. This technique does not require pretesting form stationarity. So, the ARDL is used checking for order of integration of the variables.

2) It can be used on small data set. Number of observations can from 30 mto 80. Some studies used this even on less than 30 observati 0nbs. Alalaya (2010) has used it on data set of 18 observations whereas Duasa (2007) used it on 29 observations.

3) Estimations avoids the endogeneity problem of independent variable and provides unbiased long run estimates.

4) The long run and short run relationship estimated in this model simultaneously, these overcome the problem attached with omitted variablesas well as with autocorrelation.

5) This technique allows the variables to have different optimal lags in one equation, which is not possible in any other technique.

6) ARDL use one long run equation whereas other conitegaration techniques use a system of equations for estimating long run relationship (Pesaran and Shin 1995).

7) The order of integration can be different. It means order of integration can be 0.1 or a mixture of both.

Steps involved in econometric methodology

Stationary test is the first step in econometric analysis. We can say a series is stationary if it has constant variance and its mean value should also be zero. If our series is not stationary then analysis is not valid the results would be called spurious regression. For example, if series has only two variables with decreasing or increasing trend over time; the regression result confirms with high value of R^2 that both series are highly interconnected but actually they are totally unrelated.

Unit root test

To check stationary of data, we apply unit root test e.g. Augmented Dickey- Fuller (ADF), Dickey- Fuller (DF).

Dicky-Fuller Test

Dicky-Fuller Test for Unit Root is developed by Dickey & Fuller in 1979 (Dickey, 1979). In Dickey- Fuller Test, a simple AR (1) model is given as

$$y_t = \beta y_{t-1} + \mu_t$$

Where;

yShows as the variable of interest

βShows the coefficient of this equation

tIs representing the time index

μ is the Error term

There are three main descriptions of the test:

Test 1 (No constant and No Trend)

With no constant and no trend here is the basic equation:

$$y_t = \beta y_{t-1} + \mu_t$$
$$y_t - y_{t-1} = \beta y_{t-1} - y_{t-1} + \mu_t$$
$$\Delta y_t = (\beta - 1)y_{t-1} + \mu_t$$

Where as

$$\gamma = \beta - 1$$

So,

$$\Delta yt = \beta y_{t-1} + \mu$$

Here the null hypothesis will be as:

$$H_0 : \beta = 1$$

& the Alternative hypothesis

$$H_1 : \beta < 1$$

Or

$$H_0 : \gamma = 1$$
$$H_1 : \gamma > 1$$

The null hypothesis is based on the assumption that there is a unit root of non-stationarity and the alternative hypothesis describes there is the stationarity of the variables or no unit root.

Test 2 (with constant but no trend)

$$\Delta y_t = \alpha + \beta y_{t-1} + \mu_t$$

Where as

α Is the constant

Here again we have null and alternative hypothesis:

$$H_0 : \beta = 1$$
$$H_1 : \beta < 1$$

Test 3 (with constant and with trend)

$$\Delta y_t = \alpha + \beta y_{t-1} + \beta_t + \mu_t$$

Where as β_t donates trend

$$H_0 : \beta = 1$$
$$H_1 : \beta < 1$$

Procedure of Dickey- Fuller test

First of all, plot the time series original observations the variables. If the series seems to be fluctuating around a sample average of zero, we use test 1 (no constant no trend) of Dickey-Fuller. If series shows to be wandering around a sample of average which is non-zero, we use test 2 (with constant but no trend) of Dickey-Fuller. On the other hand if serious does not fluctuate around a sample average of zero but it fluctuate linear trend, we use the test 3 (with constant and trend) of Duckey-Fuller.

Augmented Dickey-Fuller (ADF) test

Augmented Dickey-Fuller is the extension of Dickey-Fuller with extra lagged terms of dependent variables in order to remove serial co-relation. Like Dickey-Fuller test Augmented Dickey-Fuller test of unit root has three cases.

Test 1 (No constant and No Trend)

$$dy_t = ay_{t-1} + \beta_1 dy_{t-1} + \beta_2 dy_{t-2} \dots\dots\dots\dots\dots\dots\dots + \beta_\ell dy_{t-\ell} + \mu_t$$

Where as

dy_t= difference operator

$a$is coefficient

t is the time index

μ_t = Error term

$Yt\text{-}_1$ and Y_{t-2} are number of lagged difference in terms of explained variable.

Null (unit root or no stationary) and alternative (no unit root or stationary) hypothesis will be the same as Dickey-Fuller test.

$$H_0 : \boldsymbol{\alpha} = 1$$
$$H_1 : \boldsymbol{\alpha} < 1$$

Test 2 (with constant but no trend)

$$\Delta y_t = \alpha + \theta y_{t-1} + \beta_1 \Delta y_{t-1} + \beta_2 \Delta y_{t-2} \dots\dots\dots\dots + \beta_\ell \Delta y_{t-\ell} + \mu_t$$

Where as

$\alpha$is constant

And

$$H_0 : \theta = 1$$
$$H_1 : \theta < 1$$

Test 3 (with constant and with trend)

$$\Delta y_t = \alpha + \theta y_{t-1} + \gamma_t + \beta_1 \Delta y_{t-1} + \beta_2 \Delta y_{t-2} \ldots\ldots + \beta_\ell \Delta y_{t-\ell} + \mu_t$$

$\boldsymbol{\gamma t}$denotes time trend

$$H_0 : \theta = 1$$
$$H_1 : \theta < 1$$

Optimal Lag length test

The next step which we have take after checking the unit root is to find the optimal lag length, which further can be used in the model. There are various criterions which identified the optimal lah length the criterions are Schwarz information criteria, Hannan-Quinn information criteria (HQ) and Akaike information criteria (AIC) (Frankel*et al.,* 2001). All these criterions are equally feasible and valid, give almost the same results.

The first step of applying ARDL is the bound test of co-integration. The hypothesis of this test tells us that we should proceed further or not. There are null and alternative hypothesis, where the null hypothesis is "there is no co-integration or there is no long run association among dependent and independent variables. While on the other hand, alternative hypothesis is that there exist co-integration or variables have long term association. F-Test is used for the confirmation of the relationship in between variables then the comparison will be made in between these estimated values and critical values from the table presented by the (Pesaran *et al.,* 2001). The acceptance and rejection of null hypothesis depends upon these tabulated value. We compare our estimated value of F-statistic with upper and lower bound. The null hypothesis will be accepted if the F-statistic is greater than the upper limit and the hypothesis will be reject if the estimated value of F-statistic is less then lower bound. If the value of F-statistic lies between lower and upper limit, then the results are interpret as inconclusive.

Diagnostic tests

Afterapplying the ARDL bound test, to check the stability of the model that the model is tables or not we apply stability test. Three types of tests are used; to check the problem of serial correlation in the model we used Lagrange multiplier test. Ramsey's RESET and White Hetroskedasticity tests are used to checkwhetherthe functional form of model is correct or incorrect and problem of Hetroskedasticity respectively. Null hypothesis of these tests are that there is no omitted values in the series of the model, and there exist no serial correlation and problem of Hetroskedasticity in the series. While the alternative hypothesis hypothesize opposite of that.

Econometric analysis

Model specification

The functional relationship of variables is given under;

$$ICRG_t = f(LGDP, CPI, GINI, Unemployment, Population)$$

There are some other variables that have minor influence in Governance. We cannot include all those variables in our model so, error term is used in econometric models which capture and also account for the effect of minor variables in analysis.

The econometric model is given below;

$$ICRG_t = a + \beta_1 LGDP_t + \beta_2 CPI_t + \beta_3 GINI_t + \beta_4 UNEMP_t + \beta_5 POP_t + U_t$$

Where, $ICRG_t$ is the proxy of governance at time particular time t) and a is intercept term β *etas* are coefficients of variables, *LGDP* stands for natural log of per capita GDP, *CPI* stands for consumer price index, it is the proxy variable of inflation, *GINI* refers to Gini coefficients that are used for measure poverty, *UNEMP is* the unemployment rate, *POP* is the total population growth and *U* for error term.

For long run results of ARDL we will use follow the given equation;

$$\begin{aligned} dICRG_t = {} & b_{11} + b_{12}(ICRG)_{t-1} + b_{13}(LGDP)_{t-1} + b_{14}(CPI)_{t-1} \\ & + b_{15}(GINI)_{t-1} + b_{16}(UNEMP)_{t-1} + b_{17}(POP)_{t-1} \\ & + b_{12}\sum_{i=0}^{n} d\,(ICRG)_{t-i} + b_{13}\sum_{i=0}^{n} d\,(LGDP)_{t-i} \\ & + b_{14}\sum_{i=0}^{n} d\,(CPI)_{t-i} + b_{15}\sum_{i=0}^{n} d\,(GINI)_{t-i} \\ & + b_{16}\sum_{i=0}^{n} d\,(UNEMP)_{t-i} + b_{17}\sum_{i=0}^{n} d\,(POP)_{t-i} + \mu_{11} \end{aligned}$$

In the above equation i ranges indicates chosen lag length
dSymbolize as operator of first difference
$\alpha 11$ Is the drift component and $\mu 11$ is random term.
ICRG = International Country Risk Guide (Proxy for Governance)
GINI = Income inequality
UNEM = Unemployment Rate
GDP = Gross Domestic Product
POP = Population
CPI = Consumer Price Index

Defining the variables

ICRG the International Country Risk Guide (ICRG) has ratings of 22 variables in which three subcategories of risk are included. The categories are political, financial, and economic risks. ICRG has created a separate index for these subcategories. The index of political risk is based on 100 points, financial risk is rated on 50 points, and economic risk on 50 points. The total points from three indices are divided by two to produce the weights for inclusion in the composite country risk score. The composite scores, ranging from zero to 100, are then broken into categories from very low risk (80 to 100 points) to very high risk (zero to 49.5 points). The political risk rating includes 12 weighted variables covering both political and social attributes.

GINI is used for measuring income inequality in the country. It points out the income distribution in the country. Income inequality is the major cause of lower development in the country. If the distribution is not even it will increase the poverty as rich will get higher share where as poor will become poorer. The value of GINI coefficient ranges from 0 to 1. A higher values shows biased distribution whereas lower value shows even distribution. GINI is taken in order to have a view of the income distribution among citizens. Data on GINI is taken from world development indicator (WDI).

UNEM is the unemployment rate that shows the employment conditions ina country. It shows how much labor force in a country is unemployed. It does not include voluntary unemployment. It means the number of people trying to get job but are unable to find it, is included in unemployment. Higher unemployment shows instability of people to find out the jobs it depicts the lower economic activity which causes need of lesser labor force. Unemployment labor can cause serious harm to the nation by creating law and order problem and violence etc. to capture the influence of unrest citizens on governance on this variable is selected. Data for this variable has been taken from world development indicators for the time period of 1984 to 2012.

GDPEconomic growth represents an increase in the production of goods and services or the producing capacity of an economy in a particular time period which is usually one year. Moreover, economic growth is attached with the increase in the efficiency of factors of production. Economic growth can be measured in nominal terms, in which inflation is included and it can also be measured in real terms whereit is adjusted for inflation. For measuring economic growth different indicators are used, Gross Domestic Product (GDP), Gross National Income (GNI) and for comparison between different countries we use GDP per capita or GNP per capita which are obtained by dividing GDP or GNP with total population of the country.

POPPopulation is the social indicator shows the total population resides live in the country. It is one of the major indicator because labor force or the human capital is one of the major determinant of economic prosperity. Labor force is the part of the population, if the population is is at optimum level or more productive then economy will be better off. On

the other hand, population will be a burden on the economic resources if there is no less productive capacity building in the population.

CPI consumer price index or the proxy for inflation. It shows the persistent rise in the general price level calculated by taking growth rate of general prices of consumer items. We took it in percentage for our analysis.

Results and discussions

In this studyARDL approach to co-integration is used to estimate the results. Empirical results involves four steps. First is testing the stationarity, unit root test will be conducted for it. Second to estimate long run relationship bounds F-test approach co-integration is conducted. In third step stability of the model is checked by using CUSUM and CUSUM square test. Finally long run and short run relationship is checked through long run coefficients and error correction models respectively. Ramsey Reset test is used to check the functional form of the model. It is very important in order to check, if relevant variable is omitted from the model or any irrelative variable included in the model. Variance decomposition is used for estimating dynamic interactions. VDC measures relative importance of the exogenous variables causing fluctuations in the endogenous variable.

But here first of all we will analyze the descriptive statistics of the model.The given data series must be normally distributed as it is the first step of our econometric analysis. In descriptive statistics, here analyze the values of Jarque-Bera test; from the above table we can observe that the values of variables were found to be insignificant which implies that all the data series are normally distributed. On the other hand the values of Kurtosis and Skewness which have estimated are indicate the normality of data. The series must be stationary for valid and reliable analysis. To the unit root in the data we have four main tests used for that purpose. ADF, Phillips-Perron (PP) and KPSS these all test are equally valid for unit root. In these tests we basically analyze the order of integration of the variables. Usually augmented dicky fuller test (ADF) test is frequently used for all type of sample size and these tests give more superior results. So in our study we will use ADF test. This test concludes that order of integration is mixed. So when we find I (0) and I (1) order of integration then we can apply Auto Regressive Distributed Lag (ARDL). Output of unit root tests is given in Table 1.

Table 1. *Descriptive Statistics*

	ICRG	LGDP	CPI	GININ	POP	UNEMP

Mean	0.418464	6.118749	8.633050	39.81069	2.486013	5.560103
Std. Dev.	0.054327	0.115834	3.976979	6.459156	0.444027	1.523801
Skewness	-0.369895	-0.136521	0.657559	2.697043	0.653612	0.051384
Kurtosis	3.996024	1.822743	3.709282	13.86657	2.046035	2.314088
Jarque-Bera	1.860052	1.764754	2.697745	177.8408	3.164488	0.581252
Probability	0.394543	0.413798	0.259533	0.056743	0.205513	0.747795
Sum	12.13545	177.4437	250.3584	1154.510	72.09438	161.2430
Sum Sq. Dev.	0.082640	0.375690	442.8582	1168.180	5.520471	65.01515
Observations	29	29	29	29	29	29

Unit root test

First step in estimation is checking stationarity. For time series data the variable should be stationary. Non stationary variables produce spurious results. Means the results are unreliable. In case of ARDL, it is not essential to check stationarity but it is important in order that no variable is integrated of order two. ARDL technique required that the variable should be integrated of order 0, I(0), and order 1, I(1). A traditional test of augmented dickey fuller is used to check the order of integration. The results are present in the following Table 2.

Table 2. *Stationary tests by ADF*

	With Intercept		With Intercept and trend	
Variable Name	T-value	P-value	T-value	P-value
ICRG	-3.21	0.029*	-5.37	0.0009**
GDP	-3.42	0.0186*	-3.64	0.044*
CPI	-6.48	0.000**	-6.34	0.0001**
GINI	-4.71	0.0008*	-4.72	0.0039
UNEMP	-6.43	0.0000**	-6.36	0.0001**
POP	-3.56	0.014*	-8.26	0.000**

Notes: Where; the sign * indicates variable is stationary at level and ** shows variable stationary at 1st difference

Auto regressive distributed lagged model approach (ARDL)

Outcome of unit root tests shows that all variables have different order to integration I(1) and I(0) so we will apply ARDL because of OLS is best if all variables are I(0) and Johansen can be applied in case of only I(1) (Johansen, 1988; 1991).

Optimal Lag length

After checking the stationary of series, we have to see optimal lag length. Optimal lag length indicates that how many lag should be use in model. The results of above table shows one lag should be used in model.

Table 3. *Optimal Lags*

Lag	*LogL*	*LR*	*FPE*	*AIC*	*SC*	*HQ*
0	-21.92465	NA	2.00e-08	2.137403	2.470454	2.239220
1	92.23421	163.9385*	1.88e-10*	-2.6596522*	0.005287*	-1.853086*

Notes: * indicates lag order selected by the criterion; LR: sequential modified LR test statistic (each test at 5% level); FPE: Final prediction error; AIC: Akaike information criterion; SC: Schwarz information criterion; HQ: Hannan-Quinn information criterion

Table 4. *ARDL Bond Test*

Estimated Models
ICRGt = f(LGDPt, CPIt, GINIt, t, UNEMPt, POPt)

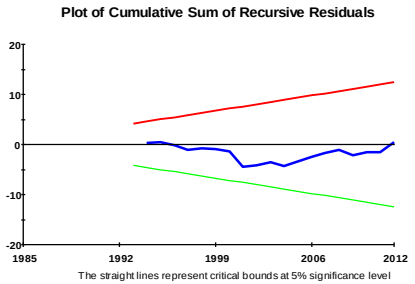
	Optimal lags		(1,1,0,1,0,1)	
	Statistics for W		24.22 *	
	Statistics for F		4.53 **	
	Critical Bounds For F– Statistics		Critical Bounds For W – Statistics	
Significance Level	Lower Critical Bound	Upper Critical Bound	Lower Critical Bound	Upper Critical Bound
5 per cent	3.2065	4.6580	19.2392	27.9478
10 per cent	2.6197	3.8912	15.7180	23.3474
	DIAGNOSTIC TESTS			
Serial Correlation	0.018964[.890]		R^2	0.81
Functional Form	3.1896[.074]		Adjusted - R^2	0.72
Normality	7.8886[.019]		F – Statistics	8.87
Heteroscedasticity	.16211[.687]		DW – Statistic	1.74

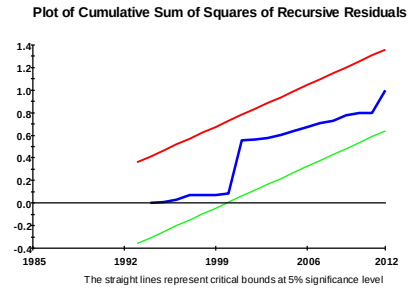
Notes: Asterisks are the indication of significance of values, ***, **, and *, and show significance at 1%; 5% and 10% levels respectively. The Probability Values are given in [ ] brackets

After lag length criterion, to check that whether the independent variables of the model are correlated in the long run with the dependent variables by using latest co-integration approach. The null hypothesis of this test is that there is "No co-integration" in variables and this hypothesis can only be rejected if the calculated value of F- statistics is greater than the upper critical bound value. The above Table shows that the calculated value of F-statistics is greater than its upper critical bound at 10% level of significance: 4.53 > 3.89 so here null hypothesis is rejected by accepting the alternative hypothesis confirmation of the long run relationship further the value of W- statistics is also more than its upper critical Bound at 10% level of significance: 24.22 > 23.34. so here the governance has stable and long run relationship with the independent variables. The diagnostics shows that there is no problem found regarding Heteroscedasticity and also the error term is normally distributed. Lastly the functional form of the model is also correct.

Stability test

To test the stability of the model CUSUM and CUSUM square tests are used. It shows the stability of the model both in lo ng run and in short run and also the significance of the model. Following are the figures:





It can be seen that CUSUM and CUSUMQ are plotted against the break point. The null hypothesis cannot be rejected if the plots remain within the bounds which are created at 5% level of significance. The above plot shows the stability of the variables throughout the period under consideration.

Interpretation of the Results

According to the above long run and short run model of ARDL shows the results: starts with the GDP growth rate, it has a negative relationship with governance because for the last one decade Pakistan's performance in terms of growth remains persistent and better but governing issues are rises because of several political and regional issues. War on terror is one of the reasons behind this phenomena.

CPI shows negative and significant relationship because inflation shows the instability in the prices so it will affect the life of the poor and individual of the society. One of the determinants in the index of good governance is crime. So more inflation means limited the resource to the poor's so it will encourage the individual of the society to crime and getting their resources with some illegal means so ultimately governing issues becomes worsened. The result is also confirmed by Grindle (2010).

GINI Income inequality also shows negative and significant relationship between the variables as it is because the income inequality is describing the disparity of the society it will worsened the governing issues the economy and ultimately it will encourage crimes thefts and

other illegal activities of the economy. The results are also consistent with Saima & Haq (2006).

UNEM unemployment shows insignificant results it means population ids not a significant segment of the governance.

POP Population shows significant and positive relationship with the level of good governance which shows that participation of the population is productive which reduces the governing issues from the economy. Although it has less magnitude but it is one of the important indicators of good governance in Pakistan.

Table 5. *Long Run and Short Run Results*

			Error Correction Representation for the Selected ARDL Model			
Dependant Variable:ICRGt			Dependant Variable:ΔICRGt			
Name of Variables	Coefficient	P-value	Name of Variable	Coefficient	P-value	
LGDPt	-10.7712	[.000]***	dLGDPt	-831.7640	[.043]**	
CPIt	-.0047676	[.019]***	dCPIt	-.0045906	[.106]	
GINIt	-.0029662	[.038]**	dGINIt	-.0015820	[.096]*	
POPt	.26105	[.061]*	dPOPt	1.1166	[.006]***	
UNEMPt	-.0036551	[.655]	dUNEMPt	-.0035196	[.649]	
	C		77.6264 [.000]	ECM_{t-1}	-.96288	[.004]***
Diagnostics for ECM						
R-squared		0.67	Mean Dependent Variable			.0053
Adjusted R-squared		0.51	S.D. Dependent Variable			.0355
S.E. of Regression		.024	Akaike Information Criterion			59.99
Sum Squared Residual		0.011	Schwarz Bayesian Criterion			53.33
Log Likelihood		69.99	Durbin-Watson Stat			1.74
F-statistic		6.27	Prob. Value (F-statistic)			[.001]***

Notes: *; **, and *** reveals significance level of test statistic at 10%, 5% and 1% respectively.

Conclusion ad policy recommendations

This study is aimed at to estimating the influence of income inequality, unemployment, population, GDP on the level of good governance in Pakistan for the period from 1984 to 2012. ARDL approach has been applied in order to analyze the linkages both in short run as well as in ling run. The results shows that the governance is significantly affected in short and long run as well. Governance is also affected significantly by these above mentioned variables in short and long run. One of the reasons of poor governance are inflation and income inequality. These reasons in cause corruption and unfair means to adopt the resources, poor performance of political, social and economic institutions. The higher corruption shows lesser control of government and ultimately leads to poor governance (Negin *et. al.,* 2006) inequality in the developing economies creates imbalances, induces illegal activities, creates biasness in the distribution of resources and [power and thus increasecorruption reduces accountability and leads to poor governance (Ndikumana, 2006). Another argument according to (Karstedt, 2001) is that reason behind governance is the lesser cooperation between or among the sectors, especially private sector and government. That ensures less help from private sector to reduce poverty, income inequality and creating employment and development in the interest of general public. It will

increase unrest in the society more crimes and violence as well. So there is a need to engage the stake holders of the society to increase the employment opportunities and reduces the disparities of the income.

It is said that governance is not a simple agenda which can be resolved overnight. It takes times for institutions to join together and ensure a strong, accountable and transparent government. From the above analysis we will make different policy recommendations in order to improve the level of good governance in Pakistan.

- All sectors of the economy should play a role together in order to increase employment opportunities which have an ability to control the income inequality and every individual can play its role into the society in a productive way.
- Also it is necessary to improve the tax base beacvuase string the tax system will burdens less on the poors of the society beacayusefauluitytyax system creates income inequaliuty and uneven distribution of the income.
- From our above analysis it is seen that poor governance and political instability are playing major role in hindering the way towards development.
- One of the important indicators of governance is accountability, which is to be improved. Economic governance has two components which are government effectiveness and regulatory quality. There is a need to improve efficiency to implement economic policies by the government.

As far the institutional governance is concerned Pakistan is also facing the problem of poor institutional setup, lack of law and order and corruption in the bureaucratic setup. There is a need to improve the bureaucratic setup. More efficient policy structure can ensure economic stability in the country. In such instances country should devise a proper political system.

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6.
Destination EU and USA: Improving Export Potential of Pakistan by Trading with India

By
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Introduction

Trade between India and Pakistan has been a crucial issue from inception of these countries in 1947. There have been seven wars or serious clashes in last sixty years. One of the major disputes over territory of Kashmir has remained an unresolved issue for both India and Pakistan. It has been observed over the past 60 years that Pakistani and Indian troops brazen out each other every day with fingers factually on the trigger, along the ceasefire line of control established on 1st January 1949 in Kashmir. Indian troops have also indulged collectively and unilaterally along the Pakistani borders in 1951 and 2002. Pakistan has been accused by India over involvement for fomenting, aiding and abetting the insurgency in Kashmir from 1989 (with considerable justifications). India has also accused Pakistan for being involved in wider acts of terrorism in India (with fewer justifications). There is a blame game from both sides of the borders (especially from Indian side) though most of the times it is just to portray the negative image by building up political pressures for getting national sympathies and popularity. Despite hostility issues there has been initiatives from both sides that has improved the economic activities in both sides of the boarders.

Pakistan and India account for 90 percent of trade in South Asia. The trade of South Asia with rest of the world is also influenced by bilateral trade of India and Pakistan as these two countries also account for 60 percent of South Asian GDP. Disruption and discontinuation of peaceful relationship worsen the overall scenario of economic integration in the region of South Asia. It has badly influenced the thinking that South Asia could be emerged as one of the major trading region in the world. There have been attempts to cater the issues of regional trade by mitigating the conflicts between major countries of South Asia (Pakistan and India).

SAFTA and SAARC are two major South Asian bodies that have influenced the process of trade and peaceful relationship between India Pakistan and other countries of the region.

In 1980s South Asian countries took the initiative to develop a South Asian Association of Regional Cooperation (SAARC). It was intended that SAARC will increase the regional trade and regional integration among the South Asian countries. SAARC conducted certain event and summits that certainly increased the integration in the regions but that was insignificantly low at 5% as compared to EU and NAFTA and ASEAN. On January 6 2006 SAARC members agreed on a treaty SAFTA focusing on elimination of trade barriers and improve the regional integration by allowing the free mobility of goods across the borders except some sensitive items to protect the national interests. It also focuses on lowering down of trade tariffs by majorly in two phases up to the level of 0-5 percent from January 2016.

Pakistan and India are involved on table talks as delegations from both the sides are visiting each other officially to normalize the trade relations. These are some of the vital measures being taken to enhance the regional trade. It is also assumed to improve the regional trade in order to enhance the trade with the world. Bilateral trade between India and Pakistan could double the trade of Pakistan with the world. Pakistan is looking forward to normalize the trade process with India by issuing the non-tariff barriers to rebuild the trade process. The normalized trade process with India will certainly bring down the prices of product in Pakistan and exports of Pakistan with other countries will also be enhanced.

Now a day's Pakistan and India are involved in the good gesture at official level to enhance the level of trade between the two countries. It is strategically crucial to resolve the issue of trade as it will normalize the relationship between the two countries. The global organizations like WTO is concerned to resolve the issues between the two countries by eliminating the trade barriers and lowering down the trade tariffs. These measures will enhance the economic integration between the two countries. Political instability and uncertainty in the Indo-Pak has led the policy makers and analysts alike to consider and think over the issues for normalizing the relationship between the two countries. Eventually, trade is identified as an important measure to enhance the level of integration in the region which will certainly normalize the peace process between India and Pakistan.

Pakistan is looking forward to assign MFN status to India. Thinkers are seeking to analyze the new dimensions over the trade that how the Indo-Pak bilateral trade would benefit the economy of Pakistan. The trade between Pakistan and India could enhance the level of exports from Pakistan to different regions. There was urgent need to study the advantages of low cost and technology transfer that could benefit Pakistan to enhance the level of trade with different countries like EU, UAE and USA to gain the advantage resulting in generation of sufficient level of reserves thus leading to the economic prosperity.

In this study we are proxing the economic progress as Pakistan's capability to trade with other countries by focusing Indo-Pak bilateral trade.

Pakistan and India Bilateral Trade Relation

In literature there are two dimensions in which different strategic writers have analyzed the trade relation in Sub-continent. In the first category thinkers are of the view that there is a sufficient role of inter-state conflict which has adversely affected the trade process between the two major countries of Sub-continent. Second category is of those thinkers who analyzed the problem of trade in the context of global scenarios. Most of the Pakistani thinkers are of the view that changing global scenarios more often disturbed the process of trade among India and Pakistan. Few of these thinkers are discussed below.

Tabish & Khan (2011) analyzed the trade process of India and Pakistan in the light of disputes between the two countries. In 1948-49, the exports between India and Pakistan were 56 percent of total exports and in the same way imports from India were 32 percent of its total imports. It indicates that Pakistan was trading 56 percent of its trade to India. The trade relationship between these two countries doesn't last for long period of time. The political scenario in both the countries doesn't help for well-structured trade patterns, as the disputed region between these two countries destroyed the trade relations. In 1960s Trade policy was changed in Pakistan to facilitate the international traders.

DRI-McGraw Hill (1997) studied the free trade between India and Pakistan that doesn't last for longer period of time. In 1950s Pakistan used to have highly restrictive policies, other economists also suggests these kinds of policies are known as highly protected trade policies. In this time period domestic user of agricultural raw material were given privilege over other consumers or raw material buyers. Domestic producers were purchasing the agriculture raw material at low price as compare to international prices.

Naqvi (2009) discussed the reasons to analyze the dinted process of trade due to the unstable and troubled political/ strategic situation between Pakistan and India. The trade history of both the countries has seen an uneven pattern of the trade right from British independence. In 1948-49, majority of Pakistan exports were traded with India. It is estimated that Pakistan's 56 percent of exports were with India. Pakistan and India got involved in severe political issues that resulted into the closure of trade flows. These trade relations were at the troubled line till 1965. Later, in 1972 after a war between these countries a resumption of limited trade was produced by both the sides. After 1975 Pakistan and India engaged themselves 14 times to sign bilateral agreement on trade to facilitate the trade in the region. Trade ties between these countries were negligible and ultimately these conditions nurtured the seed of mistrust enmity further worsening the political relationship of Pakistan and India.

Economists in Pakistan see the scenario in different spheres. Few economist hints the first trade dispute back in 1949 in this time period, India devalued its currency and Pakistan clearly refused to follow the measure. Nabi (2010) discussed, the reprisal India imposed import duty on "jute", as jute was one of the major exported items of Pakistan. This measure of India reduced the trade between the two countries. In response Pakistan revised its trade policy with India and imposed trade restriction on the traded items.

Hussain (2013), Nabi (2013) have shown different causes for decline in Indo-Pak trade as initially 50 percent of Pakistan's exports were with India and on the other side 40 percent of Pakistan's imports came from India. It denotes a greater ratio of Pakistan's bilateral trade with India. Both the researchers talked about pre-partition trade ties that exist in this region. Pakistan and India followed the pre-partition trade patterns right after the independence, it was due to the fact that trade was supporting both the regions equally due to distribution of raw products and industries. In this context both sides were enjoying the status of free trade flow across the borders. After partition in sub-continent, the strategic liability that effected the situation was break down of Korean War. This war changed the scenario for the whole world for that specific time period, as it resulted into the scarcity of "commodity products". Pakistani intellects and think tanks took it as an opportunity and it was opted as a new opening for developing the trade relations. Economist's review at that point of time Pakistan and India were having same value for rupee as currency for both the states were tied with British Pound.

The measure of trade restrictions from India turned out to be the major point to bring down the trade between India and Pakistan. In a reaction of restrictive policies from India, Pakistan as a major trade partner of also tuned up the trade policy for India and revisited her trade policy. The changes in behavior and patterns of trade policy showed several incidences of sharp trade cuts between India and Pakistan.

Hye (2011) studied the trade policy of Pakistan and India. It was the immediate effect of war broke down between these two countries right after independence and effected the whole trade cycle of India and Pakistan. The trade deteriorated with the passage of time, after the war of 1965 the trade was almost negligible and this situation prevailed till 1971. Although, there were 14 bilateral agreement signed between Pakistan and India to facilitate the trade process in 1947 to 1965. We cannot neglect the fact that nine branches of six Indian banks were operational in Pakistan till 1965 the year at which Pakistan and India went to war. In 1971 India and Pakistan was involved in another war, it resulted to severe political circumstances and the governments on sides decided not to allow trade across the borders. The situation of political gap lasted for longer period of time. Governments of both the countries were not even concerned to increase any type of economic, political or social cooperation. In this time period all the borders were closed for the trade of any type of item, even people were not allowed to cross the borders.

These policies were adopted till 1975; the time period of 1965-74 was the adverse time period for trade between both the countries.

Little *et al.* (1970) observed that in late 1970s Pakistan took major liberalization measure including elimination of bonus scheme, devaluation, and elimination of restrictive export/import policies. These measures didn't support the trade as it remained trivial to $ 132 million. It was the time at which Bangladesh was emerged as a separate country on the world map. It caused a major loss to the socio political and economic indicators of Pakistan.

Murshed & Mamoon (2010) noted that Pakistan and India were involved in six major conflicts out of these six conflicts the war of 1971 caused the major economic loss especially for Pakistan. In this time period Pakistan and India has suffered with the largest time spam in which there was no significant interaction or trade across the border. Authors has observed the occurrence of major conflicts is due the Kashmir issue as

> "Indian and Pakistani troops confront each other every day with fingers literally on the trigger, along the ceasefire line or line of control established on 1st January 1949 in Kashmir"

Hye (2011) observed three major indices of economic growth through trade openness as.

> "First the trade openness causes economic growth through efficient allocation of resources. Second, trade shifts the technology from developed to developing countries. The last learning by doing: developed countries innovate and developing countries imitates"

In these lines Hye has evolved the idea of trade openness in developing countries by describing it in three major factors. The trade openness empirically allows the economic growth as it replicates the efficient resource allocation in different sectors of the economy. In developing countries, issue of scarce resources is more severe when compared with developing countries as the growth of economy is slow where as more funds are needed to be generated by injecting extra valued revenues into the economy. Trade stream lines the resources at macro level to assess the resource allocation by reprioritizing the economic activity in the country. In case of Indo Pak trade both of these countries have developing economies and the long unified borders allows trade at a reducing cost as compared to other countries. Pakistan and India should follow the regulations for lowering the trade tariffs to allow free trade within the region.

The economic models have always suggested that whenever there are barrier of limitations of the trade or in the economic activities it has always dinted the process of economic activity within the domestic circle of the country. The South Asian countries have the lowest trade ratio among the neighboring countries. India and Pakistan are the two major contributing countries of South Asia. These countries should be focusing on lowering the trade limitations in order to enhance the economic integration of South Asia.

Burki *et al.* (2006) discussed the fact that even in the period of high trade rate doesn't last for long period of time as Pakistan enjoyed this session till 1980s. Trade patterns and relation in this region changed soon after 1980s. The major cause for cut down of trade growth rate was Pakistan's growth rate. It has been observed that growth rate of Pakistan's economy has consistently low as compared to India. In generic terms growth rate of Pakistan was low most of the times so it was difficult for business community to carry the trade with India, whereas, per capita income for Pakistan has remained above from India for most of the time. World Bank (2007) has clearly stated that per capita income of Pakistan has remained as above of India till 2006-07. In a same way cost of doing business has also been lower in Pakistan till 200-5-06 when compared with India. Now there is a huge difference as Pakistan is considerably low in per capita income.

It is important to mention the uneven trade patterns are due to political scenarios on both sides of borders. The data of trade between India and Pakistan shows a clear cut down of trade as a steep turn down of import and export for both the countries. It is a fact that political influence has disseminated trade relations between Pakistan and India. Experts states these words as "Politics of Pakistan –India trade has affected the region a lot". Further it is explained, Pakistan has lost its quintessence as a trading country due to weakening competitive essence as compared to India.

Pakistan and India are operating at negligible level of trade. Even in this modern globalized world neither country falls into the top ten category of trading partners. This is because of their past political history. The numbers show that India has increased it trade steadily till 2000 but still stands at 31 percent in trade openness index as compare to this Pakistan stands at 38 percent. The trade openness in South Asia has remained at 65 percent and in this region both these countries have remained quite low as compared to the overall trade openness of the region. The regional analysis shows that the regional trade in Subcontinent remained at one percent as compared to Latin America and Sub Saharan Africa where the trade integration remained at 3.5 to 4 percent. Whereas, trade integration for APEC, European Union (EU), North America Free Trade Area (NAFTA) and Association of South East Asian Nation (ASEAN) stood at 73, 61, 57 and 23 respectively.

Data and Methodology

Trade has been a decisive indicator for nurturing the economy. There are so many researches available that have studied the impact of trade on economic development. The review of literature suggests that trade has always been beneficial for the economy to grow. In the current economic cycle a country or economy cannot survive in isolation. To cater this issue economies spend a lot of the research and development of trade. In developing countries a new debate has emerged to flourish the trade for getting the rapid growth in economy. Pakistan and India are two

developing countries of South Asia striving for getting a peaceful relationship in the region.

Trade is a core concept related to the economies. Usually the data on trade is explored on the basis of imports and exports. In this research data used for analysis is carried out as a secondary data. The data is extracted from different official sources. Majority of data is taken from Trade Development Authority of Pakistan, World Development Indicators and Trade Map. These are the only useful and healthy resources available for the collection of data especially on world trade. The data of exports and imports of Pakistan is somehow also extracted from the State Bank of Pakistan for some time period as it was not available in US $ on the other sources. The data of India bilateral trade and India's trade with rest of the world is collected through the Ministry of Commerce, India. All these resources are available online on the websites of respective ministry. In some of the cases data is also assessed through the statistical bureau of Pakistan as historic data was mostly available through statistical bureau of Pakistan. Data is extracted from the time period of 1990-2013. Data on exchange rate has been extracted from State Bank of Pakistan and it is for the years 1990-2013. The exchange has been calculated on the basis of indices as given by State Bank of Pakistan (A table for calculating the indices of exchange rate is attached in the annexure II). The data of trade has been extracted majorly from Trade Development of Pakistan. The trade data has been considered from 1990 to 2013. The data is taken for 23 years the reason lies in the non availability of data. Before 1990 the data of trade has not been taken because before this time period the trade between India and Pakistan has remained close to zero for few years, considering that data set can result into the elimination of OLS model result by distorting the results.

OLS regression is one the most important and frequently used technique by the economists for development of model by data analysis. It is considered one of the powerful tool as it is easy to check linearity, constant variance and effect of outliers to check the assumptions of the model.

OLS is a useful technique to assess the trading patterns of the countries. In number of researches it has been used to indicate the significance of trade with the countries. In this research work OLS method is used to assess the significance of bilateral trade between India and Pakistan. The assumptions of OLS model are as

1. The impact of bilateral trade between India and Pakistan is checked on the exports to USA from Pakistan
2. Effect of Bilateral trade of Pakistan and India is checked on the exports to European Union from Pakistan
3. The impact of bilateral trade between India and Pakistan is checked on the exports to UAE from Pakistan.
4. All these three equations carry a third explanatory variable of Exchange rate to check whether exchange rate appreciation have positive or negative impact on the exports of Pakistan to USA, EU and UAE.

Export (USA) = Imp Exp (Pak, Ind), Exchange rate

Export (EU) = Imp Exp (Pak, Ind), Exchange rate
Export (Afghanistan) = Imp Exp (Pak, Ind), Exchange rate

In this study the ordinary least square regression is used to analyze the impact of Pakistan India bilateral trade on the exports of major trading partners of Pakistan. It has been identified through EDA that Pakistan's most important trading partners are developed nation and if we name the regions preciously it is United States, European Union and United Arab Emirates. The linear model developed for the OLS model contains the three sets of equations. The equations are as:

$$ExpUSA = \alpha_{1i} + \beta_{1i} TradePI_i + \gamma_{1i} Xchange_i + \varepsilon_{1i} \quad (1)$$

$$ExpUSA = \alpha_{2i} + \beta_{2i} ExportsPI_i + \gamma_{2i} Xchange_i + \varepsilon_{2i} \quad (2)$$

$$ExpUSA = \alpha_{3i} + \beta_{3i} \operatorname{Im} portsPI_{3i} + \gamma_{3i} Xchange_i + \varepsilon_{3i} \quad (3)$$

These three equations explain the linear model for checking the different explanatory variables variations and its impact on the response variable of Exports of Pakistan to USA.

First equation (1) explains the model for assimilating the two important variables of trade in the prospects of Pakistan. It aims to develop the reference for checking the status of Pakistan and India bilateral trade on the exports of USA. The equation tries to explain does the increase in Pakistan's bilateral trade with India increase the trade with the Unites States or vice versa.

Second explanatory variable is Exchange rate. Exchange rate of Pakistan over the period of last 22 years is regresses with exports to United States to check whether these are positively or negatively associated with each other.

Second set of linear equations is formed as:

$$ExpEU = \alpha_{4i} + \beta_{4i} TradePI_i + \gamma_{4i} Xchange_i + \varepsilon_{4i} \quad (4)$$

$$ExpEU = \alpha_{5i} + \beta_{5i} ExportsPI_{5i} + \gamma_{5i} Xchange_i + \varepsilon_{5i} \quad (5)$$

$$ExpEU = \alpha_{6i} + \beta_{6i} \operatorname{Im} portsPI_{6i} + \gamma_{6i} Xchange_i + \varepsilon_{6i} \quad (6)$$

In these equations Exports with European Union are regressed with three important factors of bilateral trade of Pakistan with India. In first equation EU trade is regressed with bilateral trade with India. It is important to mention that these parameters are measured with reference to Pakistan. EU is a major trading partner of Pakistan. In exports most of the exports of Pakistan flow towards EU though it is categorized at fourth level while ranking the exporting partners of Pakistan. Secondly exports with EU are also explained by exchange rate fluctuations of Pakistan. It is expressed in each equation, for each equation holds the explanatory variable exchange rate in it. In this context exchange is regressed for all the three categories of exports to check the significance of bilateral trade

Third set of equations are formed as:

$$ExpUAE = \alpha_{7i} + \beta_{7i} TradePI_{7i} + \gamma_{7i} Xchange_i + \varepsilon_{7i} \quad (7)$$

$$ExpUAE = \alpha_{8i} + \beta_{8i} ExportsPI_{8i} + \gamma_{8i} Xchange_i + \varepsilon_{8i} \quad (8)$$

$$ExpUAE = \alpha_{9i} + \beta_{9i} \operatorname{Im} portsPI_{9i} + \gamma_{9i} Xchange_i + \varepsilon_{9i} \quad (9)$$

The third set of variables is formed to check the relationship with the exports to UAE from Pakistan. The first equation (1) is formed to check the relationship between bilateral trade of Pakistan and India and Exports of Pakistan with UAE. United Arab Emirates is one of the major regions where 15 percent of Pakistan's total exports are exported. Under this contribution UAE is one of the important exporting partners of Pakistan. Exchange rate fluctuations are also regressed with the exports of Pakistan to UAE. In this equation exports to UAE is explained by two explanatory variables i.e. bilateral trade between India and Pakistan, exchange rate fluctuations in Pakistan.

Second equation explains the relationship of exports from Pakistan to UAE and exports from India to Pakistan. In other words it could be explained as it is a function of exports between India and Pakistan and Export of Pakistan to UAE. It is to analyze those fluctuations in exports with India does impact Pakistan's exports to UAE and second explanatory variable is exchange rate fluctuations.

Third equation derives a model to check the fluctuations in Imports between India and Pakistan to exports with UAE. Second explanatory variable is exchange rate. In these equation exports of Pakistan to UAE is regressed with imports of Pakistan to India and exchange rate of Pakistan.

Analysis and Discussion

Table 1, 2 and 3 (appendices) show the results of OLS models. In the tables all the values are significant and showed a positive trend with the exports of major countries/regions. All the results show the significant increase in the values of exports with the major trading partners

For equation 1, exports of Pakistan to US are regressed with bilateral trade of Pakistan and India. The results are significant at 0.46. This indicates that increase in bilateral trade with India certainly increases the trade with USA. USA being an important and biggest exporting partner of Pakistan gains a more importance and increase in exports with US will definitely benefit the trade development in Pakistan.

In the second equation of first set i.e. equation 2, Exports of Pakistan are analysed with exports of India and these have also shown as significant as increase in exports with India has increased the exports with USA as OLS shows significant results at 0.49. It clearly indicates that 1 percent increase in exports to India Pakistan can gain 46 percent increase in the exports to USA. Next explanatory variable is imports to Pakistan from India i.e. equation 3 of first set.

OLS results have shown significant results for this model as well. In this model the values are significant at 0.46 which shows that 1 percent increase in imports from Pakistan to India enhances Pakistan trade by 46.9 percent of exports to USA. In all the above three cases depreciation in exchange rate have also shown significant positive relationship. In all the three cases depreciation in exchange rate has increased the exports with USA as explained by three different explanatory variables.

The second set of variables (i.e. equation 4,5 and 6) is identified through OLS regression method. In the second set of equation the results have shown a positive significant relationship. It can be seen from the table that exports to EU are positive related to the bilateral trade of India and Pakistan. It is significant at 0.75 which shows that 1 percent increase in bilateral trade with India Pakistan has previously experienced a 75 percent increase in the exports to European Union and it is assumed to be the case in the future. It is a significant result at a very high percentage in increase of export to European Union. In the second equation the exports between India and Pakistan are regressed with Exports to EU. It has also shown a positive significant result at 0.34 on OLS. Similarly in imports it is the same percentage which shows that an increase in export with India Pakistan can enhance the exports to EU by 34 percent and at the same time an increase in imports will tend to increase the exports to EU at the same rate. In all the three equation of second set exchange has shown a positive significant result denoting that gradual but narrowed depreciation in exchange rate tends to increase the exports to Pakistan to EU in a long run especially.

Lastly, third set of equations are transformed into the number by running the OLS approach. In the last set, for equation 7, exports of Pakistan to UAE is analyzed with the bilateral trade of India and Pakistan (exports and Imports). The results show significant positive relationship between these two variables. Exports to UAE as a response variable tend to act positively when bilateral trade between India and Pakistan has increased. It is a significant result at 0.65. This shows an increase in bilateral trade between India and Pakistan, increases the exports of Pakistan to UAE by 65 percent which is a pretty decent amount of leverage to Pakistan while exporting to UAE. Similarly, second equation i.e. equation 8 explains the result for exports to UAE and exports of Pakistan to India. It has also shown a significant positive result at 0.34 which shows an increase in exports to India enhance the exports to UAE by 34 percent. Imports with India have also shown significant results at 0.64. These results are significant at 0.3, 0.6 and 0.3 respectively, which shows the positive impact of bilateral trade, with India to the exports with UAE. The depreciation in exchange rate has also shown a positive relationship with the Pakistan's exports to UAE.

Conclusion

In this study the analysis has been done to check the status of bilateral trade. Trade between India and Pakistan has been viewed with a different

view point. In case of Pakistan the major exporting partner from Pakistan is USA, UAE, Afghanistan and EU.

In this study the analysis has shown that increase in bilateral trade with India certainly enhances the exports of Pakistan to other trading partners of the country. In this context Pakistan can avail the dual benefit of trade with India. As different researchers have conceptualized empirically, that Pakistan will be benefitted with trade as economic integration will bring normalization of relationships across both sides of the borders. In the same paradigm it is also important to look at the fact that enhancing imports or either exports with India benefit Pakistan to get a significant increase in trade with other trading partners as well.

Policy Guidelines

The developed world is prominent in gaining the exports from the developing countries likewise Pakistan is exporting most of its trade contribution to the developed world i.e. USA, EU and UAE. The easy and quickest way to gain the exports is getting the product or by products through the very next immediate neighbor India. Pakistan's economy could take some time to settle the level of production due to severe problems like energy crisis. In these circumstances it would be beneficial to enhance trade with India that will benefit Pakistan by getting peaceful relation ultimately contributing towards the prospects of the economy.

Pakistan is looking forward for the following guidelines and it is suggested in this study that these would be the most beneficial measure to undertake so as to gain economic prosperity.

It has been observed that Pakistan is emphasizing on its trade promotion. Pakistan is involved in the talks with the world for promotion of exports as its priorities are to "Trade but not Aid". This slogan has been floated in many platforms by the officials of Pakistan. This shows that Pakistan is intended to enhance its trading base.

Our study finds that promoting trade between Pakistan and India is expected to raise Pakistan's exports to USA, EU and UAE significantly.

Pakistan has been given GSP plus arrangement by European Union. The Generalized System of Preferences status for Pakistan will enhance the exports to EU. It is expected to raise the Pakistani exports by 2 Billion. If Pakistan settles down a good platform for trade, it could even benefit more from exports to European Union. In the light of this study Pakistan should be looking forward to enhance the regional trade so as to get significant results by exporting to EU.

As a first step to improve trade between India and Pakistan, we should give India MFN status. It should be noted that Pakistan has already moved from positive list to negative list that has improved the number of goods traded with India. Initially Pakistan was following the positive list of 1938 items (vide import policy orders of Pakistan, 2008). It is expected that the positive list is transformed into a negative list of 1100 items that is issued for non traded items. Pakistan is intended to lower

down the number of items to 700 by end of this year. It is a step in a right direction.

Pakistan and India will also go a long way in improving the relationship between the two countries. There will be a greater motivation in solving bilateral issues between two countries if these two countries trade.

An anticipated benefit from bilateral trade would be improvement in the security climate which will enhance the investment and economic development for both the countries.

Appendices

Table 1. ***Pakistan's Exports to US***

	India Pakistan Bilateral Trade shares	Exports (Pakistan to India)	Imports (Pakistan to India)	Exchange Rate	n
β -value	0.469			0.448	n 23
	(2.321)**			(2.216)**	r^2 0.78
β-value		0.495		0.461	n 23
		(3.199)**		(0.297)**	r^2 0.81
β-value			0.469	0.448	n 23
			(2.321)***	(2.216)**	r^2 0.76

Notes: ***, **, * denotes significance level at 1%, 5% and 10%

Table 2. *Pakistan's Exports to EU*

	India Pakistan Bilateral Trade shares	Exports (Pakistan to India)	Imports (Pakistan to India)	Exchange Rate	n
β -value	0.753			0.251	n 23
	(8.021)**			(2.672)**	r^2 0.95
β-value		0.374		0.601	n 23
		(2.712)**		(4.364)**	r^2 0.85
β-value			0.374	0.601	n 23
			(2.712)**	(4.364)**	r^2 0.85

Notes: ***, **, * denotes significance level at 1%, 5% and 10%

Table 3. *Pakistan's Exports to UAE*

	India Pakistan Bilateral Trade shares	Exports (Pakistan to India)	Imports (Pakistan to India)	Exchange Rate	n
β -value	0.651			0.352	n 23
	(6.075)*			(3.284)**	r^2 0.94
β-value		0.347		0.635	n 23
		(2.683)**		(4.907)*	r^2 0.87
β-value			0.645	0.360	n 23
			(6.183)*	(3.453)*	r^2 0.93

Notes: ***, **, * denotes significance level at 1%, 5% and 10%

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7.
Career strategies of employees of MNC in the globalization reign

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Introduction

Globalization is not a concept new to literature. Besides the benefits such as greater profit followed by opportunities and customers larger than ever before which are pinned up with this boundary less trade and business activities, Organizations both companies and individuals working in global market place faces more challenges than ever before. Nothing comes without a cost, gives explanation to the challenges that companies or individuals face while going global or working global market place. These challenges of globalization reign are not only troubling organization in there developing strategies but also troubling individuals working in the MNCs. Globalization is no doubt having impact on all around but the workers working in MNCs are especially under pressure to secure and develop their careers.

Employees adopt different career strategies to develop their careers at different stages of life. But this is subjected not only to international but also local challenges. Globalization is naturally accruing phenomenon which has made possible the reaches across the oceans in just a clicks of seconds and this is becoming an inevitable existing experience (Bauman, 1998; Gill, 1991; Luke, 1993). It is no more a choice to be a part of it rather its like a war and companies and individuals are in it whether they like it or not. The changing dynamics of work may force them to rethink their preferences throughout their life time. In Pakistan, career in MNCs have been an attractive choice for potential and existing employees, except those who were looking for permanent jobs for life time in public sector, work abroad, joined the businesses, or really wanted to devote themselves for academics. Especially the MNCs have such attraction for the talented individuals to seek an attractive career. In the last decade, the global events have affected the conduciveness of Pakistani nationals in

the international job markets. The global and local environmental factors have shaped the job market in such a way that working in MNCs seem to be an attractive career for graduating students, and a lot of shinning graduates aimed at joining them to enjoy an smart livelihood.

Traditionally, the knowledge workers in the corporate sector employ different strategies to advance their careers. Researchers have identified several options that individuals choose depending upon the opportunities that the organizations and their environment provides them (give reference and different type of career strategies). That choice of the career strategies is mainly dependent upon their own work values, interests and talents. In the MNCs, the work dynamics are quite different from the public sector and local firms, as the skill requirements in this sector are quite different. The global incidents of 9-11 as well as the recession of 2008, the MNCs have tightened their recruitment policies especially in Pakistan and the local MNCs employees are under pressure to survive and compete in the sector. This poses a very different challenge for the individuals who are in the MNCs than those who are in other business sectors. The young professionals who have started their careers in the current situation have no example to follow, as the previous generations had quite different field setting.

The challenge to adopt right career strategy is test for the MNCs' employees. The young MNCs' employees of today have dreams, ideologically justified path to adopt, but not many examples to follow, as they have to map their career paths themselves.

There is no consensus among researcher about the globalization regarding the definition. It has been discussed not much from the aspects other that globalization itself (Clark, 1997; Clark, 1999: Hurrell & Woods, 1995). As Ryan (2001) put it, "Globalization ...is the web of contacts, impacts, and connections now engulfing the basic institutions of the world in virtually every dimension of activity: demographic, economic, technological, environmental, and political" (p. 71) as proved by history evidence of nations interdependence and interconnectivity. But never the less there are factors such as evolving technology, innovation and its relationship to time and space has not been passed up as today. This has put impact not only on individuals but also business activities. It was never possible to interact communicate and integrate with other in such a frictions of seconds without much cost been paid. The question before anything else is about globalization.

Theoretical Framework

The discussion questions were deduced from the theoretical framework provided by Greenhaus, Callanan, & Godshalk (2009). According to that there are seven major career strategies (Table 1). Employees use these broad strategies to progress their careers. This framework provided the basis for putting up ideas for discussion in the focus group, and the participants were probed with the help of this framework to unveil their preferences for career strategies, however the

discussion was not bounded in this framework.

Table 1. *Major Career Strategies (Greenhaus, Callanan, & Godshalk, 2009).*

Career Strategies	Description
Competence in Current Job	Attempt to perform effectively in one's current job.
Extended Work Involvement	Decision to devote considerable amounts of time, energy, and emotion to one work's role.
Skill Development	Attempt to acquire or enhance work-related skills and abilities through education, training, and job experience
Opportunity Development	Actions designed to have one's interests and aspirations known to others and to become aware of opportunities that are consistent with those aspirations.
Development of Mentor and Other Supportive Alliances	Actions designed to seek, establish and use relationships with a significant other to receive or provide information, guidance, support, and opportunities.
Image Building	The attempt to communicate the appearance of acceptability, success, and/or potential for success.
Organizational Politics	The attempt to use flattery, conformity, coalition, and trading of favors and influence as a means of attaining desired outcomes.

Methodology

Scenario - Research Settings

For the purpose of this research, young employees from different departments of a multinational company were invited to participate in a focus group discussion. Six members showed willingness to join the discussion. Their ages ranged from 27 to 35 years. All of them were permanent employees working in different positions in management cadre, whereas one of them was Head of Department (HoD) as well. Two members were currently enrolled in Masters Degree programs in different local universities, and one of them was doing advanced level diploma in his field of specialty. The group was quite familiar with each other, as they work as a team, sharing different responsibilities between them. Two of the participants were having dual roles within their organization, e.g.HoD and Trainer.

Why this Group is Selected?

This group was selected because they represent the category of young professionals working in MNCs who were experiencing the post 9-11 and post-2008-recession era of corporate career, and they were all relate to the age group where an individual aspire for developing his career strategy.

Process

The invitation was sent to the group about a week before the focus group discussion. They were briefed about the topic of discussion and its background, so that they could be mentally prepared for the discussion. They all gathered in their corporate conference room on Saturday after their working hours, keeping in consideration the matters such as availability of uninterrupted discussion and high quality participation. There were only the researchers present other than the five participants.

All the participants were informed in advance that their identity will

not be disclosed anywhere, and their discussion will be recorded and will be used for the research purpose only. Three of six group members showed their reservations regarding the privacy of the audio recording. They were ensured that the digital recording will be kept under strict control and will be deleted after the transcription. For further assurance, one of them took the responsibility to keep the recording with her and provide the transcription to the researchers on behalf of her team members. The researchers agreed with the condition that the recording will not be deleted until their research receives approval from the resource person of the PhD course, and they will also be given access to the recording for the audit review of the transcription. The conditions were accepted and consensus was developed.

The researchers, than, briefly discussed the broad concepts about career strategies that are found in management literature to give them food for that and bring them into the mood of discussion. As the group caught the heat, the researchers than signaled them while switching on the voice recorder and started by putting a question. The researchers than took the moderating stance and observed the direction of the discussion. The researchers intervened by asking a simple question only when they felt the discussion is deviating from its course. A discussion of approximately 50 minutes was recorded in the digital voice recorder and saved.

On the second working day of the next week, the researchers were asked to visit the corporate office of the respondents to perform the audit review of the focus group transcription. Both researchers, along with one volunteer and the transcriber herself held the printed copies of the transcription, transcribed using a word processer, while the recording was played on the multimedia speakers through media player installed on laptop computer. As the entire group members were natively Urdu speaking, therefore the discussion was conducted primarily in Urdu languagemixed with professional jargons in English language. The groupat certain points paused the recording to correct the translation and marked the corrections on their hardcopies. The irrelevant portions of the discussion were also marked. The marked corrections and reductions were later incorporated in the soft copy of the transcript. The group reviewed and ensured that all changes in the document have been incorporated. After the consensus of all four group members, the transcript was marked final and emailed to all the discussants as well as the researchers by the transcriber.

The researchers than took print outs of the final transcript and started an isolated analysis. They highlighted the important themes in the discussion and memo their transcript copies. Than the reviewed copies of the transcript were shared and the researchers gave a reflective presentation to each other. The conflicts in the analysis results were resolved through discussion and explanations, therefore, the reached a consensus and start writing the discussion report.

Discussion and Analysis

The discussion started with the career strategies which the group members have adopted in the current era when the global corporate job market environment is

HEC policies are being implemented in the higher education sector in Pakistan. After analyzing the contents of focus group transcripts the researchers have identified few emerging themes, which helped in getting insights about career strategies preferences of young faculty members.

Importance of skill development

There was consensus in the group about acquiring high levels of education, as the best long-term career strategy and there was no disagreement of any kind in this regard. The group also discussed that in the HEC reign all other strategies help in achievingthe short-term gains only. Most of the respondents reflected that they were primarily focusing on 'skill development' as their core strategy of career management. As one of the participants, WA said,

> "… after HEC there is only one way to enhance career and that is through enhancement of education… As HEC is tightening the criteria further for university teaching, it is important to go for higher studies to save your career."

Role of mentor

The group also endorsed that 'development of mentor and other supportive alliances' as an important career strategy. Though the group agreed to the importance of mentor in the career, but they also discussed it as a risk as well. It may be due to the latent fear of losing inscribed in our orthodoxy cultural settings that the mentors usually fear of losing their position from the upcoming generation. This socio-cultural dilemma creates fear in minds of aspiring protégés as well, as SA said,

> "… and the mentors sometimes play a negative role in the career of their protégé."

Another member reflected like,

> "… I don't know its our cultural problem or what… we are witnessing this negative role and institutionally they are the barriers in the growth of young faculty members…"

Paradox of achieving higher education at the cost of practical insights

The group discussion highlighted a very important aspect from the point of view of the faculty that is related to advanced level technology education. These faculty members feel themselves in a perplexity of sacrificing practical experience at the cost of higher education. If they focus on getting practical exposure that is important for in-depth understanding of their subject areas and also keep them updated with the change paraphernalia of technology, they may be left behind in the academic career, and vice versa. So they feel the need of their career development in a balanced way. One group member (UA) highlighted the paradox of achieving high education at the cost of losing the practical insight, which later requires more efforts to bridge the gap. He challenged the HEC policy by saying,

> "I think the emphasis HEC has developed on getting the MPhil or PhD degree to be eligible for teaching in universities is not justified. There are professionalswho are competent enough, such as in the field of computer science which is my field, but as they don't have formal qualification at such level, so they can't teach."

Perception of managerial role as hindering factor

The young faculty members perceive that getting high profile assignments at this level are partially beneficial as they develop managerial abilities and also equip them with the skills to be politically powerful. But they think that this only gives them a short term advantage, because the managerial roles require much attention which ultimately hinders their progress towards achieve long term objectives.

Lateral movement and career switching

The theme of lateral movement emerged during the group discussion as a career strategy, if someone feels that he is stagnant due to having no room of promotion in his current institution. Though it is one of the common tactics in corporate sector, but the academicians in the focus group discussion highlighted it as an unlikely practice if it is not for some higher position. Most of the group members showed their aversion of switching at the same level in some other institution.

Dual career preferences

The group agreed on advantageous nature of dual career as an appropriate strategy for academicians as it equips them with the theoretical as well as pragmatic view of their respective fields. But the group showed their propensity to prefer the dual career at the later stage of their career, when they have achieved their PhD.

Paradox of faculty development and 'Seth *culture' in private sector universities*

The group discussion has identified that the problem of '*Seth* culture' which is problem faced by the knowledge workers in the corporate sector is equally posing problems in few academic institutions as well. They highlighted the collision of interests of the young faculty members and their management. As the management thinks that the faculty ispilfering organization's time and resources to develop themselves. On the other hand, the faculty development is also necessary not only the individuals but also for the institution as well.

Conclusion

This research has developed thought provoking insights into the career strategies of young faculty members in universities in the HEC reign. The consensus has been noted over the importance of higher education among the young faculty. They have expressed the importance of this being the only important long term career strategy. The current scenario is entirely different from that of pre-HEC scenario where the young faculty had no such challenge to their existence as academic professionals. Today's academic career has become very competitive for the new comers as well as the senior ones.

The focus group discussion also highlighted an important concern of the aspiring faculty members of higher level technology education as they face perplexity in choosing either of the practical exposure or the higher education. They want to maintain balance between their theoretical development as well as the practical exposure of the industry because of the dynamic developments in their subject areas. If they peruse as per HEC policy and take the MPhil and PhD path, they fear to lose the grip on practical aspects. We feel the need of having practice oriented doctoral level degrees in the technology so that the universities as well the industry can take benefit of the cross-fertilization of ideas.

Avoidance of organizational politics has been observed among the young faculty members. They believe that power, politics, image building, and high profile assignments are significant career strategies but they may be reserved for the advanced stages of their career, because at this stage, it may cease their long term career progression.

Appendix

Transcription of the Focus Group Discussion

The panel of Focus group comprised of 5 people and a moderator, who was the researchershimself. At first it would be helpful to give brief introduction to the panel.

Mr. WA: He is a young Head of Department of a university sub-campus at Lahore, he is 29 years of age, having 6 years of experience teaching at university level and persuing his PhD in business Administration. He is at the position of HoD for last 2 years.

Mr. SA: He is lecturer and about 35 years of age. He teaches Management Subjects in the university for last 8 years. He has also done is MPhil and persuing his PhD.

Mr. MS: He is lecturer or statistics in the same university for 2 years. His age is 27 years, and he is also doing his PhD in statistics.

Mr. NM: He is finance lecturer, as well as incharge examination. His age is 33, working for last 7 years in the same university. He is also doing his PhD in Finance.

Mr. UA: He is IT lecturer in the faculty. He is persuing his MS degree in computer sciences. He is in the university for last one year.

Mr. Q is either of the moderator/s in this focus group.

Q. Where do you see in the post-9-11 and post-2008-global-depression scenario, what you will have to do, and what will you do for it to be successful in your career?

FS: The difference in post 9-11 and post 2008 is in terms of education realization, westernization and more competition in terms of technology, methodologies. People are more critical in terms of their career, survival of the fit is the war these days. So in that scenario to boos up my career I have to look for new trends and technologies to utilize them efficiently and to pursue with the right qualification to excel in my career.

SA: Post 9-11 scenario has created some hurdles for Islam & some particular countries. Now everyone is not treated equal in global scenario. Even if organizations are fair enough some regulatory issues make it difficult to find overseas job. What we need to do is to focus on those regions / countries where there is no discrimination found against religion or country we belong.

IH: Yeah, it has been a matter of fact that the world has been change inside out after 9/11 and Post-2008-Global Depression Scenario, in this point in time everyone is striving for higher education at the same time the employment opportunities are at dearth. In my opinion putting extra effort in strong areas or set of skills nature has gifted to the individual, one should try to focus and polish those to excel in extensive competition.

SI: I believe that terrorism has greatly influenced the way organizations operate and do business. Clearly it is a threat to business operation and companies like to work in calm environment with no or very little turbulence. So I see myself condemning the acts of terrorism and the same goes for my career that I will work in a non violent environment that harbors creativity and innovation rather than an environment where the work is being hampered due to threat to security.

HI: In this era of terrorism and uncertain conditions the world has come to a point where we should be on fast moving track. Everyone should strive for betterment of the society and should not encourage such activities. As a professional we should be conducting workshops to give people awareness, get highest education and avoid working in such sectors that promote violent activities

Q. Don't you see in this way that you have witnessed that in the MNCs, the appointment of HoDs and chairperson is highly politicized? Although there were other eligible professionals available, only those who could reach at the top who have some strong political affiliations with some influential persons, etc.

FS: There are some top profiles who have professional ties with the political characters. But as in Pakistan scenario, there are many critical points do come where top management has to make ties with some political bodies in order to streamline the current issues as per the criticalities in Pakistan. There can be many competent people at the top level where there are currently these top notch so called political profiles. But MNCs at times prefer them as per their current needs to be filled and to streamline the external and internal pressures.

SA: Although there were other eligible professionals available, only those who could reach at the top who have some strong political affiliations with some influential persons, etc.

IH:Yeah, I am partially agreed with the statement u have mentioned in the question. Rather I would say in first world the Head of MNCs have been working on someone's agenda like most of them are free masons or somehow have in relation with them. Furthermore, the Heads of the corporations in third world or developing nations most of the time belong to certain political affiliations or political cartels.

SI: In recent times, favoritism and nepotism has played its part toward selection of prominent personalities in leadership positions. The orthodox norm of equivalence and eligibility has now been forcibly reshaped into accepting political pressure towards selecting the best resource. Although fair selection is still in use and widely practiced but influence of political figures does play an important role in selection of recourse.

HI: This is a common occurring problem. Politics have gathered us all and especially it is seen in recruitment. The common problem in Pakistan is people not get the jobs and the main reason is mostly employees are hired who have strong reference. This should be avoided and proper recruitment system should be encouraged where there should be right fit at the right job.

FF: To some extent it is true but not in all scenarios. MNCs have to operate with the permission of govt so they need to give favor to political personalities.

Q. How do you feel the importance of having support of a mentor in your career?

FS: I do a feel there is lot support of a mentor in my career success, because when it comes to internal or non-monetary motivation, learning and exposure thing. There should be a role mode and a coach through which we can learn and maximize our potentials through mentoring.

SA: A mentor is vital for career progression, because he is in a position to give us good and unbiased opinion.

IH: Extremely important indeed. Like a good mentor could be of great importance as far as the development of professional attitude or outlook is concerned.

SI: A mentor is absolute essential for a new joiner in an organization. It is an obligation that a new entrant is assigned a mentor that guides, molds and reshapes the behavior patterns of a new employee.

HI: A mentor is required at every step of life. Same is the case with me a mentor with good motivational and knowledge transfer skills can help an employee build strong career.

FF: Its very important to have support of good mentor with you throughout your career because you have to make very critical decisions during your career and with the help of your mentor you can have a reasonable idea.

Q. Do you relate higher studies or professional certifications with your success?

FS: I relate higher studies currently but with the passage of time certifications are always required to update the studies and the current scenarios in the career success.

SA: For career progression we need updated knowledge of our field. Professional certification is more related to as compared to higher studies unless it is requirement for future growth.

IH: As I mentioned earlier since the professional competition after 9/11 and recession has been increased manifold so do the importance of higher education and certification coincided it.

SI: Yes higher studies provide a better understanding of business operations and corporate governance. And professional certifications are a proof that you have acquired success as a professional.

HI: Not in my case as I haven't done yet but definitely education is the key to success and a person should be equipped with appropriate education and also certifications to gain more knowledge.

FF: Yes higher studies is the first step to enter in this professional world. After having sufficient experience, your experience becomes more important than your studies.

Q. Do you see this problem in other job sectors as well?

FS: I do think there should be mentor centers or counseling centers in the institutions to guide and mentor the graduates for further career success point of view

IH: Not much in Government sector only suspicions regarding merit is the major concern in Governmental sector not anything else.

FF: Yes it's the requirement of almost all sectors to have mentors

Q. Do you think that the hard work you are putting in and working for extended hours, managing your responsibilities other than your core job functions, give you advantage over others? Will it ultimately enable you to progress in your career?

FS: At times working more than extended hours and to put in more effort stretch the abilities that are hidden and we have not even discovered plus they add different skills to the personality that later do add to the career success.

SA: Managing other responsibilities gives us generalist exposure and this era is more related to a generalist job rather than a specialized one.

IH: Yeah off course going extra mile in work would always benefit you as it has been reckoned as a nature's law. But working smart rather than working hard should be of focal importance.

SI: It is not necessary that putting in extra hours and doing work in addition to the job responsibilities gives advantage over others or gives you a career boost. It definitely gives you more insight into the day to day working of the organization.

HI: I do not believe if you have the ability to do your work in the working hours then it is an exceptional quality. Time management is required to progress not sitting for extended hours.

FF: Yes it will be good for me, my knowledge /expertise and my career to put more effort and work extended hours to fulfill my responsibilities

Q. What possibilities you are seeing in your career right now?

FS: There can be many possibilities in terms of Job enrichment and promotion as well.

SA: I am getting generalist experience; my responsibilities are changed over a period of time so that I am able to work as a departmental head in future.

IH: *Alhamdulilah*, I am working in the organization which is providing a developmental path for my career therefore, I am anticipating to excel in respective field InshaaAllah

SI: Learning and acquiring new skills on daily basis.

HI: Looking forward for some challenging tasks and performing diverse tasks.

FF: As I am having a reasonable mentor, I am focusing on my responsibilities so that I can have good growth opportunities

Q. Do the high level responsibilities not helping you?

FS: High level responsibilities do help me in terms of additional exposure, learning exposure, better know how of responsibilities.

SA: It happens when I am working on some assignments and I need my seniors' help but sometimes they are unable to find appropriate time for discussion which ultimately leads to a delay in the assignment.

IH: It helps as it is said the the higher you go in terms of responsibilities the more you gain in terms of importance in any field.

HI: I am not being assigned high responsibility tasks at this stage in the career.

Q. What you people think about professional networking in your career? How much you find it useful for growth?

FS: As per my career side in recruitment and selection, I am sure that professional networking play a vital role. As the more is the network, the more you know about new trends in my field adopted, the learning horizons to see and observe.

SA: Professional networking is important to know about latest trends and working practices in other organizations but it can't be linked with growth.

IH: Immensely important since the world has been diminished into a global village now respectively the importance of networking has been increased.

SI: Professional networking is a very important tool for career enrichment. Getting acquaintance of professionals helps you to acquire knowledge from them and also experiences from them that are very informative.

HI: Networking is very important as it helps you to get right candidates for important positions. Also it will improve your social life when you interact with people you always learn new things

FF: Its very important to have professional networking to have good idea about what's going on in professional world and keep yourself updated

Q. As it is common in the corporate sector that people do lateral movements for career growth from one organization to other. Do you think it may be a good choice for you too in the MNCs to follow?

FS: It would be a good choice as to learn and to excel in my career

SA:Today's job dynamics are changing rapidly. There was a time when people were much concerned about designations as well as money. But now people are concerned with job responsibilities, learning opportunities as well as money. MNCs are following different lateral structures so it won't work in case of MNCs.

IH: It could be good but after having spent some time quick moves can ruin as well.

SI: If the opportunity is attractive than lateral movement is appreciated otherwise frequent movements from organization to organization is criticized by recruiters.

FF: Yes after having sufficient experience it can be god choice

Q. Have you found any mentor in your way who have helped you in progressing?

FS: My teacher and my line manager are mentor for me to follow.

SA: I am working with a mentor since I started my career and he has helped me a lot in my working and professional career.

IH: Yeah *Alhamdulilah* my current mentor / RO is quite helpful in every matter where and whenever I required his help, he proves to be receptive. More importantly in every scenario to extricate help out of mentors is an art as well that one should learn.

SI:Yes I have found some good mentors that have shone like a guiding star and given me tips that have helped me in my career so far.

HI: Yes my teacher and manager has helped me a lot.

Q. (Please visualize your next 20 years) Do you think the MNCs have the potential to serve you better in career terms, are they able to sustain you in long term?

FS: Well to visualize for 20 years, it not the right span to visualize because as per the critical changes throughout the globe, visualization and the abrupt changes are like mis-match thing. Well, being a key resource at a key position with the right skills, I can enjoy a mentoring and a senior position in any MNC

SA: MNCs change on a fast pace in global perspective so they have a potential for growth as well as they might be effected with a global change and unable to provide any future opportunity.

SI: Yes MNCs have great potential to serve its internal clients. They highly regard their workforce and those that perform well are rewarded and equally compensated. Such compensation and perks help the organization to retain good talent.

HI: Yes MNC'S have that potential to groom the employees and give them best career path along with better environment and working conditions

FF: Yes it has the potential but it will depend on some external issues like political environment etc.

Q. If you find promising opportunities in the sectors other than MNCs, such as public organizations or academic institution, would like to switch for your growth in those organizations? Briefly justify your stance.

FS: If it is that much promising in terms of career progression, financial stability, I think I can, because good opportunities are always there to follow.

SA: MNC is not a certificate of good job all the time. Most of the time higher level positions are filled with home country employees only making it difficult for host country employees to go at higher levels. On other hand local companies are headed by local employees and there are higher chances to go at top and run the whole organization.

SI: Academic institutions are a very good way to reflect your knowledge onto others and if an opportunity in an academic institution comes up than I will think of going there.

HI: A person always look for betterment so if there is a good opportunity then why jnot I would like to be a part of it.

FF: Yes I will switch, and I can apply me experience in other companies for their growth

Q. If you get opportunity in some other MNC, where a bit broader exposure is highly demanded, don't you feel that your career objectives will be fulfilled there?

FS: Yes surely the career demands can be fulfilled.

SA: Broader experience is necessary for career growth.

SI: Sure, if the exposure is of international nature then why not.

HI: Yes definitely broad work experience will help me get a good career path.

FF: Yes it can be good for career objectives fulfillment

Q. If you go for some time in some sector other than MNCs and then come back in MNCs, will it help you?

FS: It depends upon the nature of the job for which I shall be switching for a job

again in MNC and the span of time. In case if the nature is almost same than it can help me and if the time span is more with any other organization that is not MNC then experience would be different so that won't be helping to switch again in MNC culture and the job.

SA: Every experience counts if it's on a good position.

IH: Yes in my opinion, experience is of vital importance doesn't matter where it comes from. Every sector has some specialized culture prevailing in it, and attain benefit from diverse could increase feathers in ones hat.

SI: For someone to working in an MNC, transition to a national organization and then back to an MNC will have impact on the person's performance. I will not opt for such a scenario.

HI: Yes I will be getting a multiple flavor of working with people from a different sector. The pros and cons will be highlighted and it will eventually improve my performance

FF: Yes to some extent it can specially it will be good learning opportunity regarding job environment.

Q. Would you like to have a dual-career as your current job in MNCs and serve as corporate consultant after certain years of experience? For example you establish a separate consultancy firm for this purpose. Will it be helpful in your MNCs career?

FS: I think a consultancy decision after quitting the MNCs and having a good experience in different sectors. I won't go with the dual career at the same moment. As it can be portrayed a biased and inclined profession as well.

SA: Consultancy experience is equally helpful in local and MNC.

SI: While being in an MNC, the complete concentration should be on one project. Having dual jobs while in an MNC will definitely be a burden and performance will dampen. Opening up a consultancy firm after years of experience is definitely helpful and allows an individual to impart his/her experience in the practical field.

HI: Consultancy is definitely a right choice but after getting certain years of experience. It will help me to give better solutions to other MNC's

FF: Yes it will be help full.

Q. Is MNC career your first ambition? What has brought you here?

FS: Well every person thinks for some prosperous and promising career, no doubt the skills and the working exposure brought me here to work.

SA: I like my job but I am not a person who will do a job only in MNC.

SI: Having the opportunity to work in an MNC is a definite plus point on the resume. The experience of international business operations gives an individual more exposure and rich experience as compared to a local organization.

HI: Yes, it is my career ambition and I would love to stay as long as it would eb favorable for me.

FF: Yes. Company performance image has brought me here.

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8.
Political Instability and Lessons for Pakistan: Case Study of 2014 PTI Sit in/Protests

By
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Introduction

The political stability is condition for the nation building and in return it is a process compulsory for the development of a nation. In most of developing countries the governments are not stable. A new government comes into the power overnight; either through coup or army takes over. The new government introduces a new system of rules for the operation of business which cause frustration and anger among the people. Political instability now becomes a serious problem especially in developing countries. It is creating enormous difficulties and delaying the development of these countries. Political stability plays an important role in keeping society united and in maintaining legitimacy within the state. It is an essential for the economic development, social integration, and supremacy of law in a state. The stability of political system has direct effects on the procedures of nation and state building. These both require stable political systems for their growth and successful. The development of nation and state without firm and organized system of politics is not possible. So Political instability can be defined at least three ways, first approach is as, the propensity for regime or government change, second is to focus on the incidence of political disorder or violence in a society, such as killings, third approach focuses on economic growth affect by instability.

Pakistan has spent 34 out of its 68 years, or half its life, in internal political instability as regime instability, political emergencies and constitutional deadlocks. Long-term instability in Pakistan has been significantly higher than in East Asia and post-Partition India. Lack of mature leadership, confrontation between the main organs of the state, poor relations between the center and the provinces, extensive corruption,

distrust among the politicians, strong bureaucracy and crisis of governance are the immediate threats to democracy in Pakistan.

The political instability is directly affected economic growth. How does it affect economic growth and why this is important in developing countries like Pakistan is discussed in this paper.

Foreign investors do not invest in countries where there is civil war, coups, army take over etc. The lack of interest by the foreign investors in politically destabilized countries by giving access to the productive markets hampe the economic progress and thus the country is more likely to rely on foreign aid. For example, the improper use of aid on the huge disasters like earth quake in 2005 and on the wake of flood in 2010 has lost the trust of donors to support Pakistan sufficiently even in most difficult times. Political instability also limits internal investment. Generally they avoid investing in their own country for fear of nationalization of their project, large scale interfere of militant, trade union and harsh attitude of various government agencies. The well off people including the politicians prefer to tale their money outside the country or want to invest out of their own country. The developing countries are deprived of investment funds which badly effect economic growth.

The spectra of corruption are growing stronger in absence of true accountability. Accountability which aims at strengthening the roots of democracy is lacking in our country. It is a sort of deluge which is weakening the democracy to its roots and posing a great threat. Weak institutions and feudal systems are also a major part of instability. A rupee, if properly invested, can bring 10pc returns but if only half rupee is invested and the other half is pocketed for personal use, then we will end up with negative returns and, ultimately, a faltering economy.

Case Study: How 100 Days of Dharna Create Political Instability

Political background

Following massive allegations of rigging in the 2013 general election, former cricketer-turned-politician Imran Khan's political party Pakistan Tehreek-e-Insaf (PTI) hesitantly accepted the election results demanding a investigation into electoral rigging in 4 constituencies as a litmus test for the rest of the election process. Government inaction in this regard led the PTI to organize several jalsas throughout Punjab, which is Prime Minister Nawaz Sharif's political headlock. In August 2014, Imran Khan stated that for 14 months, the Pakistan Tehreek-e-Insaf had tried to bring those who were responsible for rigging to justice, all in a legal manner through state institutions. The PTI produced a 2100-page white paper showing evidence of rigging. Despite this, no action was taken. Imran Khan argued that, normally, in any democracy, the Supreme Court of that nation would have nullified the results and called for fresh elections. Even after the evidence was presented and leaks by Afzal Khan, former additional secretary of the election commission, the Supreme Court also

took no action. However, Supreme Court sought for evidence which was necessary as per law to reverse all seats which was sought in a petition. The petitioner said he had no proof beyond the allegations which were leveled by Afzal Khan. These were proved wrong. The petition was dismissed as per the law of Pakistan which requires proof beyond reasonable doubt.

Throughout these jalsas, Khan expressed his disappointment at the lack of initiative by the country's judicial system and the adverse behavior of the Election Commission toward his cases against election rigging. On 22 April 2014, PTI officially announced the start of their anti-rigging movement.

Protest rallies

Phase 1 - Islamabad jalsa: On 11 May (when year passed) From all Pakistan people gathered in Islamabad to support Imran Khan where Khan demanded 4 constituency investigation from government and until that decided to protest in-front of election commission offices every Friday. Khan also blamed Geo News to be Part of rigging and announced to prove what he said in Faisalabad Jalsa.

Phase 2 - Faislabad jalsa: In Faisalabad, a greater number of people gathered in his jalsa where demand of Imran intensified and he questioned the victory speech of Nawaz Sharif and decided to intensify his movement to increase pressure of government and announced Sialkot Jalsa.

Phase 3 - Sialkot jalsa: In the Sialkot Jalsa, Khan addressed a huge crowd and criticized the role of the judiciary in the election. In his usual tone, he also commented on the outcomes of the result.

Phase 4 - Bahawalpur jalsa: On 27 June 2014, Khan managed to gather a massive crowd at the Bahawalpur Stadium where he announced plans for the Azadi March, calling the protest march the final phase of his movement against electoral fraud in the 2013 general election. He also gave government a margin of one month (because of the holy month of Ramadan) to open an investigation into four constituencies (as marked by his four jalsas) and presented further demands.

Informal PTI–PAT union

As was expected, Imran Khan and Muhammad Tahir-ul-Qadri, both neither fully merged their protest marches nor fully rejected to support each other. On 10 August 2014, Qadri formally announced that his party's political march, the Inqilab March, would precede parallel with PTI's Azadi march. Both marches were organized to take different routes, albeit closely mirroring each other. However, as time went by, it became quite apparent that the two parties had similar objectives yet different aims and strategies.

The announcement of two parallel marches by parties in the opposition gave rise to speculation that a coalition between PTI and PAT was possible. The chiefs of the two parties never clearly stipulated a

formal coalition but an informal agreement to support each other was achieved. On 11 August 2014, Qadri and Khan both clarified media persons that there will be two parallel marches, informally allied together for the dismissal of the government, yet without any combined forward strategy.

Goals and demands

Imran Khan and PTI had consistently asked the government to constitute tribunals and committees to investigate electoral fraud in the four constituencies since the 2013 election results were announced. In making these demands, Khan unwillingly accepted the election results, though being consistently ridiculed by the PML-N government and ministers.

A year on, the PML-N government made no headway or momentum in this regard and remained "hesitant in investigating the alleged rigging". On the other hand, Khan had consistently presented proofs of electoral fraud in various constituencies. The PTI chief had also named the caretaker Punjab chief minister Najam Sethi and former chief justice Iftikhar Muhammad Chaudhry in facilitating fraud on the order of PML-N in the past elections.

Initial demands

Because of the lack of government initiative in opening investigation into allegations of electoral fraud, Khan gave the PML-N government a month to fulfill his demand. He said that he had "knocked every door to find justice" but in vain. In PTI's Bahawalpur jalsa, the party chief warned if his ultimatum was not met within a month, a million of his followers would march onto the parliament; Khan's primary four demands included investigations into: i) How Nawaz Sharif declared victory on the 11 May elections beforehand; ii) The role of former chief justice Iftikhar Chaudhary in the elections; iii) The roles played by the caretaker government, in particular Najam Sethi; iv) Electoral fraud in 90 constituencies.

Generalized charter of demands

Over the course of the next month, Khan's demand took on a more generalized structure and included the following broad demands: i) A transparent investigation into allegations of electoral fraud in 2013 elections; ii) Judicial inquiries into the roles of persons named in electoral fraud; iii) Reformation of the electoral process (e.g., introduction of electronic voting machines, etc.) and the Election Commission.

Ultimate demands

After Khan presented his demands, the government further ridiculed him and showed no concern in this regard. This only forced Khan to present the following ultimate demands alongside his earlier demands: i) Resignation of Prime Minister Nawaz Sharif and his brother and Punjab chief minister Shahbaz Sharif; ii) Dissolution and abolition of the Sharif government, replaced with a caretaker government; iii) Call for snap elections after a caretaker government has been set up; iv) Still, there are

expected chances of talks between Khan and the government in which much of the PTI's demands, excluding re-election and replacing the Nawaz government, can be accepted in the near future

The Azadi March was due to being at Khan's residence at Zaman Park in Lahore at 10 am, but was delayed until 12:30 pm when the PTI chairman addressed the rallying crowds outside his house. Moments later, the rally began its procession towards Islamabad. Meanwhile, Khyber Pakhtunkhwa chief minister Pervez Khattak left with a convoy of supporters from Peshawar towards Islamabad. Khan's rally inched its way through the city of Lahore at a snail's pace, via the Mall Road, Faisal Chowk, Data Darbar, Bhatti Chowk, Azadi Chowk and Minar-e-Pakistan, Niazi Chowk, Ravi Bridge and finally Shahdaran to get onto the Grand Trunk Road leading to Islamabad. The delay resulted after the milestone destinations of Data Darbar, Bhatti Chowk, Azadi Chowk and Niazi Chowk were included in the rally route at a later time, after the protest march had already begun. At around 12:10 pm, PTI activists were pelted with stones by PML-N workers while passing through an area where a PML-N party office was located. The PTI convoy was on its way to exit Gujranwala at the Sheranwala Bridge injuring at least 4 PTI activists. The ensuing riot was controlled by local police but no PML-N worker was injured or arrested. Opposition parties PPP and JI condemned the PML-N miscreants identified in live footage of the clash while PML-Q leaders Chaudhry Shujaat Hussain and Chaudhry Pervaiz Elahi held Prime Minister Nawaz Sharif and Punjab chief minister Shahbaz Sharif responsible for the attack on the PTI cavalcade.

16 August, the Azadi march reached its destination at the Zero Point in Islamabad under rainy conditions. The PTI leadership officiate their Islamabad dharna where Shaikh Rasheed Ahmad addressed the rallying crowd of protesters. Later, Khyber Pakhtunkhwa chief minister Pervez Khattak took to the stage to confirm the support of the "Pakhtoon nation" for Khan's march. Khattak's speech was followed by former foreign minister Shah Mehmood Qureshi's speech and the Javed Hashmi who called for the resignation of both Nawaz Sharif and Shahbaz Sharif from the federal and provincial Punjab government respectively. Imran Khan took to the stage under heavy rain where he stated that his party's protests will continue until "Nawaz Sharif resigns and announces new elections". Khan ended his speech by announcing to speak again later the same day. Khan left for his Bani Gala residence after his speech and it was later reported that the PTI chairman had to leave the venue because of ill health to rest for the night at his residence. Many PTI protesters took this stance of leaving them negatively. Soon after his departure, many PTI followers also made their way back to their homes and the number of protesters fell sharply throughout the night. The PML-N government found an opportunity to capitalise on Khan's lack of concern for his workers "on streets faced by torrential rains all throughout the night".

The PML-N further reminds Imran Khan that the Khyber Pakhtunkhwa chief minister Pervez Khattak should not have abandoned

the people of his province where 18 people had died from incidents relating to heavy rains and downpour in Peshawar.

On 17 August, Imran Khan announced that he would be delivering "the defining speech of his career". In his speech, Khan asks his followers to "kick off a civil disobedience campaign" and not pay taxes or utility bills. Khan gave the government a deadline of two days to fulfil his demands. Minister of State for Water and Power, Abid Sher Ali, tweeted immediately that "the law is clear" and if people don't pay utility bills, they would not be provided with electricity. After that PTI vice-president Shah Mehmood Qureshi addressed the media after a meeting of the PTI core committee and said that all PTI lawmakers have decided to resign from the National Assembly. He said that the party has decided to withdraw its representatives from the Punjab and Sindh assemblies as well. PTI chairman Imran Khan announced that "he himself lead the march towards 'Red Zone' the following day. The Red Zone in Islamabad houses the diplomatic enclave and embassies, parliament, government offices and the presidential and prime ministerial palaces, which had been protected by police and blocked off with shipping containers. The number of protestors is in several hundred thousand. In this MQM chief Altaf Hussain requested Imran Khan to reconsider his decision to enter the Red Zone. He feared his party's march towards the parliament may lead to "confrontation" and "bloodshed".

On 19 August, both the rallies of PTI and PAT started moving toward the Red Zone. PTI workers move with cranes towards shipping containers placed at the edge of the barricaded zone, while emergency is imposed in PIMS and Poly Clinic Hospital. As the party workers removed blockades, the PML-N government advises security forces not to engage with the protesters. Federal information minister Pervez Rashid said, "We will not use force. They have brought innocent children with them." After the time passed Thousands of police forces were seen getting ready to initiate a crackdown on thousands of protestors in front of the Parliament building. MQM leader Altaf Hussain also warned of possible violence across the country and a possible coup d'état in the country. Imran Khan announced that the protest demonstration would continue until the resignation of PM. One day left on Allama Muhammad Tahir-ul-Qadri's 48-hour ultimatum to the government. Clashes erupted as protesters tried to march toward the Prime Minister's house. Muhammad Tahir-ul-Qadri claimed that the protest would remain peaceful, but protesters tried to force their way in. Police stepped back initially but police began to throw tear gas after some time in their way. More than 500, including women, children and policemen, were injured. People in this rage broke the fence of parliament house and entered there, but on order of Pakistan army people remained outside the building. The clashes continued between protestors and police. The protestors entered Pakistan Secretariat and damaged some vehicles. They also broke gates and entered the headquarters of national television PTV and ransacked it. PTV briefly went off air, although PTI denied its involvement in it. The Supreme Court of Pakistan offered mediation after fifth round of talks failed last week. Also, Nawaz Sharif met Pakistan

Army chief Raheel Sharif. A meeting of army chiefs was held at Rawalpindi to discuss the situation. Dozens of PTI, PAT workers have been arrested in connection with PTV and Parliament attacks. Court sentenced more than 4100 PTI/PAT workers to jail on 14 days judicial remand among which 3187 were PTI workers. Violent clashes erupted in other cities after Islamabad showdown, with as many as 13 protesters dead at the hands of the police, and several policemen injured. The army issued a statement, which called for restraints from the police force, three senior policemen and one senior policewoman resigned from the Islamabad and Punjab police, alleging police brutality. Since then, the protesters have got closer to the PM house and pressure has been mounted on Sharif after it appeared that the police, especially the Islamabad police, was openly rebelling, defying, and protesting against government orders On Friday when Imran khan's party was celebrating one month of Azadi Dharna, Khan announced the extension of protests to other cities for which Karachi was chosen as its first destination, extending on to Lahore and Multan. This extension was successful to pressurize government which the PTI wanted. Clashes lead to violence from law enforcement authorities.. On 17 December 2014, Imran Khan announced to cancel the protest in response to terrorist attack on Army Public School in Peshawar, saying; "Due to the situation in the country right now, we have decided to end our protests, decision had been made in light of the terrorist attack on a school in Peshawar" and said that "the country needed national unity".

Government Reaction and Political instability:

Following Khan's announcement of a protest march, the government announced that the PTI chief's demand as "undemocratic" and a ploy to "derail democracy". Awami National Party (ANP) provincial general secretary and former provincial minister Mian Iftikhar Hussain expressed concern that Khan's long march could derail democracy and if the democratic system is eventually derailed, the PTI chairman would be held responsible.

Operation Zarb-e-Azb and security concerns

PML-N leader and federal minister for planning and development, Ahsan Iqbal, called Khan's Azadi March anarchy in disguise and criticised Khan for launching an unnecessary protest movement when the country was at war with the terrorists in North Waziristan in the Operation Zarb-e-Azb. Khan's claim to gather a million protesters in Islamabad posed a threat to the security apparatus in the nation's capital in the eyes of the government. The PML-N government feared that such huge crowds in Islamabad could lead to severe conflicts and even terrorist attacks. The government also issued plans for the Islamabad police to stop any protesters from entering the city while the Independence Day celebrations were underway thwarting any efforts of reconciliation with PTI.

Closure of educational institutions in Islamabad

Educational institutions in Islamabad were due to start educational activities after summer holidays on 11 August 2014 but had to remain closed until 24 August 2014; the dates were later changed to 31 August 2014 to accommodate the ongoing protests, eventually leading to losses in the education sector. Most of the government schools are actually closed as 30,000 AJK and Punjab police are provided accommodation in public schools, amidst fears that they will be used for a crackdown against the sit-in participants.

Economic losses to country

By 31 August, the government claimed economic losses directly resulting from the sit in were between Rs500 million and Rs800 million. On 26 September, an adviser to the PM claimed the losses had run up to $6 billion (Rs610 billion). Traders from across the country have expressed concern over Pakistan Tehreek-e-Insaf's (PTI)'s "Azadi March" and subsequent sit-in on August 14, saying it would adversely affect businesses nationa wide. The business and trade bodies of different cities of Pakistan, including Islamabad, Peshawar, Lahore and Rawalpindi said that the march would hinder economic progress in general and the businesses in the cities in particular.

Acting Islamabad Chamber of Commerce and Industry (ICCI) president Mirza Mohamamd Ali said that the "Azadi March" of PTI would prove to be destructive not only for the traders and businessmen of the federal capital but also for the country's economy. "The country has been facing different challenges, including terrorism, extremism and energy. It cannot afford such activities that would cause political instability that will adversely affect the economy. I urge all the political leaders to show maturity and give priority to national interests over their personal interests,"

Khyber Pakhtunkhwa Chamber of Commerce and Industry President Zahidullah Shinwari urged the political parties to show patience and tolerance for each other and resolve the issues through negotiations. He said the provincial economy was facing loss of billions of rupees daily due to rise in political temperature for the last couple of weeks and added that traders and businessmen have stopped all their activities like import of the machinery, export etc and following the policy of wait and see till August 14. "We are worst the victims of the current political instability in the country," he said and added that economic activity has become almost stagnant as 70 percent capital flight has reported due to unrest and terrorism. He said KPCCI was a non-political entity and wanted only political harmony so that this province could flourish and added that rise in political temperature has cast extremely negative impact on the overall economic process

A severe blow to Pakistan's economy

At a time when political turmoil had already caused a colossal economic loss, the cancellation of Chinese President Xi Jinping's visit

dealt a severe blow to Pakistan's economy, as he was bringing along a record investment of 34 billion dollars, largely in the energy sector.

The postponement of the visit was not only a huge embarrassment for Pakistan but had also raised serious questions about the intentions of protest leaders Imran Khan and Tahir-ul-Qadri. Pakistan had become a victim of its own politicians. The country had been through a serious crisis due to Taliban-sponsored terrorism but at no point have the visits of foreign dignitaries been cancelled. PTI and PAT had turned out to be more harmful.

Imran Khan already made his agenda public. Earlier not only did he greet with jubilation the news of the cancellation of the IMF delegation's visit, he also warned the international lending agency against giving money to the present government. He said any such agreement with the Nawaz Sharif government would be counter-productive, as loans would not be returned if his party came to power. Although his call for civil disobedience came under sharp criticism, the PTI touted it to capture international attention. His advice to party supporters abroad to send money through hundi instead of official banking channels was also an attempt to weaken Pakistan economically.

Mr Xi Jinping planned to also visit India and Sri Lanka but he wanted to start his tour from Pakistan. The Chinese prime minister had conveyed his concerns about the political turmoil in Pakistan to the visiting PPP co-chairman Asif Zardari in Beijing, urging him use his good offices to resolve the dispute. Zardari tried his best but failed.

The Chinese President was the third head of state, after the Sri Lankan and Maldives heads of state, which had to cancel their visits due to the dharnas. The IMF team too had cancelled its visit for the same reason.

Do Literature Support Our Case

The downfall of political system has awakened the interest amongst researchers and induced them to take a close look at the effect of political uncertainty on the economic progress and GDP growth rate. Various studies have examined the existence of inverse relationship between political volatility and economic performance. Hibbs (1977) addressed some political issues which were responsible for poor economic activities. Later on, Gupta (1987) discussed the socio-psychological factors which cause the political instability. He also mentioned the effect of such psychological factors on the economic trend. Adverse economic policies harm and destroy the economic growth. Politicians support and promote those policies which are in their own benefits.

Moreover, Alesina & Perotti (1996) commented that as for as private investment is concerned, political instability leads to low growth; it creates risk and uncertainty in the country which results in reduced volume of investment. When the size of investment falls ultimately, the output level also decreases which reduces the size of employment, low income, high prices, stimulates the inflation both of capital and goods markets. Owing to this reduction in domestic productivity the pressure

shifts towards imports more and this might shorten the size of foreign exchange.

The study of Alisena *et al.* (1996) depicted that political instability is the major cause of government's weakness. Political variability creates democratic unrest, frequent elections, intra-party conflicts, and inconsistence regime which lead economic growth to fall.

This socio-political instability has various adverse effects. It not only creates uncertainty in political and legal environment but also disrupts markets. Several other studies have also documented political instability adversely affects economic growth. Similarly, these studies also shed light on the relationship between economic crisis and regimes change and government changes. Government crisis and regime changes have significant effects on economic growth and there is a relationship between economic growth and political instability (Campos & Nugent, 2002; Pei & Adesnik, 2010; Görmüş& Kabaskal, 2010).

Porta *et al.* (2007) founded that the informal political regime inversely affect economy in general and consequently growth. Whereas, the formal instability indirectly influences the rate of economic growth. This study increases the conditional variance flexibility specifications to determine the power of growth in the volatility pattern.

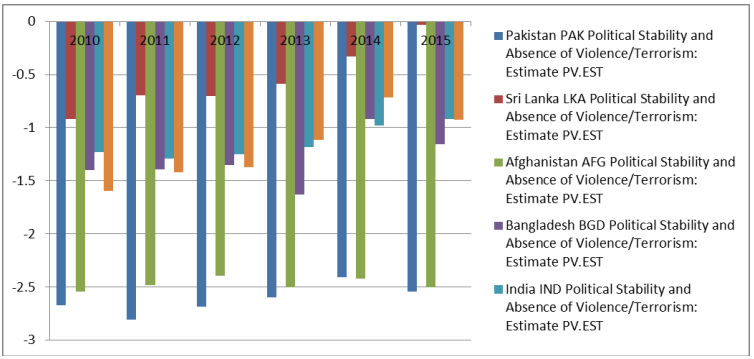
Ali, Hashmi & Hassan (2013) investigated both economic as well as political factors to predict the reasons of volatile economic growth and low investment in Pakistan. The study described that non-economic factors like corruption, political instability, frequent regime changes, energy crisis and political conflicts among parties and institutions have been the major cause of poor economic performance and lower investment. These non-economic factors created uncertainty and made the country risky. Due to this risk and volatility the domestic investors have taken their capital away from Pakistan and they invested in neighboring countries for better return. This capital movement has become the reason of poor economic growth in Pakistan.

Barro (2013) also stressed on corruption free government. He explored that if a country is peaceful and corruption free than investors will be encouraged to invest and it will promote the economic growth of an economy. This will increase the living standard of the masses. Moreover, he was also pointed out that such a peaceful environment and a democratic government is favorable for the investors and general public.

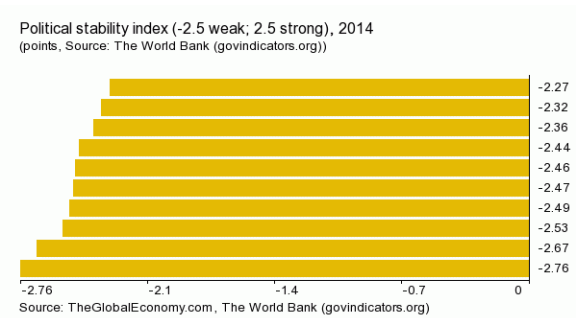
What Data say about Politically Unstable Economies

The data is selected from World development of indicator and the World Bank. The aim of this section is to analyze the effect of political instability in Pakistan. Here we run a comparison of Pakistan with other South Asian counties. We take 5 South Asian countries from the time period 2010 to 2015. As terrorism damage the national structure, it has negative effect on political stability. Stability and Absence of Violence/Terrorism measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism.

Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.



Here we capture that political instability in Pakistan is greater than any South Asain country. In Sri Lanka the absence of violence and terrorism is constantly increasing because politically they are stable then other countries with less absence of violence/Terrorism. Political stability country data from around the world: The average for 2014 was -0.04 points. The highest value was in Liechtenstein: 1.54 points and the lowest value was in Syria: -2.76 points. Below is a chart for 10 lowest value countries:



Notes: 1. DR Congo; 2. Libya; 3. Sudan; 4. Pakistan; 5. Afghanistan; 6. Iraq; 7. Somalia; 8. Yemen; 9. C.A. Republic; 10. Syria.

The index is a composite measure as it is based on several other indexes from multiple sources including the Economist Intelligence Unit, the World Economic Forum, and the Political Risk Services, among others. The underlying indexes reflect the likelihood of a disorderly transfer of government power, armed conflict, violent demonstrations, social unrest, international tensions, terrorism, as well as ethnic, religious or regional conflicts. So it is clear that terrorism, strikes and regime have negative effect on economic growth. Economic growth and political stability are deeply interconnected. On the one hand, the uncertainty

associated with an unstable political environment may reduce investment and the speed of economic development. On the other hand, poor economy may lead to government collapse and political unrest. For all the terrorism and strikes the official estimates of loss in economy is about 43.0 billion $ in 2005-2010.

Official Estimate Of Loss To Economy

Years	Rs. Billion			Total in US$ billion
	Direct Costs	Indirect Costs	Total	
2004-05	67	192	259	4.4
2005-06	78	223	301	5.0
2006-07	83	278	361	6.0
2007-08	109	376	484	7.7
2008-09	114	564	678	8.6
2009-10*	262	707	969	11.5
Cumulative 2005-10	712	2340	3052	43.0

*July - April
Source: Economic Survey, 2009-10, GoP

Political instability reduces the volume of investment, rises inflation; curtail the size of employment and productivity which turns into slower economic activities and volatile future policies. Due to this an uncertain and volatile economic environment gave a bad signal to the local as well as foreign investors not only to curtail investment but also stop and postpone all investment activities in such a risky situation and they prefer to safeguard their capital while investing in a safer destinations. This results in low productivity of output which create high pressure on aggregate demand. Eventually high inflation, pushed unemployment and stimulated poverty in the country is an expected outcome. On the other hand, the election and regime changes have significant effect on the volatility of growth. Although in some literature review it has been observed that these variables have adverse impact on economic growth.

Conclusion and Suggestion

The 2014 PTI sit in protest clearly created an environment of uncertainty in Pakistan that resulted in shying of key investments in Pakistan for the period of the sitins. The demand of resignation of an elected Prime Minister created a dead lock in political solution to the sit in giving lessons to the political elite of Pakistan that protests may have a destructive side for the economy.

More generally, the most significant part of this study is how political instability discourages economic growth, and consequently adversely affects the socio-economic and political environment of a country. Political instability reduces economic growth and this reduction and slow down of economic activities threaten the local and foreign investors to put their investment in such a risky environment. This fall in investment reduces the productivity, savings, and also consumption level because of fall in earning capacity and purchasing power of masses. The political

instability causes inflation and unemployment to rise that creates create social un-rest and uncertainty among the people and this un-rest can lead to general strikes and violence not only against employers but also against Government policies. The rationale class of the society starts criticizing on government plans. These social unrest and strikes will pass on a negative signal to the investors. Consequently, investors hesitate to put their huge investments at stake and risk. Political instability is measured by various factors and determinants such as elections, terrorist attacks, regime changes and strikes in the country over a period.

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9.
Appropriate Exchange Rate Regime for Economic Structure of Pakistan

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Introduction

After the down fall of Bretton Wood System most countries decided to say goodbye to their fixed exchange rate regime to float (Vuletin, 2004). Since then a sizeable literature has been devoted to the choice of appropriate exchange rate regime, for instance, Chang (1999), Fischer (2001), Frankel (1999, 2003), Stockman (2003), Hoffman (2007) Despite all the efforts, determination of appropriate exchange rate regime still remains a question for the developing economies (Frankel, 1999). Particularly, as the globalization -real and financial- is increasing, the question about appropriate exchange rate regime and assuming more importance than ever. The increasing globalization brings complexities of the open economy making appropriate exchange rate regime more crucial as the regime leaves its impact on all other macroeconomic variables(Yagci, 2001).

Analysis of the Global Economies has shown that a couple of developed states (United States, Australia, Canada, Germany, Japan and United Kingdom) adopted free float whereas few developed countries (Denmark, Switzerland, Ireland, Hungry and Hong Kong) have followed fixed regime from 1974 to 2001. Surprisingly the pattern of Gulf Countries (Bahrain, Saudi Arabia, Qatar, and Oman) has been quite stable and they have always adopted the fixed regime (Levy-Yeyati & Sturzenegger, 2001a, 2003). Unfortunately, the developing world is still looking for optimum choice of regime that may be suitable for their economic improvement.

According to (Frankel, 1999) one single regime cannot be considered beneficial for all countries even if they are similar in nature. Every country has its own economics structure, characteristics and economic preferences. So choice of exchange rate regime is a country-specific

concept. It depends upon economic strength, degree of openness, trade volume, capital inflow, source and nature of economic shocks, inflation history, financial development and policy objectives of the country (Yagci, 2001). Empirical literature has evidently shown that oil exporting countries are following fixed regime (Klein & Shambaugh, 2010). Their decision may be rational because they are exporting single commodity and their stages of financial development, capital inflow and policy objectives are same.

The objective of this study is to improve the understanding about choice of exchange rate regime in case of developing countries like Pakistan. Taking theoretical backing from Mundel-Flaming theory of optimal currency area (OCA) this study attempts to identify factors important in determination of exchange rate regime. Much of the literature has been developed in comparison of extreme ends of fixed and floating regime (Hoffmann, 2007) thus ignoring managed float and/or intermediate regimes. This Paper does not hinge on fixed or float rather talks about tendency of the economy towards fixed or float. Ranges of exchange rate regime remain between zero to one (0 to 1) that has been constructed by following Karass (2012). Our study finds that trade openness; foreign exchange reserves, inflation rate and financial development are important determinant.

Theoretical background

There are three different approaches when it comes to adoption of exchange rate regime. One is the Structural approach which focuses characteristics of economic structure of country. This approach is based on theory of optimal currency area (OCA). Under fixed and flexible arrangements, it requires capability to keep internal and external balance, secondly keeps an eye on economic shocks that are caused by fluctuation in trade and deterioration in terms of trade (Mundell, 1961). Basically, these studies conclude size and nature of economic shocks and economic structure of country are main determinants of optimal regime (Frenkel, 1982). These studies suggest if domestic and foreign shocks are real in nature even foreign are nominal in nature this will shift the demand for domestic goods. But if economy is facing nominal domestic shocks, amendment in exchange rate is not required.

Second the credibility and flexibility approach (Pagano, 1988) discuss that the monetary authority has two options to capture trade-off between flexibility and credibility. They can either maximize utility function or minimize cost function. This framework is useful when monetary authority want to choose exchange rate regime between two extreme ends (fixed and flexible).

Third, the bipolar view suggests international capital flow is not sustainable when countries are using intermediate exchange rate regime. So countries should move to extreme range of exchange rate regimes (Obstfeld &Rogoff, 1995).

Classification of regime

We will discuss here two type of classification of exchange rate regime.

MF Classification

Exchange rate regime is classified by International Monetary Fund in three categories for their members. First, Fixed or pegged (with a single currency or basket of currencies), second managed float (intermediate) and third is independent float. These three categories are based on official exchange rate of members and also their policies and flexibilities about exchange rate. Whenever members make any change in their exchange rate they have to report IMF. The basic problem is when countries actually (de-facto) follow different to officially claim (de-jure). This increases the ambiguities in analysis of exchange rate regime and also reduces transparency, effectiveness and performance of research policy. That's why often exchange rate regime is found different from declared regime. Existence of inaccuracy in regime mislead monetary policy, after identifying this problem IMF constructed new classification that have all information about exchange rate, monetary policy and intention of policy on the basis of foreign reserves movement and actual exchange rate.

Alternatives Classification

In 1999, IMF adopted new method to improve earlier classification but its practical usefulness was limited due to insufficient historical data. The flaws of this classification were empirically exposed when (Levy-Yeyati, 2001b) identified 35 countries as free floaters but actually 12 of them were not found free floaters. These 12 countries are amongst the emerging markets. Calvo & Reinhart (2000) found many countries that were following hard peg regime arrangements but they had declared themselves as free floater. Bubula & Otker (2002) construct new classification on de-facto regime by using monthly database of all member countries. The sample period of this classification was limited (1990 to 2001) but this analysis was meaningful and interesting since it differs from Levy-Yeyati's de-facto classification, which ignored official classification of International Monetary Fund (Darne & Ripoll-Bresson, 2004).

Literature Review

It is evidence from history that decision of choosing exchange-rate regimes are not at once and ever, either willingly or unwillingly these are changed often (Vuletin, 2004). Bachetta & Wincoop (1998) for general equilibrium they used dynamic stochastic model in their paper. The study observes government expenditures and technological shocks under different regimes of exchange rate. Authors find that under restricted assumptions level of trade is not affected by exchange rate regime. Secondly, trade is lower under float when fiscal policy is used to stabilize

economy, and third, if preference for domestic bond exists net capital flow will be lower under floating.

The groups that follow stabilization polices (Masson, Goldstein, & Frenkel,1991) there point of view is fixed exchange rate provide more discipline in fiscal policy than flexible exchange rate. A good fiscal policy leads to enhance reserves, these reserves become cause of fiscal extension and fiscal extension appreciates exchange rate. So fixed exchange rate is collapsed, history shows fixed exchange rate mostly fails to discipline fiscal policy and causes devaluation crisis (Vuletin,2004). Studies related to political economic issues (Alberola-Ila & Sanchez, 2001) express that there are hidden theoretical and empirical drawbacks in thoughts of conventional research papers on stabilization policies. Author mentions fiscal authority should spend more when it is socially advantageous. At fixed exchange rate, unstable policies deteriorate reserves and cause debt whereas under flexible exchange rate unsound policies protect themselves through variation in prices and exchange rate. So in this situation fiscal authority requests central bank to help. It is vital for central bank only pre-commit not to accommodate, except for short period.

The study related to financial crises (Chang, 1999) argued crises emerge in capital market due to "Bad policy" and "wrong predictions". Bad policy augment is that debt burden renders fixed exchange rate unsustainable whereas wrong prediction refers to public trust on different institutions and projects. If people get back all deposits in fear of bankruptcy a cascade effect erupts and floating regimes becomes inevitable.

Beyond doubt, economic environment of each country differs from the other that rules out the possibility that a single regime is appropriate for each country. This has been highlighted by many researchers, for instance, Fischer (2008) indicate a period (1999 to 2006) in their study 15 countries shift from floating exchanges to intermediate and 6 countries move intermediate to floating exchanges. Frankel (2003) suggests in his study at the same time no single currency regime is beneficial. Husain *et al.,* (2005) recommends in developing countries relatively pegged exchange rate is better for policy implementation and also helped to maintain inflation at lower level. Another study (Berg *et al.,* 2000) indicates if a country has sustainable and flexible fiscal policy, international reserves and low capital mobility than fixed exchange rate is good for economy. And if the country has same economic conditions and economic shocks as its trade partners have, fixed exchange rate is appropriate otherwise flexible is good as it serve as a shocks absorber.

Flexible exchange rate is considered as shocks absorber (Edwards, 2005), in situation of domestic over production economy enhance its exports by devaluation of its exchange. The economic literature postulates that macro-economic targets - inflation, output, economic growth - can be achieved by different exchange rate policies. There is also link between output and exchange rate, fixed exchange rate and low inflation attract investors and higher level of investment push economy at growing path.

However, a key point remains there that if exchange rate is pegged at wrong level then resources could be misallocated. However, this demands attention that investment increases in economies with fixed exchange rate regimes but productivity and per capita growth remains low as compare to flexible exchange rate (Ghosh et al.,1997).

Hussain (2006) identifies important factors that affects exchange rate regime and also worked on choosing right regime for Pakistan. The study used "score card method" and compares economy of Pakistan with other 52 countries on the basis of size of economy, trade orientation, financial integration, fear of floating and macroeconomic stability. Paper finds the case against peg regime and concludes that Pakistan is not a natural candidate of fixed exchange rate regime. In policy recommendation this study recommends flexible exchange rate regime.

The countries with more stable and developed financial markets get benefits from flexible exchange rate regime in term of improving capability of adjusting to real shocks, without sacrificing economic stability that a credible fixed exchange rate may require. A study (Stotsky *et al.,* 2012)found strong relationship between non-agricultural growth and exchange rate regime. Author states in his paper that there is positive relationship between economic growth and flexible exchange rate in African countries but in some specification real exchange rate is significant. Over all, the paper suggests that appreciation is bad and overvaluation is damaging in non-agricultural economies. It is true that exchange rate regime matter for growth but reforms packages more.

Karass (2012) conducted an empirical study on 66 developing and developed economies. The study advocates that under fixed exchange rate regime performance of fiscal policy is effective and ineffective under flexible exchange rate regimes. The reason behind is that under flexible exchange rate regime government expenditure crowds out private investment.

Aliyav (2015) studies determinants of exchange rate regime in resource abundant and resource scarce countries by using multinomial logit regression. Using data of 145 countries from 1975-2004 findings point out that resource rich countries have more probability of having fixed regime and resource poor countries are less likely to have fix regime. Moreover, the author finds, independence of central bank and democracy has stronger and significant role in resource rich countries as compare to resource poor countries.

With the help of the literature reviewed we can build an argument that every country has its own economic conditions, trade orientation, financial integration and level of development thus choice of exchange rate regime is a country specific issue. Against this backdrop, the objective of this study is to investigate appropriate exchange rate regime for Pakistan. All this warrants that Pakistan should make individual decision to follow exchange rate regime by considering its peculiar economic condition and desired policy objectives instead of following other developing or developed countries.

Data Source and methodological frame work

The data on exchange rate has been taken from "Penn world table version 8.0 and IMF-IFS. While the data on real GDP, foreign exchange reserves, inflation, are attained from WDI and Pakistan Economic Survey and International Financial Statistics (IFS). Data on fiscal deficit has been collected from State Bank of Pakistan website whereas data on financial openness (capital account openness) comes from Chinn-Ito website. Sample starts from 1984 to 2012. The reason of starting from this year is exchange rate regime

Methodological frame work

Stationary test is the first step in econometric analysis. We can say a series is stationary if it has constant variance and its mean value should also be zero. If our series is not stationary then analysis is not valid the results would be called spurious regression. For example, if series has only two variables with decreasing or increasing trend over time; the regression result confirms with high value of R^2 that both series are highly interconnected but actually they are totally unrelated. The outcome of unit root tests shows that all variables have different order to integration I(1) and I(0) so we will apply ARDL because of OLS is best if all variables are I(0) and Johansen can be applied in case of only I(1) (Johansen,1988, 1991).

The functional relationship of variables is given under;

$$ERR_t = a + \beta_1 SIZE_t + \beta_2 TOPEN_t + \beta_3 INF_t + \beta_4 KaOpen_t + \beta_5 FBGDP_t + U_t \quad (1)$$

Where, ERR_t denotes exchange rate regime at time particular time t) and a is intercept term $\beta etas$ are coefficients of variables, *Size* stands for size of economy (real gdp), *Toppen* stands for trade openness and liberalization, *Inf* refers inflation rate, *KaOpen* (capital account openness) is used as proxy of financial openness, *Fbgdp* is the proxy of fiscal shocks to economy and U for error term.

Estimation Technique

For long run relationship between Exchange rate regime and its predictors is found by ARDL bound testing approach by following the given equation;

$$dERR_t = b_{11} + b_{12}(ERR)_{t-1} + b_{13}(LSIZE)_{t-1} + b_{14}(LTOPEN)_{t-1} + b_{15}(INF)_{t-1} + b_{16}(KaOpen)_{t-1} + b_{17}FBGDP_{t-1} + b_{12}\sum_{i=0}^{n} d\,(ERR)_{t-i} + b_{13}\sum_{i=0}^{n} d\,(LSIZE)_{t-i} + b_{14}\sum_{i=0}^{n} d\,(LTOPEN)_{t-i} + b_{15}\sum_{i=0}^{n} d(INF)_{t-i} + b_{16}\sum_{i=0}^{n} d\,(KaOpen)_{t-i} + b_{17}\sum_{i=0}^{n} d(FBGDP)_{t-i} + \mu_{11} \quad (2)$$

In the above equation i ranges indicates chosen lag length, dSymbolize as operator of first difference, $\alpha 11$ is the drift component and $\mu 11$ is random term.

Construction of dependant variable

Exchange rate regime is setting of nominal exchange rate that is decided by central bank either nominal exchange rate is automatically chosen by demand and supply of currency or it is fixed at any point by central authority. Here we use de-facto (opposite of de-jure) classification of exchange rate regime by Eduardo Levy- Yayati and Federico Sturzenegger (Levy-Yeyati, 2003).

Most of the studies on exchange rate regimes have used Dummy variable for exchange rate regimes, that is, 0 for fixed and 1 for flexible. But Exchange rate regime cannot be exact "0 or 1" as in practice it may be between these two extremes. For this cogent reason, in this study we attempt to convert data set in frictions (from zero to one) we put one for fixed and zero for flexible. So we can easily decide which regime country is following, for instance, Pakistan and United States both are using de jure flexible Exchange rate regimes.

To construct this variable we follow Karras (2012). For example According to his data set the value for USA is 0.10 in 2013 and value for Pakistan is 0.24 in same years it means both countries are following flexible Exchange rate regimes difference is this US following 10 percent fixed or 90 percent flexible and 0.24 means Pakistan is following 24 percent fixed or 76 percent flexible since zero means 100 percent flexible or *pure float.*

We used monthly average data of Exchange rate. If nominal Exchange rate (PKR/$) is same as previous and next month we put "1" (fixed) if current, previous and next value is not same then we put " 0" (flexible) and then we find average value that will indicate Exchange rate regimes for that particular year.

Results and discussions

Data series should be normally distributed is the first step of econometric analysis. In descriptive statistics, we analyze the values of Jarque Bera test; the value of variables has found to be insignificant it means all data series are normally distributed.

Table 1. *Descriptive Statistics*

Name of Variables	*ERR*	*LSIZE*	*LOPPEN*	*INF*	*LFER*	*KaOpen*	*FBGDP*
Mean	0.618035	6.372325	0.345383	8.497174	0.674129	-1.211838	-2.334483
Std. Dev.	0.217982	0.174531	0.027097	3.958215	0.270353	0.130217	2.765382
Skewness	-0.944168	-0.007421	-0.298005	0.719759	-0.764964	-5.102520	0.645222
Kurtosis	3.184572	2.069192	2.693171	3.646957	2.648655	27.03571	4.096676
Jarque-Bera	4.649848	1.119389	0.542990	3.217238	3.182824	823.9123	3.465434
Probability	0.097791	0.571383	0.762239	0.200164	0.203638	0.308614	0.176803
Sum	19.15909	197.5421	10.01611	263.4124	20.89801	-35.14331	-67.70000
Sum Sq. Dev.	1.425479	0.913832	0.020558	470.0240	2.192723	0.474778	214.1255
Observations	29	29	29	29	29	29	29

And also the estimated values of Kurtosis and Skewness indicate the normality of data. Stationarty of data is also required for valid analysis. There are four popular tests that can be applied to check unit root in data series. ADF, Phillips-Perron (PP) and KPSS these all test are equally valid for unit root. These tests actually reports about integration order of variables. In this study, we used ADF test that concludes order of integration is mixed. We find that the variable of inflation, foreign exchange reserve and capital account openness on level and remaining variables found to be stationary at 1st difference. So when we find I(0) and I(1) order of integration then we apply Auto Regressive Distributed Lag (ARDL). Output of unit root tests are given in Table 2.

Table 2. *Statistics of ADF*

Name of Variables	Intercept		Intercept & Trend	
	t-Stat	Prob.	t-Stat	Prob.
ERR_t	-5.348013**	0.0018	-5.552009**	0.0005
$LSIZE_t$	-3.521759**	0.0145	-3.477914**	0.0608
$LOPEN_t$	-2.744482**	0.0790	-6.752136*	0.0000
INF_t	-3.905330*	0.0068	-3.821596*	0.0330
$LFER_t$	-6.353556*	0.0000	-6.250032*	0.0001
$KaOpen_t$	-5.291503*	0.0000	-5.188035*	0.0013
$FBGDP_t$	-4.353594**	0.0002	-4.260462**	0.0003

Note: * is indication of having stationary on level and ** indicates having stationary on first difference

Optimal Lag Length

After checking the stationary of series, we have to see optimal lag length. Optimal lag length indicates that how many lag should be use in model. The results of above table shows three lag should be used in model.

Table 3. *Optimal Lag Length*

Lag	*LogL*	*LR*	*FPE*	*AIC*	*SC*	*HQ*
0	-22.92365	NA	2.00e-08	2.137403	2.470454	2.239220
1	93.23331	165.9385*	1.85e-10*	-2.659522*	0.004887*	-1.844986*

Notes: * indicates lag order selected by the criterion; LR: sequential modified LR test statistic (each test at 5% level); FPE: Final prediction error; AIC: Akaike information criterion; SC: Schwarz information criterion; HQ: Hannan-Quinn information criterion

We select optimal lag for our model on the on the basis of lowest value of H-Q Criterion. After selecting lag length criteria, we evaluate long term dynamics of variables under consideration.

Table 4. *ARDL Bounds Testing Approach*

Estimated Models: $ERRt = f(Sizet, Opent, Inft, Fert, KaOpent, FBGDPt)$				
Optimal lags			(1,0,0,0,0,0,0)	
Statistics for W			28.4872 *	
Statistics for F			4.0696 *	
	Critical Bounds For F– Statistics		*Critical Bounds For W – Statistics*	
Significance Level	*Lower Critical Bound*	*Upper Critical Bound*	*Lower Critical Bound*	*Upper Critical Bound*
5 per cent	3.0274	4.5846	21.1915	32.0925
10 per cent	2.5055	3.8412	17.5385	26.8881
DIAGNOSTIC TESTS				

Serial Correlation	1.7289[.189]	R^2	.54368
Functional Form	.10935[.741]	*Adjusted - R^2*	.38397
Normality	7.7463[.021]	*F – Statistics*	3.4042
Heteroscedasticity	.49442[.482]	*DW – Statistic*	2.2808

Notes: Asterisks are the indication of significance of values, ***, **, and *, and show significance at 1%; 5% and 10% levels respectively. The Probability Values are given in { } brackets

After lag length criteria, now we are going to explore long run relationship among exchange rate regime and its determinants by using latest co-integration approach. As the null hypothesis of the test is "No co-integration" and it only be rejected only if calculated value of F-statistics is higher than upper critical bound value. The above Table reveals that the calculated value of F-statistics higher than its upper critical bound at 10% level of significance: 4.06 > 3.84 so the null hypothesis is rejected and alternative hypothesis has been accepted and value of W- statistics is also higher than its upper critical Bound at 10% level of significance: 28.48 > 26.88. It means the model has long-run relationship, in other words, exchange rate regime has stable and long run link with independent variables. The diagnostics reveal that there is no problem with Heteroscedasticity and the error term is normally distributed. Serial correlation and the functional form of model are also correct.

ARDL (1, 0, 0, 0, 0, 0, 0) selected based on Schwarz Bayesian Criterion. All variables except exchange rate regime and inflation are taken in Natural logarithmic form. $ERRt$ is dependent variable, while $LSIZE_t$, $LOPEN_t$, $INF_t, LFER_t$, $KaOpen_t FBGDP_t$ are independent variables. Long run and short run results are given below:

Table 5. ***Long Run and Short Run Dynamics***

Estimated Long Term Coefficients using the ARDL Approach			*Error Correction Representation for the Selected ARDL Model*		
Dependant Variable:ERRt			*Dependant Variable:ΔLERRt*		
Name of Variables	*Coefficient*	*P-value*	Name of Variable	*Coefficient*	*P-value*
$LSIZEt$	-.28665	[.341]	$dLSIZEt$	-.26393	[.353]
$LOPENt$	.28779	[.073]*	$dLOPENt$	.26498	[.052]*
$INFt$	-.064476	[.024]**	$dINFt$	-.059365	[.021]**
$LFERt$	.89984	[.024]**	$dLFERt$	.82852	[.017]**
$KaOpent$	-.18183	[.532]	$dKaOpent$	-.16742	[.524]
$FBGDPt$	.023024	[.283]	$dFBGDPt$	.021199	[.240]
C	1.2280	[.564]	ECM_{t-1}	-.92074	[.000]***
Diagnostics for ECM					
R-squared	.69685		*Mean Dependent Variable*	-.0089286	
Adjusted R-squared	.59074		*S.D. Dependent Variable*	.26995	
S.E. of Regression	.17270		*Akaike Information Criterion*	6.1546	
Sum Squared Residual	.59647		*Schwarz Bayesian Criterion*	.82583	
Log Likelihood	14.1546		*Durbin-Watson Stat*	2.2808	
F-statistic	6.5676		*Prob. Value (F-statistic)*	[.000]	

Notes: *; **, and *** reveals significance level of test statistic at 10%, 5% and 1% respectively.

The results show that coefficient of openness of economy is positively related to exchange rate regime and its impact on regime selection is statistically significant. Positive sign of openness push regime towards fixed because in this study "1" indicates fixed and "0" stands for flexible regime same as Karass (2012). The magnitude of coefficient shows that one percent change in openness push economy 0.287 percent in favor of fixed regime. So as the magnitude of coefficient is strong it would have more influence on exchange rate regime determination. Our results match with Aliyev (2015), (Walker, 2003), (Worrell *et al.,* 2000), Leblang (1999) and Malvin (1985).

The coefficient of SIZE of economy is negative but statistically insignificant. It does not matter whether it has large size of economy or small that can determine the exchange rate regime. The magnitude of coefficient is also very small; it can be interpreted as one percent change in size of economy can change 0.286 percent towards fixed regime. However, size of economy influences the exchange rate and also matter for regime determination. In case of other developed countries number of studies support this negative relationship for instance Aliyev (2015), (Walker,2003), (Worrell et al., 2000), and Malvin (1985). These findings of Size and openness are consistent with theory of optimal currency area (OCA).

Inflation is negative and statistically significant. Coefficient indicates one percent increase in inflation force exchange rate regime change 0.064 percent in flexible direction. It is difficult to maintain stable exchange rate regime under higher consumer prices. In flexible regime countries have to bear increasing inflation rate but if an economy requires low inflation rate than country has to adopt fixed exchange rate regime. If a country has historically experienced of high inflation than it can get benefit from peg (Yagci, 2001) but weak central bank faces many hurdles in maintaining inflation at low level. Generally, Pakistan did not face high inflation so the results are also in line with intuition that movement toward flexible regime is better. Studies such as Aliyev (2015), (Worrell et al., 2000) and Malvin (1985) support negative sign of inflation but contrast with Leblang (1999).

The coefficient of foreign exchange reserve is positive and statistically significant. Magnitude of coefficient is very strong showing that a one percent increase in FER will push regime 0.899 percent towards fixed. In other words we can say country with more foreign exchange reserves has more likelihood to adopt fixed regime. Literature suggests if country has high ratio of foreign exchanges to GDP then fixed exchange rate regime is preferable otherwise opposite is best. Pakistan, generally, does not hold abundant foreign exchange reserves due to consistent trade deficit thus to adopt and maintain fixed exchange rate regime is difficult for Pakistan.

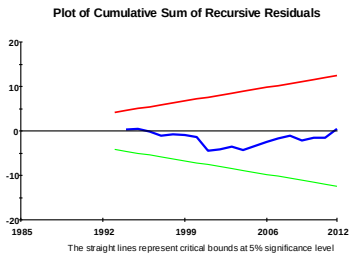
KaOpen index measures country's degree of capital account openness. Here Capital account openness appears with insignificant and negative coefficient, for this analysis it means financial openness (KaOpen) is not affecting choice of exchange rate regime, but the negative sign having

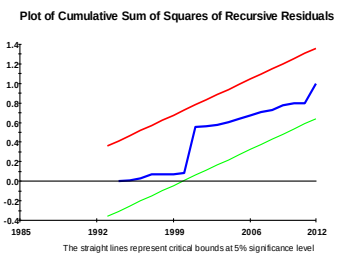
indication toward flexible. These results may be due to low level of openness furthermore, there is almost no variation in Chin-Ito Index.

Interestingly, Long run and short run dynamics are qualitatively same. These three variables $dLOPENt$, $dINFt$ and $dLFERt$ are significant in short run. In short run, our main focus is the value of ECM which is significant and negative as required. The coefficient authenticate that 92 percent of the divergence will converge to equilibrium in one year.

Diagnostic of CUSUM and CUSUM squares

Stability test: S tability of long run coefficient has been shown with the help of cumulative sum of recursive residuals (CUSUM) of cumulative sum of squares recursive residuals (CUSUM SQUARE) test.





The diagnostics of CUSUM and CUSUM squares confirm the stability of our model at conventional 5 percent level. This it can be safely said there is no structural break in the sample period under analysis which is more suitable for policy decisions.

Conclusion

This study has empirically analyzed economic, financial and political determinants of exchange-rate regime in Pakistan over the period of 1984 to 2012. Using "Auto Regressive Distributed Lagged" approach the study confirms that openness, foreign exchange reserves, rate of inflation and financial development are important determinant of exchange-rate regime for economy having features like Pakistan.

Our empirical findings suggest that appropriate regime for Pakistan is managed float au lieu de fixed one. Interestingly, the results are mixed so the absence of any clear-cut conclusion demands more caution while deciding about regime. Both extreme ends – peg and free float – seem unfavorable for Pakistan. Openness and foreign exchange reserves are in favor of regime towards fix but at the same time inflation appears with negative sign, it is the indication towards flexibility. The results are alike Hussain (2006) as his study also informs that peg (hard fix) is not suitable for economy with Pakistan's characteristics and increase in regime flexibility would likely to improve its economic performance. The results do not change when we add governance and political stability for robustness check.

W reiterate that economic theories are not sufficient to give confirm answer to policy makers in prediction of appropriate regime. And there is no single theoretical approach that can claim of its victory and superiority over another (Ouchen 2013). Some studies find support from OCA approach and others acquire evidence from "Bipolar view and Trade off" (Fisher, 2001). The choice of appropriate exchange-rate regime is not clear-cut; it is much complicated, continuous revision is required in empirical and theoretical studies.

Appendix

Table 6. *Variables and Transformation*

Variables	Names of the Variables	Transformation	Data Source	Data Range
ERR_t	Exchange Rate Regime	[See Karass 2012]	PWT 8.0 and IFS	1984 – 2012
$LSIZE_t$	Size of Economy	LN [Real GDP]	WDI [2013]	1984 – 2012
$LOPEN_t$	Trade Openness	LN[Imports +Exports/Real GDP]	WDI [2013]	1984 – 2012
INF_t	Inflation	Consumer Price Index	WDI [2013]	1984 – 2012
$LFER_t$	Foreign Exchange Reserves	LN [Foreign Exchange Reserves Gold excluded]	WDI [2013]	1984 – 2012
$KaOpen_t$	Capital account openness	Ito-Chin Methodology	Ito-Chin [2013]	1984 – 2012
$FBGDPt$	Fiscal Shocks	[Fiscal Budget Deficit to GDP]	SBP	1984 – 2012

Table 7. *Robustness check*

Name of Variables	1st Model [Prob.]	2nd Model Prob.]	3rd Model [Prob.]	4th Model [Prob.]	5th Model[Prob.]
$LSIZE_t$	-0.20568[.463]	-0.25733[.429]	-.45780[.174]	-.058348[.907]	-.45243[.132]
INF_t	-070071*[.027]	-.066917*[.018]	-.064306* [.029]	-.063485*[.016]	-.062554*[.057]
$LFER_t$	0.97730*[.030]	0.91263*[.022]	0.87535*[.035]	0.88703*[.017]	0.86915*[.061]
$LFBGDP_t$	0.021020[.333]	.020842[.331]	0.014265 [.511]	0.020846[.292]	0.009532 [.663]
$LOPEN_t$	0.29436*[.074]	0.28552*[.073]	------	0.27207*[.907]	------
$GOVER_t$		-0.13576[.875]	-.0070969[.994]		
PS_t				-.47968[.708]	
LFD_t					1.2893*[.069]
Optimal Lags	1,0,0,0,0,1	1,0,0,0,0,0,0	1,0,0,0,0,0	1,0,0,0,0,0,0	1,0,0,0,1,0
			DAIGNOSTIC TEST		
R^2	0.51	0.53	0.43	0.51	0.54
F-Statistic	3.3690	3.2828	2.7062	3.2790	3.7123
DW-Statistic	2.26	2.28	2.10	2.28	2.10
ECM(-1)	-0.90	-0.93	-0.94	-1.00	-0.82
Serial Correlation	2.349{.125}	1.693{.193}	0.906{.341}	2.123{.015}	0.417{.518}
Functional Form	2.202{.138}	0.256{.613}	0.016{.896}	0.548{.459}	0.010{.919}
Normality	6.226{.044}	7.88{.019}	3.734{.155}	6.15{.046}	1.154{.562}
Heteroscedasticity	0.842{.359}	0.405{.524}	1.271{.259}	0.4140{.52}	2.677{.102}

Notes: * indicates that particular variable is significant in regression and the values in the brackets{} are P-values

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10.
How Government Policy and Demographics affect Money Demand Function in Bangladesh

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Introduction

One of the most crucial problems, of developing and developed countries, is a problem of estimation of money demand function. Why stability is considered an important for money demand function? An extensive volume of research has been done by the researchers to estimate money demand function and its stability. Due to difference in methodologies, the results had been mixed and researchers could not reach at the same conclusion. The other reason of dissimilar results is different data time spans. The earliest theory presented by Fisher (1911) is quantity theory of money labeled as transaction demand for money. He ignored interest rate and focused on only income in his theory as a main determinant of money demand. The money demand is inelastic to interest rate changes. The general form of this theory can be stated as,

$$MV=PT \qquad (1)$$

Marshall (1923) and Pigou (1917) did work on Cambridge cash balance approach of money demand. This theory also represents the connection between total production of goods, total amount of money, the price level and how money moves in any economy. Cambridge approach focuses on individuals' income which they want to hold. The individuals do not suffer from institutional limitations i.e. the use of credit cards by individuals.

Keynes (1936) introduced three motives of money demand in his famous book "The General Theory of Employment, Interest and Money". Those motives are used as, transactional, precautionary and speculative purposes. Keynes theory (1936) is generally known as *liquidity*

preference theory. In opposite to Fisher, Keynes introduced another variable affecting money demand i.e. interest rate.

Portfolio theories emphasized that the prime function of money is store of value. Friedman (1956) and Tobin (1958) introduced the portfolio theories to determine demand for money. They argued that the money which people hold is necessarily a part of their portfolio assets. Compared with other assets, money proposes various combinations of risks and returns.

We incorporate variables like fiscal deficit, exchange rate and population in addition to income and interest rate in our model to determine money demand function in the long run. For analysis, this study employs time series data for the period ranges from 1975 to 2013.

Significance of the study

The most disputed issue is the demand for money and its empirical analysis in developing economies. The literature available on this subject is rich and robust. The monetary policy cannot work properly without stable money demand function.

The interest rate increases when the international economies crash or any domestic economy deals with depression/recession. This situation raises some questions, such as "what is the function of monetary policy? What is the reason of economic boom and recession? Can money be used as a tool to boost growth empirically in developing countries? The above questions require proper functioning of monetary policy and particularly the money demand function. The quantity of money demand decides that how much this quantity can be used to stimulate economic growth in developing countries. Monetary policy works efficiently with stable money demand function. The steady-state relationship between money demand and its determinants determines the success of the policy (Baharumshah, *et al.* 2009).

Theoretical Foundation of the Study

The previous studies concluded the relationship between demand for money and its determining factors in long run. Some literature is discussed here.

Siddiki (2000) made analysis of money demand for Bangladesh by employing ARDL Bound Testing approach during 1975-1995. The variables like, income, interest rate, unofficial exchange rate were employed to determine money demand function for analysis. The results support the presence of co-integration among variables. The findings revealed that all independent variables influence demand for money in long run. Ahmed (2007) examined the function of money demand using Engle-Granger test for Bangladesh over the period ranges from 1980-2006. The results explored that interest rate; inflation rate and income have an effect on demand for money in long run. Interest rate and inflation affects negatively while income responds positively to money demand in the long run.

Miah (2011) estimated narrow and broad functions of money demand for Bangladesh using quarterly data from 1999 to 2005. The empirical results showed that there exists stable connection between monetary aggregates (M1, M2 and M3) and income, interest rate, exchange rate. The variables are co-integrated with MI and M2 but it is not so with M3. No stability is found for all monetary aggregates, used in this study. Alkiswani (2001) empirically investigated the function of narrow money demand using the quarterly data for Syria over the period 1974-1994. The Error Correction Modeling and Co-integration approach were adopted to estimate the short run and long run relationship respectively. Positive correlation was found between real income and money aggregate (M1), while the coefficient of inflation was negative. The exchange rate and interest rate did not respond to money demand. Nwaobi (2002) employed Johansen and Jusilius maximum likelihood approach of co-integration to observe long run link among demand for money, rate of interest, price level and real income in Nigeria for the period ranges from 1960 to 1995. The stable money demand function is observed both in long run and short run and income is proved most suitable scale variable in determining money demand function. Economidou& Bahmani-Oskooee (2005) investigated the function of money demand for Greece using quarterly data during 1975-2002. The findings showed the existence of co-integration between money demand and its determining factors. Positive correlation was found between real income and money aggregates while the coefficient sign of interest rate was negative. However, the M1 monetary aggregate remained stable rather than M2 in Greece.

Khrawish *et al.* (2012) examined the link between budget deficit and money demand using co-integration and vector error correction modeling techniques during 1992 to 2010. The variables like real GDP, consumer price index, real government expenditures and interest rate (IR) were used to determine money demand function. The findings revealed significant and positive long run relationship between real money demand and real GDP, budget deficits, Internal Debt and external debt. And negative long run link was found between money demand and consumer price index, real government expenditure and deposit rate (IR).

Tang (2007) estimated the factors affecting money demand for ASEAN-5 economies i.e. Thailand, Malaysia, Singapore, the Philippines, and Indonesia during 1960-2005. The co-integration was found between real money balances and exchange rate, inflation, real income in Malaysia, the Philippines and Singapore. The remaining two countries showed no co-integration. In short run, money demand function remained stable in all countries.

Valadkhani (2008) examined the money demand function for Asian-pacific region of six countries i.e. China, Japan, Malaysia, the Philippines, Singapore and Fiji. The purpose of this study was to explore factors of money demand for both short and long run namely real income, rate of inflation, interest rate and real effective exchange rate using panel data from 1975-2002. Co-integration was observed between demand for money and its determining factors after applying Engle-Granger

technique. The ECM test revealed that in short run, only income, inflation and interest rate effects money demand (M2) significantly.

Money demand function is determined by the various macroeconomic factors. These factors can be interest rate, exchange rate, fiscal deficit, financial innovation, inflation, real income, external and internal debt, tax revenue, Investment, energy crises, oil shocks etc. The relationship among these variables has been of vital concentration for the researchers. The purpose of these researches is to examine the faction, importance and effect of these variables on money demand and its stability. In 1963, Nobel Laureate, Robert Mundell (1963) argued that exchange rate could work in determining the money demand function. He anticipated the idea that along with income and interest rate, exchange rate could become a major determinant of money demand.

At present the researchers are much concerned to sort out the relationship between fiscal deficit and money demand. The Keynesian proposition and Ricardian equivalence hypothesis provide a base to observe the link between money demand and fiscal deficit. These two approaches can be tested empirically. We incorporate fiscal deficit in our model in addition to income, interest rate and exchange rate. Population growth also affects money demand function (Faridi & Akhtar, 2013). In this thesis we incorporate urban and rural population in our model as independent variables to get some unique and interesting results using ARDL approach.

In this study we employ exchange rate, fiscal deficit, urban and rural population along with interest rate, real income as independent variables to determine the money demand function for Bangladesh. We have applied ARDL approach to examine long run and short run results simultaneously. We investigate the function of money demand and its stability empirically for Bangladesh. This would be a new addition in the previous literature of money demand function.

Method and Procedure of the Study

Model Specification

The functional relationship of variables is given under.

$$LMON_t = f(LFISCDEF_t, LGDPPC_t, LEXCR_t, LINT_t, LURB_t, LRUR_t)$$

Whereas,

LMON= log (Money demand (as a percentage of GDP))
LEXCR= log (Official exchange rate (LCU per US$))
LGDPPC= log (Per Capita GDP)
INT= Real Interest rate
LFISCDEF= log (Fiscal deficit (as a percentage of GDP))
LURB = log (Urban population as (% of total population))
LRUR = log (Rural Population as (% of total population))

Data Source

The time series data on fiscal deficit, official exchange rate, GDP per capita, urban population, rural population, real interest rate and money demand (M2) is obtained from Word Development Indicators (2015). The data duration is from 1975-2013 for Bangladesh.

Estimation Techniques

Ng-Perron for Unit Root Problem

Ng & Perron (2001) build four kinds of tests, based on GLS de-trended method of ERS. They used this method in order to develop proficient version of updated version of Phillip Perron test. It is relatively easy to apply and preferred alternative to the traditional ADF and PP tests. This test gives more robust results. The other proficiency of this test is having high power than Phillip Perron test, when the value of φ moves towards one.

Estimating Co-integration using Autoregressive Distributed Lag Model (ARDL)

The Autoregressive Distibuted Lag (ARDL) modelwas extended by Pesaran *et al.* (2001). This approach usually deals with single Co-integration. In Johnson approach, all variables are co-integrated at I(1). In ARDL approach it is not so. This approach is applicable when we have I(0) and I(1) in our set. However to avoid the spurious relation between money demand (M2) and its determining factors, the researcher analyst considered Autoregressive Distibuted Lag (ARDL) co-integration approach for reliable results in short run and long run equilibrium.

A general form of all variables with relation to money demand is given as below:

$$\Delta LMON_t = \alpha_{10} + \alpha_{11} LMON_{t-1} + \alpha_{12} LINT_{t-1} + \alpha_{13} LEXCR_{t-1} + \alpha_{14} LFISCDEF_{t-1} +$$

$$\alpha_{15} LGDPPC_{t-1} + \alpha_{16} LRUR_{t-1} + \alpha_{17} LURB_{t-1} + \beta_{11} \sum_{i=1}^{p} \Delta LMON_{t-i} + \beta_{12} \sum_{i=0}^{p} \Delta LINT_{t-1} +$$

$$\beta_{13} \sum_{i=0}^{p} \Delta LEXCR_{t-i} \beta_{14} \sum_{i=0}^{p} \Delta FISCDEF_{t-i} + \beta_{15} \sum_{i=0}^{p} \Delta GDPPC_{t-i} + \beta_{16} \sum_{i=0}^{p} \Delta LRUR_{t-i} + \beta_{17} \sum_{i=0}^{p} \Delta LURB_{t-i} + \eta$$

The modified equation for short run is given as below:

$$\Delta LMON_t = \beta_{10} + \beta_{11} \sum_{i=1}^{p} \Delta LMON + \beta_{12} \sum_{i=0}^{p} \Delta LFISCDEF_{t-i} + \beta_{13} \sum_{i=0}^{p} \Delta LINT_{t-i} + \beta_{14} \sum_{i=0}^{p} \Delta LGDPPC_{t-i} +$$

$$\beta_{15} \sum_{i=0}^{p} \Delta LRUR_{t-i} + \beta_{16} \sum_{i=0}^{p} \Delta LURB_{t-i} + \beta_{17} \sum_{i=0}^{p} \Delta LEXCR_{t-i} + \gamma_{11} ECM_{t-1} + \varepsilon_1$$

ARDL bound testing approach by Pesaran *et al.* (2001) is used for attaining robust results and reliable estimates of the long run coefficients in case of small sample. The short run estimates are also observed. We have three situations here

i. All of the series are I (0), and hence stationary, here we simply use the OLS technique because our data is stationary at level.

ii. All of the series are integrated at first difference e.g. I(1) but they are not co-integrated then we estimate standard regression model with OLS.
iii. All of the series are integrated of the same order and they are also co-integrated, here we use two types of model. First OLS regression model to observe the long run relationship among variables and second error correction model (ECM) to investigate the short run dynamics.

What do we do in such situation if we want to extract both long and short run relationship using one statistical technique? This is where the ARDL model enters the picture. That's why we prefer to use this approach to avoid autocorrelation and endogenity problems.Therefore in this study we use ARDL bound testing approach instead of panel data approach.

Data Analysis and Interpretations

The results of descriptive statistics have been shown in table 1. The estimated values of Kurtosis and Skewness indicate the normality of data. The Jarque- Bera is usually employed to observe the normality of data and insignificant values of Jarque- Bera test exposed that data series is normally distributed except fiscal deficit and real interest rate. After checking the normality, the unit root test is applied to expose the problem of unit root in data series.

Table 1. *Descriptive Statistics*

Series	LMON	LRUR	LGDPPC	LFISCDEF	LEXCR	INT	LURB
Mean	3.366727	4368.657	95.91936	-0.343780	3.628831	0.820744	300.3923
Std. Dev.	0.588295	66.13940	2.965540	0.196631	0.552477	0.844594	28.01038
Jarque-Bera	1.691555	1.541997	4.604044	19.80064	2.511359	41.12441	4.289128
Probability	0.429223	0.462551	0.100056	0.000050	0.284882	0.000000	0.117119

Th Ng-Perron technique is used here to check the stationary in data series. The estimates are shown in table 2. The results declare that at level specification per capita GDP, rural population, exchange rate and fiscal deficit are witnessed as stationary but money demand, interest rate and urban population are witnessed as non-stationary variables. However, all variables at first difference specification are observed as stationary. The results are shown below:

Table 2. *Ng-Perron Unit Root Test*

Ng-Perron Test Statistics				
Variable	At Level			
	MZa	MZt	MSB	MPT
LMON	1.40835	1.61924	1.14974	96.9891
LGDPPC	-14.9658	-2.47504	0.16538	2.57712
LFISCDEF	-18.1398	-2.93544	0.16182	1.62387
LEXCR	-7.36609	-1.71951	0.23344	4.01518
INT	-3.32431	-1.19864	0.36057	7.29544
LURB	1.13115	1.50281	1.32856	120.545
LRUR	-7.76968	-1.74571	0.22468	3.93803

Table 2. *Ng-Perron Unit Root Test (Continue)*

At First Difference				
Variable	MZa	MZt	MSB	MPT
ΔLMON	-8.45356	-1.98065	0.23430	3.17979
ΔLGDPPC	-11.0863	-2.31432	0.20875	2.36539
ΔLFISCDEF	-15.1034	-2.74629	0.18183	1.62876
ΔLEXCR	-7.64355	-1.93279	0.25287	3.28664
ΔINT	-18.1074	-3.00771	0.16610	1.35748
ΔLURB	-24.1054	-3.39522	0.14085	1.26906
ΔLRUR	-17.3173	-2.52403	0.14575	2.83452
Asymptotic Critical Values				
Level of Significance		1 Percent	-13.8000	
		5 Percent	-8.10000	
		10 Percent	-5.70000	

After checking the stationary and non- stationary in all variables, the mixed order of integration [I (0) and I (1)] has been found in this study. Therefore we have applied ARDL test to find the long run relationship between money demand and its determinants. The empirical findings indicate that the calculated value is more than its upper critical bound. It denotes the stable relationship between dependent and independent variables in the long run. Moreover, the diagnostics designate that the issues of heteroscedasticity and serial correlation do not exist in data series. The results are shown in table 3.

Table 3. *Autoregressive Distributed Lag Estimates*

Dependent variable is LMON

Estimated Model: LMONt= f (LGDPPCt, LFISCDEFt, INTt, LEXCRt, LRURt, LURBt)

F-statistic	95% Lower Bound	95% Upper Bound	90% Lower Bound	90% Upper Bound
8.4000	2.8234	4.2227	2.3669	3.6219
W-statistic	95% Lower Bound	95% Upper Bound	90% Lower Bound	90% Upper Bound
58.7999	19.7639	29.5586	16.5682	25.3532

Diagnostic Tests				
R-Bar-Squared	0 .99202	Serial Correlation	0.2011E-4	[0.996]
F-Stat. F(8,29)	576.1972[0.000]	Functional Form	0.73693	[0.391]
Akaike Info. Criterion	56.1102	Normality	2.9338	[0.231]
Schwarz Bayesian Criterion	48.7411	Heteroscedasticity	0.63063	[0.427]

The long run coefficients are reported in table 4 which illustrates the long run results. The estimated results disclose that interest rate effects money demand significantly while the sign of coefficient is positive. These above findings are consistent with Narayan et al. (2009) and Abdulkheir (2013). The findings disclose one percent increase in interest rate tends to increase in money demand by 0.64 percent.

Table 4. *Estimated Long Run Coefficients using ARDL Approach*

Dependent variable is LMON				
Variables	Coefficient	Standard Errors	T-Ratio	Prob. Value
LGDPPC	0.97807	0.48018	2.0369	0.051
INT	0.64487	0.32009	2.0147	0.053
LFISCDEF	-0.27053	0.22816	-1.1857	0.245
LEXCR	-0.21293	0.66368	-0.32083	0.751
LRUR	0.12794	0.067364	1.8992	0.068
LURB	0.23502	0.12116	1.9398	0.062
C	-719.6912	375.6314	-1.9160	0.065

Moreover; the coefficient of real GDP has found to be high and significant contributor to money demand in Bangladesh and it reveals that money demand increase by 0.98 percent by one percent increase in real income in the long run. Ahmed (2007) found the same results for income. Both interest rate and real income were found significant contributor to money demand function. Fiscal deficit has negative and insignificant effect on money demand. It reveals that one percent increase in budget deficit tends to decrease money demand by 0.28 percent in long run. Al-Qudair and Al-Towaijri, (2003) witnessed negative effect of fiscal deficit on money demand function. Exchange rate also exerts negative effect upon money demand. One percent increase in exchange rate tends to decrease in money demand by 0.21 percent. Arize and Nam (2012) concluded the similar results. While positive and significant link was found between rural and urban population and money demand. Faridi and Akhtar (2013) captured the impact of population growth on money demand function in their study.

After discussing the results of long run coefficients we would move to find the short run coefficients using error correction representation. The results of short run coefficients are shared in below Table 5.

Table 5. *Error Correction Representations for the selected ARDL Model*

Dependent variable is LMON				
Variables	Coefficient	Standard Errors	T-Ratio	Prob. Value
ΔLGDPPC	0.272650	0.085179	3.2008	0.003
ΔINT	0.095379	0.029584	3.2240	0.003
ΔLFISCDEF	-0.075412	0.058186	-1.2960	0.205
ΔLEXCR	-0.059356	0.179000	-0.33159	0.743
ΔLRUR	0.035664	0.011908	2.9950	0.005
ΔLURB	0.065514	0.021945	2.9854	0.006
ecm(t-1)	-0.278760	0.109460	-2.5467	0.016
R-Squared	0 .69594	R-Bar-Squared		0.61206
S.E. of Regression	0.04992	F-Stat. F(7,30)		9.4821[0.000]
Mean of Dependent Variable	0.056212	S.D. of Dependent Variable		0.080157
Residual Sum of Squares	0.072285	Equation Log-likelihood		65.1102
Akaike Info. Criterion	56.1102	Schwarz Bayesian Criterion		48.7411
DW-statistic	1.9956			

The estimated results disclosed that interest rate effects demand for money significantly while due to interest rate volatility, the coefficient sign remains positive. Positive and significant link is found between them. Both fiscal deficit and exchange rate effects money demand negatively and insignificantly in short run. GDP per capita responds positively and significantly to money demand. While positive and significant relationship was found between rural population and money

demand. Urban population effects money demand positively and significantly. After estimating the short run dynamics, the stability of money demand function is tested during the period 1975 to 2013. The findings exposed stability in data series for Bangladesh. The graphical representation makes it clear. The money demand function (M2) remains stable over time.

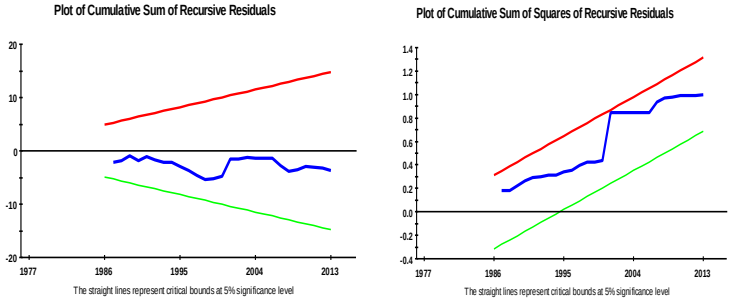

Figure 1. *Stability test*

Conclusion and Policy Recommendations

The prime objective of this study is to examine the factors influencing money demand function for Bangladesh. The estimation process starts from analyzing unit root test, for instance: Ng-Perron unit root test and KPSS unit root test. These two tests are often employed to observe the small sample size. They give superior estimations and more reliable tests. When we become certain for the existence of stationary in variables at level or at first difference, then it is crucial to apply ARDL bound testing approachto explore the co-integration among all variables used for three countries.

This study selects money demand (M2) as dependent variable and interest rate, real income, exchange rate, fiscal deficit, urban and rural population as independent variables.

The data is being used of thirty nine years ranginf from 1975 to 2013. The co-integration analysis reveals that all variables except fiscal deficit and exchange rate are co-integrated in Bangladesh analysis. The interest rate and real income affects money demand significantly. The urban and rural population influence money demand positively and significantly. In case of short run, interest rate, real income, urban and rural population has significant effect on money demand while fiscal deficit and exchange rate are found to be insignificant. By incorporating CUSUM and CUSUMSQ tests, we check the stability of money demand. We found the stable function of money demand.

We draw some policy implications here which would facilitate policy advisors to work. Our findings reveal the significance of monetary targeting (M2) and it is a better option for Central Bank of Bangladesh to

use (M2) in the execution of monetary policy. In our analysis, we find a stable money demand function.

In our model, we added some new variables apart from conventional variables like real income, nominal interest rate. The addition of some new variables gives robust and reliable estimates after analysis. We incorporate exchange rate, fiscal deficit, rural and urban population in our model to get some unique results. Second policy makers can better understand the main determinants of money demand. They are also able to understand three things: whether depreciation leads to currency substitution or not; whether any change in interest rate influence money demand or not; whether change in fiscal deficit make any change in money demand.

The stable money demand function is necessary for proper performance of monetary policy in case of Bangladesh. If it happens, then the economy will grow to promote business and economic activities in Bangladesh.

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11.
Does new public management practices lead to effective public welfare responses in Pakistan

By
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Introduction

This chapter includes background, importance of problem, problem statement, research question, objective of research, and significance of study.Context of study is the exact position of research in literature. This study is broadly in the category of social sciences. Further it falls under the area of Management and then Public Management.

Background of the problem

The term New Public Management (NPM) or NPA (New Public Administration) was conceptualized by Christopher Cropper Hood, Gladstone Professor of Government in 1991. It broadly speculates the government policies which meant to enhance public sector efficiency (Hood, 1991b).

As per fundamental assumption of NPM, market based orientation of public sector management will lead to better cost-efficiency exclusively (Boston, 1996). The idea behind NPM is routed through the call for redesigning the public sector policies on the basis of market economy (David and Gaebler, 1992).

Conventionally, NPM has its origins in public-choice theory and managerialism (Dunsire, 1995; Gruening, 2001; Schedler, 1995a). Some salient characteristics of the New Public Management or New Public Administration (NPM/NPA) are given in the Table 1.1below:

Table 1. *Characteristics of NPM/NPA*

Undisputed characteristics (Gruening, 2001)		Debatable attributes (Gruening, 2001)	
a.	Budget cuts	1.	Legal, budget, and spending constraints
b.	Vouchers	2.	Rationalization of jurisdictions
c.	Accountability for performance	3.	Policy analysis and evaluation
d.	Performance auditing	4.	Improved regulation
e.	Privatization	5.	Rationalization or streamlining of administrative

f.	Customers (one-stop shops, case management)		structures
g.	Decentralization	6.	Democratization and citizen participation
h.	Strategic planning and management		
i.	Separation of provision and production		
j.	Competition		
k.	Performance measurement		
l.	Changed management style		
m.	Contracting out		
n.	Freedom to manage (flexibility)		
o.	Improved accounting		
p.	Personnel management (incentives)		
q.	User charges		
r.	Separation of politics and administration		
s.	Improved financial management		
t.	More use of information technology		

Since 1980s, the world supranational organizations have been striving to strengthen public sector organizations (Dunleavy, Margetts, Bastow, & Tinkler, 2006). Business world is composed of two main sectors i.e. public sector and private sector. Private organizations usually aim to earn profit whereas public sector organizations focus to facilitate general public interest and improve their living standards. Critical evaluation reveals that the performance of the public sector is not up to the mark (Schachter, 1989). Since people have become more sentient of their rights, they are demanding more accountability and response from the government sector. The feature of NPM in terms of economy was advocated by the World Bank, the International Monetary Fund, the Organization for Economic Cooperation and Development, and UN. It became a powerful instrument for the change in developing countries, which had to accept the prescriptions of the international donor agencies to get financial assistance (Knack, 2004; Turner & Hulme, 1997). The idea behind NPM is routed through the call for redesigning the public sector policies on the basis of market economy (Osborne & Gaebler, 1992). Conventionally, NPM has its origins in public-choice theory and managerialism (Aucoin, 1990; Reichard, 1996; Schedler, 1995b). The need for change is to adopt private sector business techniques and introduce them in public sector in order to improve their efficiency and effectiveness. These attempts have been termed as New Public management or reforms. The main theme of NPM is to see how public sector organizations should change the efficiency, the procedure and expertise and the relationship with the private sector (Cole & Jones, 2005). The traditional approach of public administration has given greater emphasis on rules and procedures whereas the new paradigm places high emphasize on the attainment of results and outputs.

In order to strengthen Public sector of Pakistan, Asian Development Bank (ADB) has started different reforms for balancing the economic crisis in 1998. The main goal of Public sector reforms was to improve the feedback mechanism in accordance with the requirements of the macroeconomic stability, revival of economic growth and reduction in the poverty levels. ADB had approved many programs in order to reengineering the different sectors i.e. Rural Finance Sector Development Program, Trade, Export Promotion and Industry Program (TEPI) (1999);

the Energy Sector Restructuring Program and Microfinance Development sector Program (2001); the Governance Program and Financial (Non-Bank) Markets (2002) and the Decentralization Support Program.

In Pakistan, since the introduction of New Public Management reforms, false claims regarding little implementation have been made about its improved performance. Instead of strengthening the economy and reducing poverty, loans are being sought from different supranational organizations. The question is as to why public sector organizations are not performing up to the mark? Related to the said question, why change is not visible? Equally important is to ask as to why citizens are not treated like customers. This study is designed to explore the answer to these questions by measuring the influence of different variables influencing the performance of public sector organizations. The variables influencing the public sector organization performance have been explored in different countries of the world but little work has been done in Pakistan.

Problem statement

Widespread introduction of public management reforms or inventions or restructuring of public sector organizations have led to the improvement in public service provision in UK, USA, New Zealand, Australia along with other developed and some developing countries. In 2001, Pakistan adopted reform techniques in public sector organizations. The concept of decentralized local government is not novel in Pakistan but it has remained rhetoric rather than a working reality. Devolution reforms of 2001 are deemed relatively successful by the international aid and development agencies; at least in terms of considerable enhancement in deliverance of the quality services of common man at the grass root level. Moreover, success is dependent on its effectiveness which is not well known because it lacks substantial empirical evidence. This study would aim to evaluate the effects of that particular NPM practices in public sector enterprises. This research will help the public sectors' policy makers to create the state of art end product for excellence of deliverance of services to face the pressure of international donor agencies. Therefore, this issue requires further investigation especially in Pakistani context. Theoretically, it is an effort to fill a gap in literature especially from Pakistani perspective on New Public Management (NPM). Practically, it has implications for public sector organizations to enhance understanding of factors influencing effectiveness of NPM in Pakistan and to learn the ways of improving those factors for deliverance of quality services.

Importance of the problem

Various researches are found in the area of success or failure of NPM. Researchers have tried to evaluate NPM implementation in various aspects such as change, improvement or effectiveness. These researches have widely been undertaken in different countries of the world; however it is quite an under-researched area in Pakistan. Therefore, this deficiency

must be addressed with further research. This research is important as it aims to empirically investigate factors empirically that influence the effectiveness of NPM in public sector organizations of Pakistan. This study is significant as it explores some of the factors that stand critical in the success as well as failure of these reforms. Furthermore, this study is important as it focuses on the dimensions of NPM implemented by middle level managers in their respective departments.

Objectives of the research

In light of the aforementioned highlighted research gap and need of NPM evaluation, the main objective of this study is to evaluate that how NPM has influenced and increased the performance of public sector enterprises. Government of Pakistan is under continuous pressures from international donors, international financial regulatory authorities and aid agencies to privatize its denationalized entities that provide public services and let the 'invisible hand' take care of economy and public sector. However, the counter argument is that Pakistan has had a huge public sector for decades and vast majority of population is dependent on public provision of goods and services. In other words, exit option is not available to marginalized groups of society and unfortunately such groups make the majority in population. As such switching over to free market economy and rolling back of state institutions is not a straightforward and simple solution. Adaptation to imported models like NPM (New Public Management) is the only option to implement. To align with the research objective, the following questions will be probed further.

Research Question

This study has following research question:

"What are the major dimensions of NPM that have significant impact on the performance of Public Sector Enterprises in Pakistan?"

Significance of the Study

This study is important in various aspects. It has theoretical significance as it contributes in literature by giving valuable perception to readers on effectiveness of NPM in enhancing performance of organizations in Pakistan. It has practical significance as it is valuable for decision or policy makers in these organizations who might be helpful in making better strategis and thus implementing NPM effectively in future.

Limitations of the Study

First, this study is limited in terms of sample because it covered participants within three provinces of the country and by and large the respondents were from Punjab. It was helpful for gathering data conveniently but it limits the representation of organizations from other regions. Second, this study is also limited in terms of measurement tools because it used only questionnaire for data collection. It was helpful for

gathering data from large number of respondents but it limits the depth of information that other tools may provide.

Future Research Directions

First, a broad sample should be taken to cover organizations present in other provinces of the country. It will give representation to the organizations all over the country. Second, multiple measurement tools should be utilized for data collection. Interviews can give more in-depth information on the current topic because it has infrequent empirical studies on it thus it requires evidence of new information from various aspects.

Organization of Thesis

This research document is organized in different sections. Appended parts include tables and lists; abstract, references, appendix etc. whereas body parts include main chapters of research.

First chapter is "Introduction" which covers overview of whole research. It includes sections of Background of the Problem; Problem Statement; Importance of the Problem; Objectives of the Research; Research Question; Significance of the Study; Limitations of the Study; Future Research Directions; and Organization of Thesis.

Second chapter is "Literature Review" which covers review of literature relevant to this research. It includes sections of Background of NPM; Early Research on NPM; Recent Research on NPM; NPM in Various Regions; NPM in Pakistan; NPM Outcomes – Performance in NPM; and Outcome of Review.

Third chapter is "Research Framework" which covers theoretical framework or model used in this research. It includes sections of Selected Variables; Proposed Research Framework; and Development of Hypotheses.

Fourth chapter is "Research Methodology" which covers overall methods and techniques used in this research. It includes sections of Research Approach and Strategy; Data Sources; Population and Sampling; Design of Measures; Procedure for Data Collection; and Statistical Techniques and Tools.

Fifth chapter is "Data Analyses and Discussion" which covers analysis of data, its interpretations and its implications in this research. It includes section of Data Analyses as Descriptive Statistics; Validity and Reliability; Assumptions for Regression Analysis; Regression Analysis; and Result of Hypotheses Testing; and Correlation Matrix. It includes section of Discussion as well.

Sixth chapter is "Conclusion and Recommendations" which covers outcome of this research and relevant suggestions or directions. It includes sections of Conclusion and Recommendations.

Literature review

This chapter includes review of previous literature on the topic under study. Review covers the integrated review of relevant literature in the past few decades. This review is in the form of a critical analysis and outcome of review.

The review of the literature has been classified into major sections covering background, periods, and situation for various factors that are commonly researched in the area of NPM; and outcome of NPM; as well as outcome of overall review.

Background of NPM

Literature review covers the background of NPM before the analysis and review of NPM from different aspects. The necessary background has been reviewed below:

The term 'new public management' (NPM) is broad and is composed of overlapping concepts as well. Therefore, sometimes it is also considered controversial as a term. It is used mainly as a handy shorthand, a summary description of a way of reorganizing public sector bodies to bring their management, reporting, and accounting approaches closer to (a particular perception of) business methods. Different researchers described the doctrines of public sector management encompassed by NPM and also described the phases in the development of NPM and its future prospects. Aucoin (1990); Pollitt (1990); Hood (1991b) are among few notable researchers in this area.

Savoie (2003)defined NPM as a process to break down formal systems of control and instill a new ‘bias for action’ in government bureaucracies and a public sector management theory that sought to make government more efficient and responsive by employing private sector techniques and creating market conditions for the delivery of public services. Some contemporary researchers define NPM as a best blend of dividing large bureaucracies into smaller, competition between public sector departments, public and private sectors and incentivization on appropriate economic basis (Khilji & Wang, 2006; Legge, 1995; Lengnick-Hall, Lengnick-Hall, Andrade, & Drake, 2009). Christopher Cropper Hood, Gladstone Professor of Government in 1991 defined NPM “the government policies which meant to enhance public sector efficiency” (Hood, 1991a). For as this study, we will consider the definition of Hood as operational definition of NPM.

Next sections of literature review cover NPM research under the classification of early studies; recent studies; NPM in various regions; and NPM in Pakistan; and outcome of NPM i.e., performance in NPM. Later, outcome of overall review is presented.

Early research on NPM

Dunleavy and Hood (1994) analyzed the idea of 'New Public Management' in the perspective of previous efforts at managerial reform. It argues that NPM has proved to be having a consistent agenda while the

major criticisms on NPM have contradictions among themselves. NPM must endure criticisms by modifying its agenda, attempting to identify the areas and overcome the drawbacks that prominently exist in NPM methods.

Hood (1995) discussed the rise of NPM as an alternative to the tradition of public accountability and organizational best practice. There are a number of variations in the extent to which different OECD countries adopted NPM in initial years. Conventional explanation of the rise of NPM is also hard to sustain inspection and varies in any of the inspections done.

Ferris and Graddy (1998) evaluated the importance of institutional economics in the development of a new public management theoryand its role in designing institutional arrangements that would further help towards improvement of public sector performance. It explored elements of transaction cost and principal agency theory along with their application in public sector. Numerous factors associated with policy making and implementations are analyzed along with their risks to public sector accountability. Findings indicate that institutional economics can provide theoretical foundation for government reform initiatives that would ultimately lead towards effective application of private sector solutions to public management.

Christensen and Lægreid (2001) explores the view that modern reforms such as New Public Management represent a globalization trend. It has been interrogated by analyzing the differentiated effects and implications of NPM when implemented in the civil service systems in Australia, New Zealand and Norway. This interrogation is focused mostly on how NPM affected relationship between political and administrative leadership and enquires whether politicians are losing control on two main features of NPM devolution and contractualism. It is quite possible that control is lost to structural devolution due to dominance of economic norms and values. And it is also possible that control is lost to contracts. These possibilities affect public belief of civil servants as well. Relationship between political control and administrative autonomy is also discussed in the perspectives of accountability and responsibility. And possible negative and positive effects of NPM on political governance are also presented.

Recent Research on NPM

Pollitt and Dan (2011) assessed the impacts of NPM and reported the analysis of a database of nearly 520 relevant studies available at COCOPS website (www.cocops.eu). Key findings indicate that studies dealing with outputs and outcomes are rare in the area of NPM. Most studies are confined to 'internal' changes in the activities and processes of public organizations. Majority of studies on outputs and outcomes covered performance improvements but such majority does not cover any change or actual worsening of performance. Such huge variation seems to be connected with certain contextual influences of which important ones are analyzed and an informed speculation has been offered regarding the

causes of widespread of reforms while evidence base seems weak and less significant.

Hammerschmid and Van de Walle (2011) indicated that New Public Management has existed in European public sectors since more than 25 years. It is a surprise to find only a few studies covering evaluations although the research in this area emphasizes indicators and evidence of NPM. It also presents an overview of academic evaluation and impact studies of entire NPM-style reform programs in terms of two sets of changes and reforms. The first set focuses on specific managerial innovations within public organizations while the second set focuses on changes to overall role of government and citizens induced by NPM. It concludes that majority of research focuses on the first set of changes whereas second one only got limited attention mainly in critical areas.

Theobald (2012) studied the application of New Public Management in Long-term Care Insurance. Germany restructured formal care provision by implementing reforms based on NPM. It emphasized on market, competition and efficiency in this sector. It analyses this process of implementation of NPM by combining NPM concepts or measures preconditions of welfare mix approaches of care responsibility and the political-administrative system of the social insurance-based welfare state. Findings reveal that German assumptions on welfare mix paved the way for NPM reforms and social insurance-based welfare state strengthened state's position. It indicates an increase for-profit providers, tensions emerging due to new organizational forms of care provision and underlying values within welfare associations, and the situation of care workers. Therefore, it claims that NPM is not mere management technique.

Jarl, Fredriksson, and Persson (2012) suggested that New Public Management is one of the most significant reforms in public welfare during recent past. Previous sociological research seems to argue that NPM results in a 'de-professionalization' of civil servants which makes individual civil servants more dependent on the directions of the local manager than on common professional standards. Recent public administration research, on the other hand takes slightly different approach that apart from previous assumption, NPM may also enhance the professional status of welfare managers. An example of a professional project for school principals in Sweden has been used to develop a theoretical framework for understanding the influence of NPM. That framework was developed by integrating literature on sociology of professions and public administration. It used a process-oriented methodological approach. Its results indicated that Swedish school principals gained increased support for their professional project by introducing NPM. On the basis of these findings, it is claimed that NPM can function as a catalyst for professional projects of welfare managers.

Alonso, Clifton, and Díaz-Fuentes (2013) explored whether New Public Management actually leads towards a smaller public sector. NPM is found to be the subject of extensive academic debate in terms of its successes and failures. But empirical assessments rarely focused on

whether NPM reached its stated objectives or not. The main reason is the difficulty of quantifying the impact of such reforms. Therefore, this study attempted to focus on this aspect of NPM particularly taking outsourcing and decentralization in to account. Findings indicate that government outsourcing did not lead to a smaller public sector whereas decentralization policies resulted in a smaller public sector, particularly from the perspective of government expenditure.

NPM in Various Regions

Dan and Pollitt (2014) reviewed previous NPM research in central and eastern Europe (CEE) regions to identify the outcome of reforms. They claim that recent research increasingly debates against the appropriate application of NPM in the region. Thus, such highly debated policy must be explored for clear understanding. They classified actual impacts of NPM that match central and eastern European states. And evaluated past decade's empirical studies in the region according to their classification. This assessment, contrary to prior literature, suggested that NPM is workable in the region. NPM has usually been less effective than expected but existence of enough evidence shows that certain central ideas in NPM has improved public organizations. Such recent and transparent assessment of NPM effectiveness in a growing region has quite useful implications for other regions having similar challenges and opportunities.

Glor (2001) reviewed NPM and under chosen categories and definition of previous researchers,assessed the adoption and implementation of NPM in Canada. Findings show that Canada is in debts since it reorganized its government, changed its management methods and reduced federal public sector. Author suggests that federal government's improvement in terms of reduced expenditures in public service is similar to UK and New Zealand or even better.

Hope Sr and Chikulo (2000) suggested that the role of public sector is transformed all over the world since it is directed towards public service delivery and better economic progress. This change required policy reform in traditional public administration. These reforms have now become NPM. Authors analyzed role of decentralization in public sector with respect to NPM in Africa. They suggest that NPM can provide an appropriate framework for efficient public services delivery in Africa.

Steane (1999) suggested that public management has now changed fundamentally as public choice and principal agency theories have evolved. These are being applied to modern management in terms of competition and contracts. These developments will further result in evolved role of the state.

Sehested (2002) identified the NPM reforms in Europe and their relationship with professional roles of managers. Author proposed that NPM reforms challenges the traditional autonomous role of professionals. Further comparative analysis of European literature on NPM reforms identifies specific challenges for professionals. Moreover, it proposes the Danish way of NPM reforms implementation using decentralization,

managerialism and democratization. Author claims that changed roles of professionals raise important research questions. Further, European comparative studies are presented on actual changes in professional roles of managers due to NPM reforms. And further investigation into new roles is suggested.

Marobela (2008) examined recent public sector reforms introduced by the Government of Botswana to improve civil service performance. Political reasons for these changes are explored in terms of neoliberal ideology that is leading these NPM reforms. Process of change is explained through a realist social theory. Findings suggest that in developing countries mostly poor people depend on public services. Thus, privatization of public services will promote poverty and inequality because fundamentally private sector is profit centered not needs centered. Moreover, workers will also face the consequences of the same. Outsourcing is such example in Botswana, shows worse working conditions that workers face. Therefore, restructuring of public sector shall be deeply understood by organizations and researchers related to labor relations.

Elias Sarker (2006) examined factors influencing relative success and failure of NPM initiatives in developing countries with reference to Singapore and Bangladesh. Findings indicate that NPM- oriented reformsare successful due to advanced level of economic development, the existence of market economy, rule of law, advanced administrative infrastructure and state efficiency. It further signifies that Singapore fulfills most of these conditions, whereas Bangladesh lags far behind in such NPM initiatives. Moreover, it is suggested that the state plays vital role in socio- economic transformation that can significantly promote market- oriented reforms. Thus, case of Singapore is a useful example for developing countries like Bangladesh who struggle with NPM reforms.

Norton (2007) examined the suitability of Anglo- American (occidental) NPM practices for public sector reforms in Japan. Findings indicate that the Anglo- American (occidental) NPM reforms do not seem appropriate in Japan. Attempt to use decentralization and deregulation form of NPM is based on historical constitution that was aimed at occupying Power. Adoption of such Anglo- American contexts by Japan's political elite will reduce impact of reforms that would be culturally accommodating and acceptable to all democratic stakeholders. Author proposed that Japan's public sector reformers shall be devised in unique form of NPM considering all cultural and historical aspects. This proposal means that alternative to the UK and US models may also be developed.

Leeuw (1996) proposed that NPM has challenged the common assumption that public sector auditing leads to improvement in public sector performance. It discussed characteristics of NPM which are mainly less controls and devolution of responsibilities. Further it shows why performance auditors can be interested in challenges they may confront while contributing to performance of public sector. These challenges are

mainly unintended side- effects of auditing such as ossification. Other challenges may also be lack of communication between auditors and auditees. Directions are provided to handle these challenges.

den Heyer (2011) examined the use of NPM for democratic police reform in transitioning, developing and post- conflict nations. It considers use of NPM in police reform on the basis of previous literature and history of NPM usage in public sector and policing in Western nations. Findings indicated that it is possible to use NPM as a strategy in police reform. Moreover, it can be used with other policing approaches such as community- oriented policing. However, it must be culturally specific and under local capability constraints. These findings are important for the concerns of police reform, transparency and accountability while police reform and restructuring programs are planned or implemented.

NPM in Pakistan

The Pakistani context of research on New Public Management (NPM) is also available to some extent. Zia and Khan (2013) claimed that Pakistan is making efforts to modernize its institutions to deal with formidable and complex challenges that it confronts. Public sector reforms in Pakistan reflect different models. Authors aimed to explore drivers of public sector management reforms to realize how far they reflect local realities and how much they have been influenced by international trends. The results show points of convergence and divergence in different reform drivers in Pakistan led by New Public Management (NPM) model.

Kalimullah, Ashraf, and Ashaduzzaman (2012) stated that New Public Management (NPM) being a new paradigm of public administration, points to the failures and inadequacies of public sector performance over time and the problems of public sector activity and traditional public administration. New public management supposed to address problems such as size of the government, centralized bureaucracies, inadequate mechanisms of accountability, waste and inefficiency in resource use. Authors provided general review of literature and attempted to pinpoint the emergence, principles and criticisms of NPM considering its theoretical aspects.

Naveed and Jadoon (2012) suggested that the universal trend of new public management (NPM) has been emphasized by the government of Pakistan in public enterprises which try to adopt corporate management techniques to improve their performance. It indicates replacement of traditional personnel administration with private sector human resource management practices. Adoption of NPM based reforms is a challenge of policy transfer from developed to developing countries and it makes difficult for public enterprises to enjoy flexibility and autonomy of private sector due to centralizing tendency in public sector particularly in Pakistan. Authors aimed to evaluate adoptability of private-sector HRM practices in public enterprises in Pakistan through a case study analysis of Sui Northern Gas Pipelines Limited. Results indicate inconsistencies

between intended and implemented HRM practices and identifies gaps between the both.

Arfeen and Khan (2009) analyzed and examined the impact of public sector innovation to improve public satisfaction level. Authors aimed to analyze the process of innovation, mainly in Information and Communication Technology (ICT) in the public sector. Authors compared the findings of the e-government case study to the literature of innovation mainly in the area of process innovation. Authors gave SWOT analysis with weight rating to judge the e-governance challenges, which Pakistan is facing as a developing nation. Authors also gave the e-government model/ guidelines that encapsulate the reality of innovation by the government. The study concluded that the public sector needs to overcome its traditional characteristics of poor agenda setting, unclear objectives, lack of transparency, and bureaucratic layers of decision-making processes.

NPM outcomes – Performance in NPM

Brignall and Modell (2000) claimed that since the 1990s, NPM has affected public services in advanced economies like U.K. and Scandinavia. These public services are under pressure to become efficient and effective to maximum level with minimum demands on taxpayers. Therefore, various private sector management techniques and neo-market system have been adopted. Author aimed to explore role of institutional theory in successful implementation of performance measurement and management in public sector. Various concerns related to interrelationship of stakeholders have been discussed. Consequently, multiple research propositions are given. These are based on link between focal organizations, funders and professional service providers, respectively. Two are based on focal organization's links with purchasers. Further, future research directions are proposed which suggests that empirical research in the form of longitudinal case studies is required which shall examine paths of development and their effects through time.

Brewer and Selden (2000) suggested that abundant theories of effective government organizations exist but empirical testing is rare. Therefore, empirical investigation of these theories is the main purpose here. Authors explored and classified key dimensions of organizational performance from existing theory and developed measures for a construct. And an organizational performance model was also developed from literature. Further, the model is tested with data based on 1996 Merit Principles Survey, U.S. Merit Systems Protection Board. Results indicate that employees' perceptions of organizational performance are supported in twenty-three largest federal agencies. Thus most of the relationships are confirmed.

Kim (2005) followed the previous theoretical and empirical researches in the same journal. Theory of effective government organizationswas proposed by Rainey and Steinbauer, and Brewer, whereas empirical study based on data from Merit Principles Survey was conducted by Selden. Following these significant developments author selected individual-level

factors for further empirical testing. These factors including job satisfaction, affective commitment, public service motivation, and organizational citizenship behavior were tested for their impact on organizational performance in public sector of Korea. Data were based on survey of public employees in government agencies. Results show that proposed relationships in the model are supported. Further, these findings were discussed with reference to previous studies.

Outcome of Review

The review of literature examined previous research on NPM and its outcomes, specifically performance in various perspectives. This review provides a strong base for selection and finalization of most influential factors of NPM and its outcome as performance. Careful choice of these constructs and their measures will result in the development of a research framework that can be further used as a model for empirical testing. This process is further conducted and presented in the next chapters.

Research framework

This chapter includes theoretical framework to be used for this research. It also includes hypotheses for the study.

Selected Variables

The variables (dimensions) and their respective measures (items) have been taken from literature. These independent variables and their measures (items) are mentioned and elaborated next.

- Independent variables consist of Factors influencing the effectiveness of NPM. Total four factors that have been selected from various Characteristics of the NPM.
- Dependent variable consists of Effectiveness of NPM. Total 1 factor has been used to measure effectiveness in terms of Perceived Organizational Performance in NPM.

The lists of both types of Measures of this study in terms of variables andOperationalized Terms are given in the Table 2below:

Table 2. *List of variables*

	Variables (Measures)	Operationalized Terms	Type of Variable
1	Management Style	HR Practices	Independent
2	Decentralization	Delegation	Independent
3	Democratization & Participation	Involvement in Decision Making	Independent
4	Customer Concept	Customer Orientation	Independent
5	Perceived Organizational Performance in NPM	Perceived Organizational Performance in NPM	Dependent

Perceived Organizational Performance in NPM is mainly influenced by Management Style; Decentralization; Democratization & Participation; and Customer Concept. The theoretical implications, significance forOrganizational Performance in NPM (Dependent Variable), and evidence from previous research is given for each of the variables (dimensions) and their respective measures (items).

1 Management Style (HR Practices)
2 Decentralization (Delegation)
3 Democratization and Participation (Involvement in Decision Making)
4 Customer Concept (Customer Orientation)
5 Perceived Organizational Performance in NPM

Proposed research framework

The conceptual model is based on the relationship of independent variables with dependent variable. The causal relationship makes it a causal model which is presented in the form of a research framework. The statistical model for casual relationship is usually regression model which will be mentioned in this research. Proposed research framework or model is shown in the Figure 1 below:

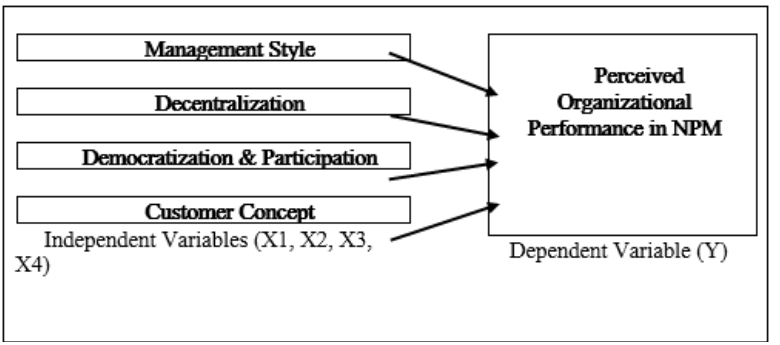

Figure 1. *Proposed Research Framework*

Development of Hypotheses

The relationship among independent variables and respective dependent variable are usually tested through hypotheses statements based on the linkages developed among all the variables. Null Hypotheses are rejected and Alternate Hypotheses are accepted for successful outcome of testing relationships through Hypotheses statements. The alternate hypotheses developed from variables of finalized model are stated below:

- H_1: "Management Style" has significant and positive impact on "Perceived Organizational Performance in NPM".
- H_2: "Decentralization" has significant and positive impact on "Perceived Organizational Performance in NPM".
- H_3: "Democratization & Participation" has significant and positive impact on "Perceived Organizational Performance in NPM".
- H_4: "Customer Concept" has significant and positive impact on "Perceived Organizational Performance in NPM".

Research methodology

This chapter includes methodology of this research. It covers research approach, data sources, design of population and sampling, design of measures, procedure for data collection, and statistical techniques and tools.

Research Approach and Strategy

This study can be categorized as policy research. Nagel, Stuart (1999) defined Policy research that "determining which of various policies will most achieve a given set of goals in light of the relations between the policies and the goals". Policy research is an approach to attain confidence for researcher and it is a process of public self-criticism with an eye to improving their methods (Firestone & Herriott, 1982; Miles, 1979; Smith & Louis, 1982; Yin, 1981). Policy researches have previously adopted both quantitative as well as qualitative research strategy. Quantitative research strategy options have been predetermined and a large number of respondents are involved. By definition, measurement must be objective, quantitative and statistically valid and it refers to counts and measures of things. Whereas, qualitative research is collecting, analyzing, and interpreting data by observing what people do and say. It refers to the meanings, concepts, definitions, characteristics, metaphors, symbols, and descriptions of things. However, based on the objective and questions of the research, this study tends to deploy quantitative research strategy. Quantitative strategy is implemented in a study when it aims to gather and analyze data in a pure empirical way by using numerical evidences.

Research approach in this study is quantitative as it deals with numerical data analysis. The data is collected for variables of framework using measurement tool and later it is analyzed under statistical analysis techniques using statistical tools. The results of analyses are then interpreted and discussed quantitatively as this research used quantitative research approach.

Data Sources

A research usually includes primary and secondary sources of data. Secondary sources of data help to make use of previous data such as literature, reports empirical data etc. Whereas, primary sources of data help to gather new data such as survey, interview, focus groups, experiment etc. Primary sources provide theoretical knowledge whereas secondary sources provide significance to source for analysis of data.

This study collected data from different sources. Literature, model, measures, and previous legislation are secondary and questionnaire is primary data source. Questionnaire was searched from literature. For this study, only those public sector enterprises were selected where devolution reforms have been implemented. Primary data was collected from those civil services officers who worked more than three months in those government departments where reforms where implemented.

Questionnaires were distributed among civil officers by hand and e-mail. Most of the respondents were from Punjab and less respondents were belong to the other two provinces (i.e. KPK and Sindh) although no respondent from Baluchistan.

Population and sampling

Population and sampling methodology is mentioned here.

Population

Population is used to draw certain sample from it under certain sampling technique. A sampling frame is used for that purpose.

For this "Devolution Plan (2000)" as elaborated in a study by Paracha (2003), only those public sector enterprises were selected where public management reforms have been implemented. i.e., eleven (11) different public sector departments mentioned in Districts were the third order of administrative divisions, below Provinces and Divisions, until the reforms of August 2000, when Divisions were abolished. Districts were declared the top tier of a three-tier system of local government with the two lower tiers composed of approximately 596 Tehsils and more than 6,000 Union Councils. Prior to 2001, there were 106 districts in the four provinces. The population for this study is based on a list of civil servants (BPS-17 to BPS-20) of public organizations compiled from the report "Transparency International – Pakistan" which aims to measure the nature and extent of corruption being faced by consumers. Secondly, a list of knowledgeable and experienced officers (BPS-17 to BPS-20) from the S&GAD was compiled. The above mentioned method is adapted from the work of Owusu (2006).

Sampling technique

Sampling technique for this research is the "Convenience Sampling Technique" selected from "Non-probability Sampling Method". This method is useful for the purpose of selection of sample from a population with convenience of the researcher.

Source of sample

Source of sample is usually the sampling frame that is used for selection of units or samples from a certain population. In case of this study, source of sample is taken in terms of convenience and judgement of researcher. Convenient sample included key employees of public sector organizations focusing mainly those who fall under 17th to 20th rank or scale of employment while as per the judgement of researcher, these employees were able to provide purposeful and meaningful data for this study.

Unit of analysis is individual employees from each organization. Various respondents from different organizations in the province of Punjab participated as a sample who are the main source of sample for this study.

Size of sample

Reviewing various sample size measurement methods by researchers, this study adopted one of the most common and reliable formula available in research methods.

Krejcie and Morgan (1970)presented sample size measurement methods for known and unknown populations. The formula for and table for known populations is commonly used to select sample sizes for researches. That table shows sample sizes calculated using confidence level (95%), population sizes (known numbers), and population-sample proportion (50%). For this study, sample size has been calculated as with above mentioned data for estimated population size (8000) at different levels of population-sample proportions. Sample size is 383 at 50% proportion; 368 at 40% proportion; 322 at 30% proportion; 246 at 20% proportion; 139 at 10% proportion. This study will select an appropriate size from these sample size outputs. Among the employees of 11 public sector organizations, 368 questionnaires will be distributed on convenience basis.

Design of measures

Measurement instrument and its methodology is mentioned here in terms of measurement instruments and their scales to be used as well as validity and reliability of these instruments for gathering useful data.

Measurement instruments

Data collection methods are essential for research design. For that purpose, measurement instruments such as questionnaire, interview, focus group, experiment etc. are significant and have their own relevance in different contexts. Questionnaire is quite useful to gather and measure data for this study purposefully.

This research used Questionnaire for proposed model that includes all the selected variables. Questionnaire has constructs (variables) with multiple items (questions). Statements of Questionnaire's items were phrased along their respective scales.

All the measures (constructs and their items) as well as their scales were adapted from valid sources in previous literature. The main sources of measures for all the constructs and their items are listed in Table 3below:

Table 3. *Sources of measures*

	Constructs (Measures)	Scales	Sources
1	Management Style (HR Practices)	No – Yes (Don't know)	Lund and Gjerding (1996)
2	Decentralization (Delegation)	Not at All – To a Great Extent	Gordon and Narayanan (1984)
3	Democratization and Participation (Involvement in Decision Making)	None – Much	Jeppesen (2003)
4	Customer Concept (Customer Orientation)	Not at All – To a Great Extent	Narver and Slater (1990)
5	Perceived Organizational Performance in NPM	Strongly Disagree – Strongly Agree Poor – Outstanding Never – Always	Brewer and Selden (2000)

Questionnaire (full form) has been given in the appendix of this document.

Validity and reliability

Validity and reliability is helpful indicator of strength and weakness of measurement instruments used in a research. The validity has been tested in terms of content validity whereas construct validity is least applicable because adopted measures are usually pre-validated. The reliability of the measures or items of each construct will be tested using Cronbach's Alpha test that is most commonly used for reliability testing.

Procedure for data collection

Data collection methods include measurement instruments such as questionnaire. This research selected Questionnaire survey for data collection purpose. A researcher administered questionnaire survey was conducted for subjects or respondents from various organizations for a selected sample size. Survey was completed in short duration.

Procedure for Data Collection is important because significance of results is affected by it. The results of this research will be possibly significant as it has taken the necessary measures to minimize the possibility of insignificant results. Sample size has been calculated carefully and survey for data collection will also be conducted with caution of any biasness. These measures will be helpful in achieving statistically significant data and results.

Statistical Techniques and Tools

The reliability of measures has been tested using Cronbach's Alpha. Demographic variables' datahas been analyzed with Descriptive statistics because that is useful for profiling the sample. Data collected from Research Framework's variables has been analyzed using statistical technique of regression analysis because a causal model is under study. Type of regression is multiple linear regression because of multiple independent variables and single dependent variable.

Statistical analyses have been primarily done using the latest version available of the most commonly used software IBM SPSS Statistics.

Data analyses and discussion

This chapter includes data analysis and discussion of this research in detail. Data Analyses covers Descriptive Statistics Analysis of Demographics; Validity and Reliability Analysis of Constructs; Assumptions for Regression Analysis; Regression Analysis of Research Framework; and Result of Hypotheses Testing. Discussion covers overall implications of findings in this research.

Data analyses

Data analysis is done for both demographic variables and research framework variables in questionnaire survey. The analysis of Demographic variables for data collected through the demographics

section of questionnaire survey is done in the form of Demographic statistics. These are useful as a demographic profile of the participants of the survey used for this research. The analysis of research framework variables for data collected through the research framework variables section of questionnaire survey is done in the form of Regression analysis. Initially, the validity and reliability of instrument is checked and assumptions of regression are also tested. Later, the Regression is run for whole model and its variables. The results of hypotheses testing are also given. The details of all these analyses are given below:

Descriptive statistics

Descriptive statistics of Demographic Variables are given inTable 4below:

Table 4. *Descriptive statistics of demographic variables*

Sr. No.	Demographic Variables with Items	104 Respondents	
		Frequency	Percentage
	Gender		
1	Male	71	68.3%
	Female	33	31.7%
	Level of Education		
	Below 16 years	6	5.8%
2	16 years	51	49.0%
	18 years	33	31.7%
	Above 18 years	14	13.5%
	Work Experience		
	Below 1 years	2	1.9%
3	1-5 years	40	38.5%
	6-9 years	35	33.7%
	More than 09 years	27	26.0%
	Designation/BPS		
	16	7	6.7%
4	17	57	54.8%
	18	34	32.7%
	19	5	4.8%
	20	1	1.0%

Note: The response of this survey was 104 out of 368 sample size.

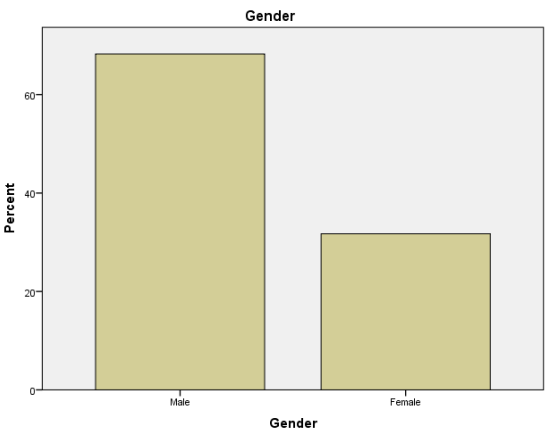

Chart 1. *Descriptive Statistics – Gender*

The frequency distribution of "Gender" shows that 68.3% respondents are males whereas 31.7% are females. Therefore, larger proportion of respondents is male and moderate proportion is female.

These results indicate that male gender is dominant in this sample which points out the superiority and involvement of males in this sample.

Chart 2 shows Descriptive Statistics for Level of Education.

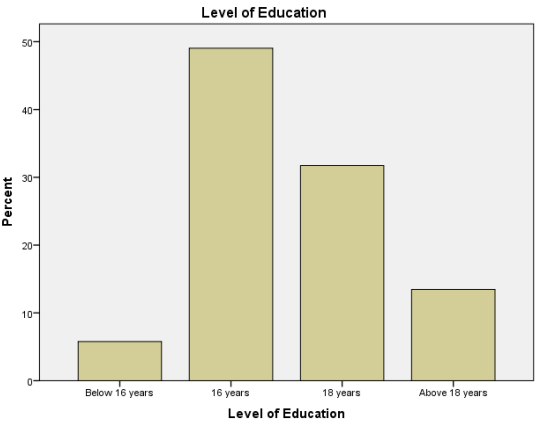

Chart 2. *Descriptive Statistics – Level of Education*

The frequency distribution of "Level of Education" shows that 49.0% respondents have 16 years of education whereas 31.7% respondents have 18 years of education. Therefore, majority of respondents is having 16 or 18 years of education. Further results show that 5.8% respondents have below 16 years of education and 13.5% respondents have above 18 years of education. These results indicate that as whole, larger proportion i.e. 80.7% is moderately educated. Whereas, smaller proportion i.e. 19.3% is either very poorly or very highly educated.Chart 3 shows Descriptive Statistics forWork Experience.

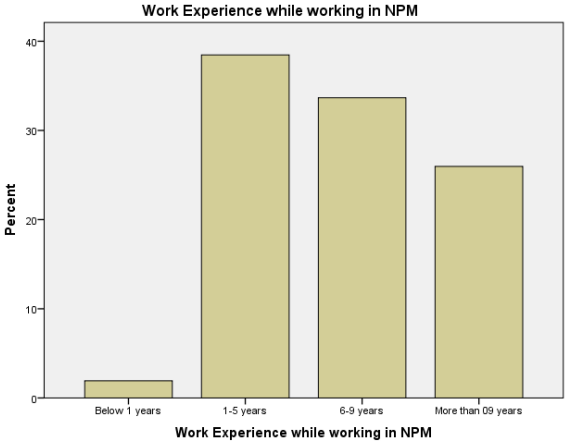

Chart 3. *Descriptive Statistics – Work Experience*

The frequency distribution of "Work Experience" shows that 38.5% respondents have 1-5 years of work experience whereas 33.7% respondents have 6-9 years of work experience. Therefore, majority of respondents is having either 1-5 years or 6-9 years of work experience. Further results show that 26.0% respondents have more than 09 years of work experience and 1.9% respondents have below 1 year of work experience. Therefore, a moderate respondents have more than 09 years of work experience while minority of respondents have below 1 year of work experience.

These results indicate that as whole, larger proportion i.e. 72.2% is moderately experienced, while a moderate proportion i.e. 26.0% is highly experienced. Whereas, smaller proportion i.e. 1.9% is barely experienced.

Chart 4 shows Descriptive Statistics for Designation/BPS.

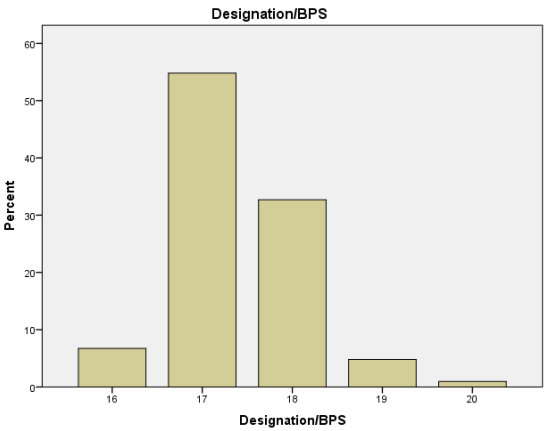

Chart 4. *Descriptive Statistics – Designation/BPS*

The frequency distribution of "Designation/BPS" shows that 54.8% respondents are from scale 17 and 32.7% respondents are from scale 18.Therefore, majority of respondents is having either 17 or 18 scale. Further results show that 4.8% respondents are from scale 19 and 1.0% respondents are from scale 20. Therefore, minority of respondents has either 19 or 20 scale. Remaining results show that 6.7% respondents are from scale 16. Therefore, minority of respondents has 16 scale.

These results indicate that as whole, larger proportion (87.5%) is working at a medium scale, while a smaller proportion (5.8%) is working at a high scale, and another smaller proportion (6.7%) is working at a low scale.

Validity and Reliability

Construct Validity is done using factor analysis to test relationship of constructs. For this purpose Kaiser-Meyer-Olkin (KMO) and Bartlett's tests are used. Results of both tests are given below in Table 5:

Table 5. *Validity statistics*

KMO and Bartlett's Test	Results		Validity Level
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	KMO	.657	Moderate Or Average
Bartlett's Test of Sphericity	Approx. Chi-Square	163.099	Significant
	df	10	
	Sig.	.000	

Validity Statistics show that for KMO measure the value is .657 which is moderate or average because it is approaching close to 1.0. Whereas, Bartlett's test shows value of Chi-Square 163.099 which is significant because it is greater than table value. The p-value is 0.000 which is also significant as it is lower than 0.05. Results indicate that factor analysis is suitable for this research. Data Reduction is not used in this research, therefore further factor analysis is not conducted.

The reliability of both constructs was tested using Cronbach's Alpha reliability coefficient. Cronbach's alpha values for each construct are given below in Table 6:

Table 6. *Reliability statistics*

Constructs	N	Items	Cronbach's Alpha	Reliability Level
Management Style (HR Practices)	104	7	.688	Average
Decentralization (Delegation)	104	5	.467	Low
Democratization and Participation (Involvement in Decision Making)	104	7	.723	Average
Customer Concept (Customer Orientation)	104	6	.786	Average
Perceived Organizational Performance in NPM	104	6	.812	High
Overall (All)	104	31	.878	High

Cronbach's Alpha reliability coefficient of each of the 5 constructs for respective number of items is found to be at acceptable standard. The high reliability level of all constructs indicates that the reliability of all constructs is high. Therefore, the given measurement instrument is highly reliable for this study.

Assumptions for regression analysis

Assumptions of regression must be fulfilled before using regression analysis technique. The research framework or model of this study makes single regression equation as following:

$$Y = \alpha + \beta 1X1 + \beta 2\ X2 + \beta 3\ X3$$
$$DV = \alpha + \beta 1\ (IV1) + \beta 2\ (IV2) + \beta 3\ (IV3)$$

A linear regression is run for whole regression model to test the assumptions of regression for the given regression equation. The results of regression assumptions are in Table 7 + Chart 5:

Table 7. *AutoCorrelation (Durbin-Watson) & MultiCollinearity (Tolerance & VIF)*

Model		AutoCorrelation Statistics	Collinearity Statistics	
		Durbin-Watson	Tolerance	VIF
1	(Constant)	1.568		
	Management Style (HR Practices)		.726	1.377
	Decentralization (Delegation)		.669	1.495
	Democratization and Participation (Involvement in Decision Making)		.484	2.066
	Customer Concept (Customer Orientation)		.604	1.655

a. Autocorrelation (Durbin-Watson)

Durbin-Watson test shows value of 1.568 which is less than 2.0 but it still indicates the absence of autocorrelation because it is not close to 0 (positive autocorrelation) or 4 (negative autocorrelation). Therefore assumption of autocorrelation is fulfilled.

b. MultiCollinearity (Tolerance and VIF)

Collinearity Statistics shows that for all the variables of this model; the values of Tolerance are from .484–.726 and the values of VIF range from 1.377–2.066. All the values of Tolerance are greater than 0.01 and all the values of VIF are lower than 10, which indicate the absence of multicollinearity. Therefore assumption of multicollinearity is fulfilled.

c. Heteroscedasticity (Scatter plot)

Heteroscedasticity was also tested using Scatter Plot diagram which shows absence of Heteroscedasticity. Therefore assumption of Heteroscedasticity is also fulfilled.

All the assumptions of regression are fulfilled for whole model. Therefore, it is suitable to use regression analysis technique for this regression model.

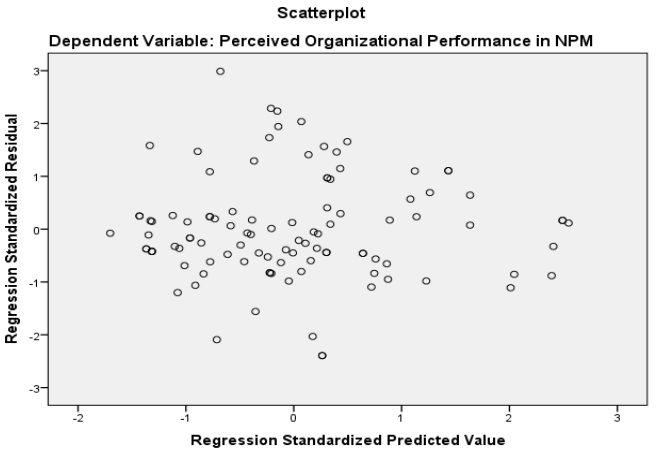

Chart 5. *Heteroscedasticity (Scatter plot)*

Regression analysis

Regression Analysis for Regression Equation is given below in Table 8 to 10:

Table 8. *Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.672a	.452	.429	.5872249

Notes: a. Predictors: (Constant), Customer Concept (Customer Orientation), Decentralization (Delegation), Management Style (HR Practices), Democratization and Participation (Involvement in Decision Making); b. Dependent Variable: Perceived Organizational Performance in NPM

Table 9. *ANOVA*[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	28.107	4	7.027	20.377	.000b
	Residual	34.138	99	.345		
	Total	62.245	103			

Notes: a. Predictors: (Constant), Customer Concept (Customer Orientation), Decentralization (Delegation), Management Style (HR Practices), Democratization and Participation (Involvement in Decision Making); b. Dependent Variable: Perceived Organizational Performance in NPM

Table 10. *Coefficients*[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.941	.386		2.438	.017
	Management Style (HR Practices)	-.012	.145	-.007	-.081	.936
	Decentralization (Delegation)	-.335	.149	-.205	-2.250	.027
	Democratization and Participation (Involvement in Decision Making)	.708	.136	.557	5.203	.000
	Customer Concept (Customer Orientation)	.328	.126	.250	2.614	.010

Notes: Dependent Variable: Perceived Organizational Performance in NPM

Results of Regression Analysis for Regression Equation in tables above show that:

This model explains 42.9% variance with 58.7% standard error of the estimate. This model also has significant value for F-statistic (20.377) with significant p-value (0.000). Therefore, this model as a whole is significant.

The variables of this model are both significant and insignificant.

- X1 variable i.e., Management Style (HR Practices) is insignificant with insignificant t-statistic (-.081) and significant p-value (.936). And it is contrasting the expected outcome of actual hypothesis.
- X2 variable i.e., Decentralization (Delegation) is significant with significant t-statistic (-2.250) and significant p-value (.027). But it is negative; therefore, it is opposite to the expected outcome of actual hypothesis.
- X3 variable i.e., Democratization and Participation (Involvement in Decision Making) is positively significant with significant t-statistic (5.203) and significant p-value (0.000).
- X4 variable i.e., Customer Concept (Customer Orientation) is positively significant with significant t-statistic (2.614) and significant p-value (0.000).

Therefore, overall, last two of the variables of regression model are matching their corresponding hypotheses as these are positively significant. First two of the variables of regression model are not matching their corresponding hypotheses as these are either insignificant or negatively significant.

The independent variables of this model impact on dependent variables as described below:

- X1 variable i.e., Management Style (HR Practices) has -.007 value for standardized coefficient of Beta which indicates 1 SD change (increase) in this independent variable brings only 0.7% change (increase) in dependent variable.
- X2 variable i.e., Decentralization (Delegation) has -.205 value for standardized coefficient of Beta which indicates 1 SD change (increase) in this independent variable brings -20.5% change (decrease) in dependent variable.
- X3 variable i.e., Democratization and Participation (Involvement in Decision Making) has .557 values for standardized coefficient of Beta which indicates 1 SD change (increase) in this independent variable brings 55.7% change (increase) in dependent variable.
- X4 variable i.e., Customer Concept (Customer Orientation) has .250 value for standardized coefficient of Beta which indicates 1 SD change (increase) in this independent variable brings 25.0% change (increase) in dependent variable.

5.1.5. Result of hypotheses testing

The relationship and impact of each independent variable on respective dependent variable was tested using regression analysis technique. The result of Hypotheses testing is shown below in Table 11:

Table 11. *Result of hypotheses testing*

Hypotheses Statements	Direction	Significance	Result
H_1: IV1 has significant positive impact on DV	"Positive"	Insignificant	Not Supported
H_2: IV2 has significant positive impact on DV	"Negative"	Significant	Not Supported
H_3: IV3 has significant positive impact on DV	"Positive"	Significant	Supported
H_4: IV4 has significant positive impact on DV	"Positive"	Significant	Supported

Correlation Matrix

The correlational relationship among variables in the model was also tested using Pearson Correlation analysis technique. The Correlation Matrix is presented to show the Pearson Correlation Coefficients among the variables. It indicates the strength of association among variables. The Correlation Matrix is shown below in Table 12:

Table 12. *Correlation matrix*

		MS	DD	DP	CC	PNPM
MS	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	104				
DD	Pearson Correlation	.360**	1			
	Sig. (2-tailed)	.000				
	N	104	104			
DP	Pearson Correlation	.454**	.473**	1		
	Sig. (2-tailed)	.000	.000			
	N	104	104	104		
CC	Pearson Correlation	.371**	.048	.551**	1	
	Sig. (2-tailed)	.000	.627	.000		
	N	104	104	104	104	
PNPM	Pearson Correlation	.265**	.068	.595**	.545**	1
	Sig. (2-tailed)	.007	.494	.000	.000	
	N	104	104	104	104	104

Notes:**. Correlation is significant at the 0.01 level (2-tailed).

The results show that there is significant and positive correlation among majority of the variables. Only IV2 is not correlated with IV3 and IV4. These findings indicate that most of variables have statistically strong relationship with the each other.

Discussion

Data analysis results are presented and interpreted in terms of demographic results and model or research related results. These results are discussed below:

The demographic data was collected through the demographics section of questionnaire survey. These results indicate an overall individual profile of the respondents related to the study. The model or research data was collected through the model related section of questionnaire survey.

First, The validity and reliability was checked for the model and data. Content validity is already fine because adopted questionnaire is pre-validated. It was tested by consulting researchers of same field. Construct validity was done using factor analysis and only necessary tests required to test relationship of variables were used. These (KMO and Bartlett's test) were found significant for this data. The reliability was tested by

using Chronbach's alpha coefficient which was found acceptable for all the constructs. Second, the statistical analysis of data collected for research framework or model was done using the statistical technique of multiple regression analysis for regression equation of framework (model).

Assumptions of regression were tested before using regression analysis technique on the regression equation of framework or model of this study. First, Autocorrelation was checked with Durbin-Watson test that showed the absence of autocorrelation. Second, Multicollinearity was checked with Collinearity Statistics (Tolerance and VIF) for all the variables of this model that showed the absence of multicollinearity. Third, Heteroscedasticity was checked using Scatter Plot diagram that showed the absence of Heteroscedasticity. Overall, all the assumptions of regression were fulfilled for whole model which made it suitable to use regression analysis technique for this regression model.

For regression equation the model as a whole was found significant along with all the variables which were significant or insignificant. This model explains average variance with average standard error of the estimate. This model also has significant value for F-statistic with significant p-value. Therefore, this model as a whole is significant. IV3 and IV4 were positively significant with significant t-statistic and significant p-value for each. IV2 was negatively significant while IV1 was insignificant. Therefore, some of the variables of this model are significant and some are not. Overall, analysis was successful in all aspects.

The result of hypothesis testing showed that 2 of the hypotheses are supported in this study and 2 are not supported as some independent variables i.e., IV3 and IV4 show significant and positive impact on respective dependent variable i.e., DV. While the other independent variables like IV1 and IV2 are either insignificant or significant but negative impact.

The implications of this research are given in recommendation section. These recommendations are of vital importance for the enhancement of organizational performance through effective implementation of NPM.

Conclusion and recommendations

This chapter covers conclusion of this research and its recommendations.

Conclusion

This study aimed to achieve two basic objectives. A detail of successful achievement of these objectives is given below:

First objective is successfully achieved in previous chapter by measuring factors influencing Organizational Performance in NPM in organizations in Pakistan. Results show that "Democratization and Participation (Involvement in Decision Making)"; and "Customer

Concept (Customer Orientation)" have significant positive impact on "Perceived Organizational Performance in NPM". Whereas "Management Style (HR Practices)" and "Decentralization (Delegation)" do not have positive significant impact on "Perceived Organizational Performance in NPM". The insignificant (nearly zero) impact of "Management Style (HR Practices)" indicates the unresponsiveness of employees towards modern management related practices. The significant (but negative) impact of "Decentralization (Delegation)" indicates the resistance of employees towards recent attempts of Devolution of power or authority. This research is limited to civil servants which shows their interest in favor of centralization or against decentralization which may be biased. Furthermore, we may conclude that it is one side of picture. This research may be extended to verify positive and negative sides of centralization and decentralization as per customers' notions.

Second objective is successfully achieved in upcoming chapter by providing recommendations as general and specific strategies for effective implementation of NPM in public sector enterprises in Pakistan to help in enhancing organizational performance under NPM.

Recommendations

Recommendations are provided here for effective implementation of NPM in public sector enterprises in Pakistan in order to help in enhancing organizational performance under NPM. These are presented as strategies of general and specific scopes that may prove more effective while promoting and implementing NPM in further organizations. A few key recommendations are elaborated below in the form of:

- 6 General strategies – based on theories of previous researches
- 4 Specific strategies – based on empirical results of current research

Perceived Organizational Performance in NPM can be enhanced by:

1. Management Style (HR Practices)
2. Decentralization (Delegation)
3. Democratization and Participation (Involvement in Decision Making)
4. Customer Concept (Customer Orientation)

Perceived Organizational Performance in NPM can be enhanced by:

5. Privatization + Outsourcing or Contracting out
6. Information Technology + ERP or Information systems
7. Innovation Management
8. Change Management
9. Performance Management (Measurement and other aspects)
10. Accountability (multi-dimensions)

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12.
Relationship of Fiscal Discipline and Household Income on Money Demand Function in Sri Lanka

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Introduction

The Regardless of a great number of studies on demand for money function in Sri Lanka, the subject of dependability of demand for money function was disregarded. Without joining stable money demand, the financial strategy can't work logically. The oddity of this study originates from the use of co-integration strategy to Sri Lankan yearly information during 1975-2013. The empirical findings are additionally not quite the same as prior studies on money demand in Sri Lanka.

The intermediate targets and appropriate instruments of monetary policy work with stable money demand function. A stable money demand function witness the effective monetary policy in developed and developing countries. In this study we examine the stable money demand function utilizing ARDL approach to discover co-integration in variables. The variables must be co-integrated at I(0) and I(1). This methodology likewise gives consistent estimates of long run coefficients (Pesaran *et al.* 2001).

We use per capita GDP, real interest rate, exchange rate, fiscal deficit, urban and rural population as independent factors to determine money demand function in Sri Lanka keeping in perspective a few of examination papers have found these determinants impact money demand function significantly. The connection between exchange rate and interest rate has delivered blended results in both created and creating nations. So to keep away from the perplexity, different exploration papers justify the negative and additionally positive method of reasoning of exchange rate with money demand (M2). Additionally diverse examination papers justify the both positive and negative method of reasoning of fiscal deficit

with demand for money (M2). Three noteworthy methodologies like Classical, Keynesians and the post-Keynesians present money demand function. At first, Fisher (1911) presented quantity theory of money which is commonly called transaction demand for money. He simply focused on income as fundamental determinant of money demand and completely overlooked interest rate in his hypothesis. The general form of this theory can be stated as,

$$MV=PT \quad (1)$$

Keynes (1936) introduced another methodology of demand for money in his book, "The General theory of employment, interest and money". He said three intentions in his book named as, motive of transaction money demand, motive of speculative money demand and motive of precautionary money demand. Keynes hypothesis is otherwise called liquidity preference theory. Inverse to Fisher, He asserted that interest rate assumes significant part in deciding money demand alongside income. Portfolio theories explore that the primary capacity of money is store of value. Friedman (1956) and Tobin (1958) contended that the money which individuals hold is fundamentally a piece of their portfolio assets. Baumol (1952) and Tobin (1956) gave foundation to inventory theoretical approach or transaction theories of money demand. They contended that money is utilized pretty much as medium of trade. They essential part of money was just to fill the role of medium of exchange.

The central target of our study is to deal with principle determinants influencing money demand function in long run for Sri Lanka. For short run estimation, the Error Correction Modeling (ECM) is normally embraced by specialists. For implementing successful monetary policy, both intermediate targets and right choice of tools are required. In Pakistan numerous studies have been done to assess the function of money demand by different techniques of co-integration see (Khan & Sajjid, 2005; Sarwar *et al.,* 2013; Mall, 2013).

Conclusively, investigation of demand for money function is additionally getting fame in Sri Lanka and to deal with those variables like income, interest rate, exchange rate, fiscal deficit and rural and urban populace; decide monetary movement hazardously. With the end goal of estimation, this study chooses data of time series over the period from 1975 to 2013. To deal with the long run and short run appraises at the same time, the methodology of ARDL is being used. Here we utilize the above methodology of co-integration to observe the association between money function and its determinants.

Significance of the study

The issue of evaluating the function of money demand is currently the most essential issue in developing as well in developed countries. The question of stability of demand for money is getting popularity in terms of policy implications. Hence, the money demand comes from its capacity of being a unit of account, store of value and medium of exchange. In

developing and developed countries, numerous studies uncovered the significance of money demand and different methods of estimation are used to observe the relationship between money demand and its determinants. The monetary policy is used as an effective tool in handling the interest rate and inflation. This study will also cast a considerable impact in tracking the exchange rate, fiscal deficit and other macroeconomic variables. Moreover this research would give substantial knowledge to those who are interested to explore the determinants of money demand function in Bangladesh.

Theoretical Foundation of the Study

The relationship between money demand and its determinants are talked about by numerous economists. Some studies are given under: Jegajeevan (2009) investigated the function of money demand for the period ranges from 1992-2008 in Sri Lanka. The empirical discoveries indicated positive relationship between money aggregate and income over the long run, while inflation and Treasury bill rate influences money demand contrarily over the long run. Dharmadasa & Nakanishi (2013) used time series data to research money demand function over the period from 1978-2010 in Sri Lanka. The strategy, which utilized to discover co-integration among variables, was, Autoregressive distributed lag (ARDL). Findings uncovered that money demand (M1) is co-integrated and having huge association with short term domestic and foreign interest rate, real GDP and real exchange rate.

Renani (2007) inspected money demand function for Iran utilizing ARDL bound testing methodology of co-integration over the period 1985-2006. The independent variables i.e. income, inflation and exchange rate affect money demand over the long run. Inflation influences adversely while income and exchange rate react decidedly to money demand. Padhan (2011) with the assistance of co-integration test and Granger Causality test dissected the money demand function and its determinants utilizing quarterly information amid the period from 1996-2009 in India. The findings revealed that interest rate, exchange rate, money stock and GDP growth effect money demand. Suliman & Dafaalla (2011) investigated the determinants of real money balance for the period ranges from 1960-2010 in Sudan. The empirical findings revealed the positive relationship between money aggregate and income, while inflation and exchange rate apply negative impact on money demand. Salha & Jaidi (2013) dissected money demand function utilizing ARDL bound testing approach for Tunisia over the period 1981-2011. The real income is viewed as a fundamental part in this study. The study unveiled the presence of co-integration between money demand and its determinants i.e. investment expenditures, final consumption expenditures and expenditures on exports and interest rate. Narayan *et al.* (2009) inspected the money demand function utilizing board DOLS and SUR strategies over the period from 1974–2002. South Asian Countries like Bangladesh, India, Pakistan, Nepal and Sri Lanka were decided for examination. Co-integration was found between M2 and its determinants both in an

individual country and panel examination. The findings uncover positive and significant effect of income on money demand. While domestic interest rate reacts money demand altogether just in Bangladesh and India as it were. While the foreign interest rate influences money demand significantly with the exception of India. Abdullah *et al.* (2010) explored the money demand function utilizing ARDL bound testing approach for Asean-5 nations i.e. Indonesia, Malaysia, Singapore, Thailand and the Philippines. The findings showed the stable long run link among all the variables namely broad money, income, exchange rate, interest rate, inflation and foreign interest rate with empirical support. The coefficients of exchange rate and inflation are positive and negative respectively. The coefficient of interest rate spread is discovered critical having negative sign aside from the Philippines.

Arize & Nam (2012) utilizing error correction methods for short-run dynamics assessed money demand function for seven Asian nations. The nations were India, Malaysia, Pakistan, Korea, Philippines, Thailand and Sri Lanka. After discoveries, the positive and noteworthy connection was found between exchange rate and money demand in each of the seven nations for short and additionally long run. The domestic interest rate reacts money demand fundamentally for all nations. This study accentuated that broad money must be used by the monetary authorities to get desire objectives.

There are different macroeconomic variables which impact money demand function. These components can be interest rate, exchange rate, fiscal deficit, tax revenue, populace development, real income, inflation, financial innovation, public debt and so forth. Money demand in addition to money supply is fundamental in the execution of fiscal arrangement. The most punctual hypotheses concentrated on income and interest rate as major deciding variables of money demand. Numerous economists are currently worried to locate some new variables that would influence Money demand over the long haul. Mundell (1963) contended that exchange rate could likewise help in deciding Money demand function. The empirical examinations have demonstrated the solid relationship between exchange rate and money demand. The Keynesian proposition and Ricardian equivalence hypothesis have given the rationale for exploring the connection between fiscal deficit and Money demand. The population factor additionally contributes deciding money demand; see (Faridi & Akhtar, 2013). We incorporate real income, interest rate, exchange rate, fiscal deficit and urban and rural population in our model as autonomous variables to decide money demand function utilizing ARDL approach.

Method and Procedure of the Study

Model Specification

The functional relationship of variables is given under.

$$LMON_t = f(LFISCDEF_t, LGDPPC_t, LEXCR_t, LINT_t, LURB_t, LRUR_t)$$

Whereas,

LMON= log (Money demand (as a % of GDP))
LEXCR= log (Official exchange rate (LCU per US$))
LGDPPC= log (per capita GDP)
INT= Real Interest Rate
LFISCDEF= log (Fiscal deficit (as a % of GDP))
LURB= log (Urban population (% of total population))
LRUR = log (Rural population (% of total population))

Data Source

The time series data on per capita GDP, real interest rate, fiscal deficit, official exchange rate, urban and rural population is obtained from World Development Indicators (WDI).

Estimation Techniques

Ng-Perron for Unit Root Problem

Ng & Perron (2001) form four sorts of tests, in light of GLS de-trended technique for ERS. They utilized this strategy as a part of request to create capable form of redesigned adaptation of Phillip Perron test. Similarly as with most different tests, the null hypothesis of unit root can't be rejected if the test measurements are higher than the critical value. This test is moderately simple to apply and favored other option to the conventional ADF and PP tests. This test gives more vigorous results. The other capability of this test is having high power than Phillip Perron test, when the estimation of φ moves towards one.

2.3.2 Estimating Co-integration using Autoregressive distributed lag model (ARDL)

The autoregressive distributed lag (ARDL) model was reached out by Pesaran *et al.* (2001). The ARDL methodology is connected when variables are co-integrated at I(0) and I(1). In Johnson approach, all variables must be co-integrated at I(1). In ARDL approach it is not really. It is a bit much every one of the variables to be incorporated at I(1). This methodology is relevant when we have I(0) and I(1) variables in our set. However to maintain a strategic distance from the spurious connection among the money demand (M2) and its determinants, the economists considered Autoregressive distributed lag (ARDL) co-integration approach for solid results over the long run and in addition short-run balance. The general equation of ARDL for the proposed model is given below.

$$\Delta LMON_t = \alpha_{10} + \alpha_{11} LMON_{t-1} + \alpha_{12} LINT_{t-1} + \alpha_{13} LEXCR_{t-1} + \alpha_{14} LFISCDEF_{t-1} +$$

$$\alpha_{15} LGDPPC_{t-1} + \alpha_{16} LRUR_{t-1} + \alpha_{17} LURB_{t-1} + \beta_{11} \sum_{i=1}^{p} \Delta LMON_{t-i} + \beta_{12} \sum_{i=0}^{p} \Delta LINT_{t-1} +$$

$$\beta_{13} \sum_{i=0}^{p} \Delta LEXCR_{t-i} \beta_{14} \sum_{i=0}^{p} \Delta FISCDEF_{t-i} + \beta_{15} \sum_{i=0}^{p} \Delta GDPPC_{t-i} + \beta_{16} \sum_{i=0}^{p} \Delta LRUR_{t-i} + \beta_{17} \sum_{i=0}^{p} \Delta LURB_{t-i} + \eta$$

The equation below will estimate the short run Dynamics

$$\Delta LMON_t = \beta_{10} + \beta_{11}\sum_{i=1}^{p}\Delta LMON + \beta_{12}\sum_{i=0}^{p}\Delta LFISCDEF_{t-i} + \beta_{13}\sum_{i=0}^{p}\Delta LINT_{t-i} + \beta_{14}\sum_{i=0}^{p}\Delta LGDPPC_{t-i} +$$

$$\beta_{15}\sum_{i=0}^{p}\Delta LRUR_{t-i} + \beta_{16}\sum_{i=0}^{p}\Delta LURB_{t-i} + \beta_{17}\sum_{i=0}^{p}\Delta LEXCR_{t-i} + \gamma_{11}ECM_{t-1} + \varepsilon_1$$

ARDL bound testing approach by Pesaran *et al.* (2001) is utilized for accomplishing vigorous results and super predictable evaluations of the long run coefficients in small sample case. The short run evaluations are additionally watched. We have three circumstances here

i. All of the series are I (0), and subsequently stationary, here we basically utilize the OLS method in light of the fact that our information is stationary at level.
ii. All of the series are integrated at first difference e.g. I(1) yet they are not co-integrated then we evaluate standard regression model with OLS.
iii. All of the series are integrated of the same order and they are likewise co-integrated, here we utilize two sorts of model. To start with OLS regression model to watch the long run relationship among variables and second error correction model (ECM) to watch the short run dynamics.

What do we do in such circumstance in the event that we need to extricate both long and short run relationship utilizing statistical technique? This is the place the ARDL model enters the picture. That is the reason we like to utilize this way to deal with keep away from autocorrelation and endogeneity problems. Therefore, in this study we utilize ARDL bound testing approach rather than using panel data approach.

Data Analysis and interpretations

The consequences of descriptive statistics have been appeared for our model in table 1. The evaluated estimations of Kurtosis and Skewness show the normality of data. The Jarque – Bera test is further used to test normality of data series and insignificant values of this test exposed that data series is normally distributed except money demand.

Table 1. *Descriptive Statistics*

Series	LMON	INT	LGDPPC	LFISCDEF	LEXCR	LURB	LRUR
Mean	3.504260	3.645256	11.13971	-3.876664	3.805330	2.817637	4.421082
Std. Dev.	0.185329	4.183980	0.414201	1.444856	0.819258	0.087849	0.017970
Jarque-Bera	17.49020	0.179575	2.104850	3.163075	2.809071	3.422694	3.436597
Probability	0.000159	0.914126	0.349090	0.205659	0.245481	0.180622	0.179371

In the wake of checking the normality, the unit root test is employed to expose the issue of unit root in data series. There is one procedure utilized to observe the stationary in variables i.e. Ng-Perron unit root test. Subsequent to checking the stationary and non-stationary in all variables, mixed order of integration is observed. The results revealed that per capita GDP, interest rate, urban and rural population is witnessed as stationary at level but all other variables are witnessed as non-stationary at level. At first difference, all variables are witnessed as stationary. The outcomes are appeared in table 2.

Table 2. *Ng-Perron Unit Root Test*

Ng-Perron Test Statistics				
Variable	At Level			
	MZa	MZt	MSB	MPT
LMON	-0.17791	-0.11799	0.66319	27.3044
LGDPPC	-6.38771	-1.48677	0.23275	4.75456
LFISCDEF	-3.59979	-1.08713	0.30200	6.81096
LEXCR	-2.51935	-0.92635	0.36769	8.79893
INT	-17.7522	-2.97616	0.16765	1.39148
LURB	-13.6336	-2.50877	0.18401	2.18233
LRUR	-7.73711	-1.84019	0.23784	3.62207
At First Difference				
Variable	MZa	MZt	MSB	MPT
ΔLMON	-13.7670	-2.60802	0.18944	1.83942
ΔLGDPPC	-14.3005	-2.58763	0.18095	2.03750
ΔLFISCDEF	-18.4254	-3.03508	0.16472	1.33029
ΔLEXCR	-18.0548	-2.80229	0.15521	2.06725
ΔINT	-16.3577	-2.85209	0.17436	1.52668
ΔLURB	-57.8269	-5.31187	0.09186	0.57788
ΔLRUR	-16.6371	-2.74865	0.16521	1.96299
Asymptotic Critical Values				
Level of Significance		1 Percent	-13.8000	
		5 Percent	-8.10000	
		10 Percent	-5.70000	

The mixed order of integration is confirmed by applying unit root test therefore, ARDL is applied to observe the long run relationship between money demand and its determining factors. The results expose that there is long run relationship between money demand and its determinants in Sri Lanka on the basis of the value of F-test. Moreover our results are robust to the diagnostics as serial correlation, functional form, normality and heteroscedasticity. The outcome of co-integration method is appeared in Table 3.

Table 3. *Autoregressive Distributed Lag Estimates*

Dependent variable is LMON				
Estimated Model: LMONt= f (LGDPPCt, LFISCDEFt, INTt, LEXCRt, LRURt, LURBt)				
F-statistic	95% Lower Bound	95% Upper Bound	90% Lower Bound	90% Upper Bound
12.0756	2.8234	4.2227	2.3669	3.6219
W-statistic	95% Lower Bound	95% Upper Bound	90% Lower Bound	90% Upper Bound
84.5292	19.7639	29.5586	16.5682	25.3532
Diagnostic Tests				

R-Bar-Squared	0 .65404	Serial Correlation	0.47117 [.492]
F-Stat. F(8,29)	9.7434[0.000]	Functional Form	0.22607 [.634]
Akaike Info. Criterion	-96.5863	Normality	0.89279 [.640]
Schwarz Bayesian Criterion	-103.9554	Heteroscedasticity	0.039437 [0.427]

The estimates of long run are appeared in table 4. The results explore that per capita GDP has positive and significant effect on money demand in long run. This finding is consistent with the work of Azim *et al.,* (2010). The above two studies concluded the same outcomes of per capita GDP as we have in Sri Lanka. Interest rate effects significantly effects upon money demand but the sign of coefficient is positive. The results of Narayan *et al*, (2009) and Abdullah *et al.* (2010) are consistent to our outcomes.

Table 4. *Long Run Coefficients using ARDL Approach*

Dependent variable is LMON				
Variables	Coefficient	Standard Errors	T-Ratio	Prob. Value
LGDPPC	0 .26530	0.11277	2.3526	0.026
INT	0.98218	0.35844	2.7401	0.010
LFISCDEF	0.72093	0.36032	2.0008	0.055
LEXCR	-0.16210	0.082509	-1.9646	0.059
LRUR	-0.88236	18.1883	-0.048513	0.962
LURB	- 0.16949	0.36233	-0.46778	0.643
C	-650.8644	9036.0	.072030	0.943

While negative and insignificant link was found between rural population and money demand. One percent change in rural population makes -0.89 percent change in money demand. Urban population effects money demand negatively and insignificantly. The exchange rate affects money demand significantly and negatively in the long run. Anwar & Saghar (2012) and Mall (2013) concluded the same results for exchange rate. Moreover fiscal deficit affects money demand positively and significantly in the long run. Vamvoukas (2010) and Khrawish *et al.* (2012) supported our results, their sign of coefficient of fiscal deficit was also positive.

After discussing the long run estimates, we next move to the outcomes of error correction representation for the selected ARDL model. The outcomes are appeared in below Table 5.

Table 5. *Error Correction Representations for the selected ARDL Model*

Dependent variable is LMON				
Variables	Coefficient	Standard Errors	T-Ratio	Prob. Value
ΔLGDPPC	0.17807	0.064422	2.7642	0.010
ΔINT	-0.14639	0.125050	-1.1706	0.251
ΔLFISCDEF	0.48391	0.200500	2.4136	0.022
ΔLEXCR	-0.10880	0.061209	-1.7776	0.086
ΔLRUR	-0.59226	12.17340	-0.048652	0.962
ΔLURB	-0.11377	0.237170	-0.047969	0.635
ecm(t-1)	-0.67122	0.118640	-5.6576	0.000
R-Squared	0 .79808	R-Bar-Squared		0.74238
S.E. of Regression	2.7763	F-Stat. F(7,30)		16.3747[0.000]
Mean of Dependent Variable	-.18922	S.D. of Dependent Variable		5.4698
Residual Sum of Squares	223.5229	Equation Log-likelihood		-87.5863
Akaike Info. Criterion	-96.5863	Schwarz Bayesian Criterion		-103.9554
DW-statistic	1.7870			

The short run results which are estimated through ARDL Bound Testing approach are shown in table 5. For Sri Lanka, the estimated results disclosed that interest rate has insignificant effect on money demand and the sign of coefficient is negative. GDP per capita affects money demand positively and significantly. While negative and insignificant link was found between rural population and money demand. Urban population effects money demand negatively and insignificantly. In the case of exchange rate, the results reveal that there prevails negative and significant effect on money demand. Fiscal deficit affects money demand positively and significantly in the long run. After discussing short run estimates, we move to apply the stability test and our findings expose stability in data series. The graphical representation makes it clear. The money demand function (M2) remains stable over time for Sri Lanka after applying CUSUM and CUSUMSQ.

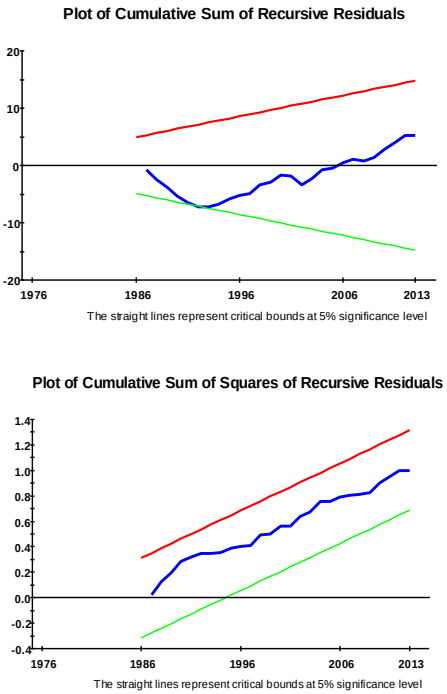

Figure 1. *Stability test*

Conclusion and policy Recommendations

The prime objective of our study is to investigate the money demand function over the period from 1975 to 2013 in Sri Lanka. In this respects, time series information is used for analysis. The econometric technique used to inspect the presence of co-integration among variables is,

autoregressive distributed lag (ARDL). We have utilized per capita GDP, real interest rate, exchange rate, fiscal deficit, rural population and urban population to determine demand for money function. Our findings are reliable with past discoveries; in this manner, the variables can be taken as determinants of money demand utilized as a part of this study. First money demand (M2) is co-integrated with exchange rate, interest rate, income and fiscal deficit. In this manner, these determinants can be taken in deciding money demand over the long run. The income, interest rate and fiscal deficit affects significantly and positively upon money demand. The negative relationship was seen between exchange rate and money demand. At the point when any domestic currency depreciates, then the demand for domestic currency would be declined. The CUSUM and CUSUMSQ test affirms the stability of money demand function in Sri Lanka. The main points curtail from the above findings propose per capita GDP, interest rate, exchange rate and fiscal deficit are vital determinants of money demand in Sri Lanka. Our findings also suggest the money demand (M2) is useful monetary aggregate in implementing the monetary policy. The model utilized as a part of this study permitted us to fuse exchange rate, fiscal deficit, urban and rural population in addition to income and interest rate. Strategy planners can better comprehend to assess the fundamental determinants of money demand as far as policy implication. Another outstanding thing uncovered from our discoveries is presence of stable money demand function in Sri Lanka. Convincingly, money demand (M2) is better monetary aggregate in the execution of monetary policy.

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