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## Fiscal Decentralisation in Pakistan

NAEEM UR REHMAN KHATTAK, IFTIKHAR AHMAD, and JANGRAIZ KHAN

### INTRODUCTION

Fiscal decentralisation is considered as an important policy instrument to achieve economic efficiency and ensure effective governance through financial autonomy of provincial governments. It integrates the smaller units of federation and ensures their participation in the economic development of country while at the same time capacitate the central government to fulfil the national level tasks more efficiently and effectively. It is considered as an important growth accelerating measure. It empowers the lower level governments through financial autonomy and administrative empowerment.

Devolution helps the lower tiers of government to act as a powerful administrative agent of the central government. However, decentralisation helps units to be more innovative, responsible and efficient as they have more autonomous status. Decentralisation policy is believed to positively affect economic growth because it envisage better derivation and implementation of social policies. The decentralised setup of the government does not have any information barriers and lower level of government is better positioned to know the basic necessities and developmental needs of the people that are living in different regions of a country. Decentralisation brings up the true potential of a locality with the efficient resource exploration and its efficient utilisation. It furthers competition among the competing constituencies for better service provision which results in higher efficiency. This all has the potential to positively influence economic growth.

Fiscal decentralisation can help in better targeting and can eliminate unnecessary engagements of the central governments. In the words of Bird and Smart (2002), “*for services to be effectively provided, those receiving transfers need a clear mandate, adequate resources and sufficient flexibility to make decisions*”. Decentralisation is the process through which the responsibilities as well as resources from national to sub national<sup>1</sup> governments are devolved [Rondinelli (1981)]. Thus, by decentralisation, central government empower the sub national governments in

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<sup>1</sup>In this discussion the provincial, states and sub-national level of governments will be used interchangeably.

such a manner that can help in better use of resources, improve public living standards and at the same time to share the work load [Gordin (2004)]. Nevertheless from financial point of view, decentralisation may pose danger if it is weakly designed so that provinces are able to externalise their costs to others [Rodden, *et al.* (2002); Von Hagen, *et al.* (2000)].

Pakistan is federal country with a centralised taxation system. Federal government collects bulk of resources and then redistributes it among the federal and constituent parts to correct both vertical and horizontal fiscal imbalances. In Pakistan, the system of fiscal resource distribution is guarded by law and an autonomous body i.e., National Finance Commission (NFC) is constituted by law, after every five years time, to ensure transparent and judicious resource distribution. However, at times different problems interrupted the mechanism and current fiscal resource distribution did not prove up to the mark. Deadlocks were experienced at times and hence NFC failed to deliver undisputed awards to settle vertical and horizontal resource gaps.

The Present study aims to identify the strengths and weaknesses of the current fiscal resource distribution system in Pakistan, through the compilation of its historical trends. Proper information regarding the prevailing resource distribution system is believed to result in better policy formulation and thus would ultimately help the country to catch the development path faster. In this connection, it is also necessary to analyse the effects of current resource distribution policies on the economic growth of the country. Thus, this study helps in identifying the degree of financial autonomy of the sub national governments and quantify its long run returns.

## LITERATURE REVIEW

Importance of the relationship between fiscal decentralisation and economic growth is depicted by the amount of literature available on this topic. Extensive material is found exploring various important relationships. However, differing results were obtained at the estimation stage owing to the variables and data under analysis. Similarly, different results are found for the developed and developing economies. Even in the case of Pakistan, studies still has to find clear relationship between fiscal decentralisation and economic growth.

Davoodi and Zou (1998) developed a theoretical model for explaining the relationship between fiscal decentralisation and economic growth. For empirical testing, they have used time averaged panel data for 46 countries from 1970 to 1989. In the case of developing countries a negative association is found between fiscal decentralisation and economic growth.

Zhang and Zou (1998) used the China's provincial panel data for year 1978–92 and found that there is a negative relationship between the degree of fiscal decentralisation and provincial economic growth.

Phillips and Woller (1997) studied the relationship between economic growth and fiscal decentralisation for the sample of seventeen developed countries and twenty three less developed countries for the period from 1974 to 1991. For the developed countries they found weakly significant, negative relationship between revenue decentralisation and economic growth. However, they fail to prove any relationship between the two variables in the case of less developed countries.

Xie, Zou and Davoodi (1999) found a highly insignificant relationship between fiscal decentralisation and economic growth for the United States. Authors attributed it to the fact that the country has already achieved an optimal level of fiscal decentralisation and thus further decentralisation may be detrimental to economic growth.

Thieben (2001) used the OECD countries cross sectional data for the period from 1975-95. He analysed the benefits and short comings of fiscal decentralisation for these countries. The study could not find any relationship between economic growth of the OECD countries and the degree of revenue decentralisation of the sub-national governments.

Contrary to the above stated review, Lin and Liu (2000) concluded that fiscal decentralisation has made positive effects on provincial economic growth in the case of China. They used the provincial panel data of twenty eight provinces of China for the period from 1970 to 1993. The authors observed that fiscal reforms played an important role in the impressive growth of China.

Another interesting observation was made by Mello and Barenstein (2001) which used the cross country data for 78 countries for 1980-92. The study concluded that as the share of non-tax revenues, grants and federal transfer increases in the total sub-national revenues, the association between decentralisation and governance becomes stronger.

### **Resource Distribution System in Pakistan**

Pakistan has a federal system. It is a country with strong federal government. Currently there are three levels of government working in Pakistan i.e., the federal, provincial and the local (district) level governments. Due to the efficiency and distributional issues, the resource sharing mechanism always remained under debate.

According to Jaffery and Sadaqat (2006), the systematic resource transfers take place at four stages. At the first stage the National Finance Commission (NFC) awards decides the revenue distribution between the federal and provincial governments. At the second stage, Provincial Finance Commission (PFC) delegate resources from provincial to local levels. Following this as a third stage transfers are made from federal to local levels and finally the vertical resource sharing occurs at local levels i.e. from District Government to Tehsil Municipal Administration. On the contrary, the random transfers take the shape of special grants, discretionary funds for executives, the parliamentary development funds and likewise. However, in this study our emphasis will remain on the fiscal relations between federal and provincial government.

Without sufficient knowledge regarding the history of resource distribution, it is hard to identify related bottlenecks related to resource distribution mechanism. This section summarises all the awards presented during the course of time after independence. The over time development is then discussed on the basis of historical analysis [Ahmed, *et al.* (2007)].

### **Niemeyer Award**

Under the 1935 Act of United India, the Niemeyer Award was being followed for resource distribution between the centre and provinces. According to this award, an important tax i.e. sales tax was levied and collected by the provincial governments. In the case of income tax, 50 percent of the total collection was reallocated to the provinces.

After 1947, when Pakistan came into being, the same arrangements were followed till March 1952, although some adjustments were made in railway budget and sharing of income and sales tax [Pakistan (1991)].

### **Raisman Award**

The Raisman award was presented in December, 1947 [Pakistan (1991)]. The Raisman award made special arrangements to cover the poor financial position of the federal government. Fifty percent of sales tax was allocated to the federal government as an ad hoc measure. Provinces were allocated 50 percent of income tax, out of which 45 percent was allocated to East Pakistan while the rest was divided among the provinces of Punjab, Sindh, Khyber Pakhtunkhwa, Bhawalpur, Khairpur, Balochistan states union and residual<sup>2</sup> as 27, 12, 8, 4, 0.6, 0.6, and 2.8 percent, respectively [Pakistan (1991)].

### **Revenue Sharing Under One Unit**

During the implementation period of Raisman award, in year 1955, all the four provinces of West Pakistan were merged and declared one unit. Hence, after 1955 the whole country was declared two identities only i.e., East Pakistan and West Pakistan. During the era of One Unit, two awards were announced i.e., of year 1961 and 1965.

### **National Finance Committee 1970**

In April 1970, for the first time a committee (instead of a commission) was designated to work under the federal finance minister and give recommendations for amicable Intergovernmental resource allocation. The resource pool was reshuffled. The committee recommended that vertical resource distribution between federal and provincial governments should be 20:80 percent, respectively. Once again, 30 percent of the allotted sales tax was redistributed among the provinces according to the collection from the respective areas.

### **Financial Arrangements in 1973 Constitution**

In 1973, the new constitution of Pakistan was agreed upon by the National Assembly and implemented. In the new constitution, special arrangements were made to make the resource distribution mechanism smooth and acceptable. According to the 1973 constitution, it was obligated upon the federal government to constitute the NFC after each five years time. The finance commission was designated to suggest and review the resource distribution mechanism in Pakistan. Hence with the new statutes, an effort was made to ensure an amicable resource distribution.

### **The 1st NFC Award 1974**

The first NFC was established under the new constitution in 1974. Under this commission the DP consisted of only sales tax, income tax and export duty on cotton. Population was adopted as only criterion for horizontal resource distribution among the provinces. The vertical resource distribution remained as of the previous award. With the

<sup>2</sup>The states which were believed to join Pakistan later after independence.

adoption of population as the single criterion for resource distribution, the provincial share of Punjab increased to 60.25 percent of the total provincial share. Thus with the non diversification of formula, the smaller provinces were affected negatively.

### The 2nd NFC Award 1979

Following the 1974 award, the 2nd NFC award was set up by the government of President General Zia-ul-Haq, in 1979. Hence the revised resource shares for the provinces announced under the 1979 NFC award are presented at Table 1.

Table 1  
*Provincial Share 1979 Award*

(Percent)			
Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan
57.97	23.34	13.39	5.30

Source: Pakistan (2006b).

### The 3rd NFC Award 1985

This NFC remained unable to recommend any improvement in distribution mechanism. The resources continued to be distributed in the light of the 1974 NFC award with the amended provincial population.

### The 4th NFC Award 1991

The fourth NFC award was formed in 1990 by the democratic government of Mr Nawaz Sharif. The commission finalised its recommendations in April, 1991. This award was considered an important achievement because it achieved success after a gap of almost 16 years. This award came up with a number of positive recommendations. Most importantly the resource pool was expanded with the inclusion of more taxes in the DP. Thus, according to the 1991 NFC award, the horizontal resource share of the provinces registered a growth of 17 percentage points (i.e., increase from 28 percent to 45 percent of federal tax revenues), [Ghaus and Pasha (1994)]. The resources were allocated among the provinces in accordance with their population size, which is presented at Table 2.

Table 2  
*Provincial Share-1991 Award*

(Percent)			
Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan
57.88	23.28	13.54	5.30

Source: Pakistan (1991).

### The 5th NFC Award 1997

This NFC award was announced in second month of 1997. The DP was further expanded with the inclusion of all taxes and duties. It now comprised of sales tax, income tax, wealth tax, capital value tax, custom duties, export duties, excise duties (other than

duty on gas that is charged at wellhead), and all other taxes that were levied or collected by federal government at that time. Similarly, royalties on crude oil and net development surcharges on natural gas were extended to the provinces in the shape of straight transfers. In addition, this commission also announced the incentive of matching grants<sup>3</sup> to the provinces [Pakistan (1997)].

### **The 6th NFC Award 2000**

Despite having problems at the implementation stage, the two NFC awards of 1991 and 1997 remained successful in bringing improvements in the resource distribution mechanism. The 6th NFC for year 2000 was constituted by General Pervaiz Musharraf, the then President of Pakistan. The centre was insisting 45 percent out of DP but the provinces were demanding 50 percent of share. It completed its tenure without any success.

### **The 7th NFC Award 2006**

After the unproductive ending of the 6th NFC, new commission was nominated on 21st July, 2005. Nevertheless, the deadlock still prevailed among the stake holders. The commission faced difficulties in achieving consensus for amicable resource distribution mechanism. Therefore, as a last option, under the Article 160(6) of the 1973 constitution of Islamic Republic of Pakistan, all the chief ministers of the provinces vested the authority to the President for declaring an acceptable and justified fiscal resource sharing formula. Hence, the President General Pervaiz Musharraf amended the "Distribution of Revenues and Grants-in-Aid Order, 1997" by issuing Ordinance No. 1 of 2006. Thus finally after a delay of six years, the resource distribution mechanism of 1997 was amended on 1st July, 2006 [Pakistan (2006a)]. Considering the provinces demands, the provincial share was increased against the federal and they were given gradual increase in their shares.

In Short, History of NFC indicates that the resource distribution in Pakistan by and large has been unsuccessful. It has both the shades of failure as well as certain achievements. On its positive achievements, NFC has a best system to ensure amicable resource distribution as it takes all the decision makers on board and decides over resource distribution with their consent. In addition, with the passage of time more financial autonomy was delegated to the provinces and there is more realisation of fiscal decentralisation especially in past two NFC awards of 1997 and 2006. Onwards from 1991 NFC award, resource allocation for the provinces increased either due to inclusion of taxes in the DP or due to the higher provincial share against that of federal. In addition, increased grants and straight transfers are channelised to the provinces now. Similarly, the incentive of matching grants motivated the provinces, inviting them to enhance efficiency, have their own resource generation and obtain financial autonomy [Ahmed, *et al.* (2007)].

However, on its negative side, NFC has experienced various deadlocks too, mainly due to the non agreement among the provinces. In a political economy like Pakistan, all the provinces have differing characteristics and offers different economic opportunities to

<sup>3</sup>Provided that they exceed the target of 14.2 percent growth in revenue generation.

its people. Varying interests of the provinces weakened their bargaining power. Over the time, provinces have demanded for inclusion of different criteria in the resource distribution formula. For example, Sindh has emphasised on the revenue generation criteria, Khyber Pakhtunkhwa demanded for backwardness, Balochistan advocated for area while Punjab insisted for taking the agriculture produce as a criteria to be considered while distributing the resources. Thus due to the failure in bargain and absence of consensus, provinces retreat to the adoption of a single criterion, which is sub optimal. The institutional set up of NFC has failed in amicably progressing and tackling the problem of fiscal decentralisation. Lack of consensus had given way to interim awards and grants which ultimately has benefited the larger province.

## ECONOMETRIC ESTIMATION

### Methodology

For this study, the theoretical model of Davoodi and Zou (1998) is followed. It is the most explicit and well elaborated model encompassing the influence of fiscal decentralisation upon economic growth. Authors have extended the endogenous growth model of Barro (1990) which states that production function has two inputs i.e. capital and public spending. Keeping in view the Pakistan's situation,<sup>4</sup> it is assumed that over the time, public spending is done by the two tiers of government i.e., federal and provincial. Thus, appropriation of spending among the different levels of government can lead to higher economic growth (even without changing the existing budget's share in GDP) if the prevailing spending pattern is different from the growth maximising expenditure shares.

In the context of this study, we will follow the above model to determine the effects of FD on economic growth and final regression equation can be written as:

$$\Delta PCGDP_t = \alpha_0 + \alpha_1 FD_t + \alpha_2 D_t + \alpha_3 Control_t + \varepsilon_t$$

where 't' refers to time,  $\Delta PCGDP_t$  represents the growth rate of per capita gross domestic product.  $FD_t$  is the set of proxies that would represent different aspects of decentralisation. Different FD variables would be separately used in the regression as alternative measures of fiscal decentralisation.  $D_t$  is the dummy variable representing years with political instability. There were certain events that presumably affected the economic outcomes in Pakistan and by introducing the dummy for politically volatile years we want to control their effects. Lastly, as we know that literature has identified a number of important variables that affect economic outcome of the country and are therefore included in the regression. Hence,  $Control_t$  variables including investment, government expenditures and trade openness are taken into account to get reliable results.<sup>5</sup>

### Data

As discussed earlier, the major focus of the study is to test the empirical relationship between fiscal decentralisation and economic growth for Pakistan. For this purpose, study

<sup>4</sup>Even after LGO, 2001, ninety six percent of public spending is carried out by the two tiers of government which are federal and provincial.

<sup>5</sup>We tried but could not get significant results for labour force variable therefore is not discussed here.



would use time series data for 36 years covering the period from year 1974-2009. Although, the length of the data is quite narrow for the time series analysis, nevertheless, there are solid reasons which restrict the availability of meaningful data for this study. To explain a bit, in 1973 a new constitution was promulgated in Pakistan which explicitly elaborated the resource distribution mechanism in the country and following that data is available in legible form. Another reason is that prior to year 1973, Pakistan was struggling to recover from; adverse economic conditions due to the 1971 war, the end of eleven years of dictatorship and the separation of East Pakistan. Therefore, to have data for relative normal years, this study is restricted to start with data from year 1974 onwards.

Now the important variables for the analysis are discussed. Before going into details, it is important to explain that as in this study we will be dealing with different important economic variables which might be a function of economic growth hence, to avoid the endogeneity issue we will express the explanatory variables as ratio to GDP. As we have GDP growth variable on the left hand side of the equation while the variable on the right hand side are expressed relative to level GDP thus explanatory variables are assumed to be exogenous. Per capita GDP growth ( $\Delta PCGDP$ ) is used as the dependent variables to measure economic performance. PCGDP (at constant local currency unit) and has been taken from the World Bank's World Development Indicators (WDI).

For the right hand side control variables, investment holds the most important position and is considered crucial for economic growth. This study uses 'Total Investment' figures to capture investment behaviour in Pakistan and data is collected from various sources including SBP (2005), Pakistan (2009) and Budget speech 2009-10. In order to make it more intelligible and easy for explaining its relative position, Total Investment was expressed as a ratio to GDP (invtgdp).

Government expenditure is considered as another important contributor to economic growth in developing countries. Developing countries often face problem of concentration of power at the centre and therefore, bulk of resources pours into the economy in the shape of government spending. Thus, government expenditure<sup>6</sup> was used and expressed as ratio to GDP (getgdp). Data source for this variable was WDI. Another important contributor to economic growth in this globalised world is trade openness. Measure for trade openness is defined as 'exports plus imports' of goods & services and is expressed as a ratio to GDP (open). Hence, this variable would reflect the impact of trade openness on economic growth. Data for these variables was also taken from WDI.

### **Fiscal Decentralisation Measures**

Having discussed the important determinants of economic growth, now we are in a position to discuss proxies for the variable of interest i.e. fiscal decentralisation. Data source for this variable was SBP (2005) and *Pakistan Economic Survey* (Various Issues) Decentralisation is a complex phenomenon and it covers a range of issues, from revenue raising capability, to the administrative capacity of the sub-national governments to take decisions as well as their spending responsibilities. Hence, it is very difficult to

<sup>6</sup>General government final consumption expenditure includes all government current expenditures for purchases of goods and services (including compensation of employees). It also includes most expenditure on national defence and security, but excludes government military expenditures that are part of government capital formation (WDI definition).

efficiently measure the exact degree of decentralisation. Nevertheless, literature on fiscal decentralisation has proposed a number of alternative measures which can be used to proxy the level of fiscal decentralisation in a country.

Revenue approach for measuring fiscal decentralisation was used in this study. This approach was adopted in order to isolate the effects of two major sources of revenues for the provincial governments in Pakistan. These sources are the provincial own revenues and federal transfers (i.e. the provincial share in federal resource pool). Thus, analysis would make us able to figure out the individual effects of provincial resource generation potential and the effects of vertical fiscal imbalance (which illustrates provincial dependence on federal transfers) on economic growth.

To capture the above stated aspects of fiscal decentralisation, proxies were tried in a number of ways so as to get a better measure for fiscal decentralisation. Due to the significant nature of the federal transfer in the provincial revenues, we will start discussing it first. Total federal transfers to provinces is presented in three different ways including real federal transfer<sup>7</sup> (rftrans), as a ratio to provincial total revenues (ftranstpr) and as a ratio to GDP (ftranstgdp). Thus, vertical fiscal imbalance captured in such a manner would provide us a chance to confirm its overall significance on economic growth of Pakistan by expressing it in absolute as well as in relative terms.

Another important proxy to capture fiscal decentralisation is by looking at the provincial own revenues. The impact of provincial own resource base is used in a number of ways to enquire its contribution to economic growth of Pakistan. Presenting the total provincial revenues generated from own sources would be meaningless owing to its magnitude, therefore, provincial tax revenues are presented in ratio to federal tax revenues (ptaxftaxr). This measure would show the impact of any increase in provincial tax revenues relative to federal and would help in enquiring its long run affect on the economic growth of Pakistan.

### Unit Root Test for Stationarity

The augmented Dickey-Fuller (ADF) test is undertaken for all the variables using up to two lags<sup>8</sup> for each variable. The ADF test contains the short run dynamics and is based on the autoregressive models that contains the lagged differences of the same variable with the optional inclusion of both 'constant' and 'constant and trend' factors. Here the null hypothesis is that "the variable contains a unit root i.e. it follows a non-stationary process i.e.  $H_0: \beta - 1 = 0$ " which is tested against an alternative hypothesis that "variable is stationary i.e.  $H_1: \beta - 1 < 0$ ". Hence, if the calculated value of the AFD test statistic is lower than the critical values, we accept the null hypothesis that there is a unit root and vice versa. The ADF results for the set of variables used in this study are presented in Tables 3 and 4. It can be observed from the results that all variables (except three i.e. ratio of investment to GDP, ratio of government expenditure to GDP and ratio of provincial tax to federal tax revenues; which are stationary at level hence I(0)), are first difference stationary or I(1). Results remains consistent both with the inclusion of a 'constant' and a 'constant and trend' factors in the ADF. Hence, it can be concluded from the results of the ADF test that data contains variables that are mix with respect to their order of integration. Therefore, the selection of appropriate econometric technique should be undertaken considering this property of the data.

<sup>7</sup>Deflated using GDP deflator.

<sup>8</sup>To allow for the correction of serial correlation, if any.

Table 3

*H<sub>0</sub>: Non Stationary (At Level)*

Variables <sup>9</sup>	$\tau$ – ADF with Constant			$\tau$ – ADF with Constant and Trend		
	Lags			Lags		
	0	1	2	0	1	2
Pcrgdp	1.445	1.600	1.714	1.065	1.498	1.879
Invtdgdp	3.723***	2.572	2.506	3.508*	2.725	2.704
Open	2.492	2.482	2.268	2.640	2.608	2.293
Getgdp	2.954*	1.201	1.565	2.907	1.095	1.418
Ptaxtftaxr	3.014**	4.746***	5.128***	2.537	4.180**	4.654***
Ftranstgdp	1.535	1.627	1.800	1.717	1.879	1.953
Rfrans	1.372	1.376	1.526	1.464	1.725	1.804
Ftranstpr	1.899	2.005	1.788	2.151	2.684	2.545
Critical Values	3.633	3.639	3.646	4.243	4.253	4.262
1%=***, 5%=**	2.948	2.951	2.954	3.544	3.548	3.553
10%=*	2.612	2.614	2.616	3.205	3.207	3.209

Table 4

*H<sub>0</sub>: Non-stationary (At 1st Difference)*

Variables	$\tau$ – ADF with Constant		
	Lags		
	0	1	2
Dpcgdp	4.442***	2.747*	2.512
Dinvtdgdp	5.639***	4.166***	4.806***
Dopen	6.085***	4.976***	4.295***
Dgetgdp	10.52***	3.900***	2.890*
Dptaxtftaxr	5.081***	3.782***	3.620**
Dftranstgdp	5.212***	3.777***	2.571
Drftrans	4.776***	3.576***	2.391
Dftranstpr	4.657***	3.912***	2.823*
Critical Values	3.633	3.639	3.646
1%=***,	2.948	2.951	2.954
5%=**, 10%=*	2.612	2.614	2.616

### Econometric Technique

There are number of econometric techniques which can be used to measure the relationship between economic variables. Adoption of different alternative techniques depends on the nature of data and the kind of relationship in which researchers are interested. In case of Pakistan, as National Finance Commission decides the resource transfer mechanism between federal and provincial governments by announcing NFC awards. These awards are constitutionally required to be announced after every five years (although some inconsistency is being faced from time to time). Therefore, it would be interesting to find out both the short term as well as the long run effects of fiscal

<sup>9</sup>Variables expressed in lower case presents their log transformation.

decentralisation in Pakistan. This analysis will present the net effect of government's stance over fiscal federalism for its effect on economic growth. The appropriate econometric technique for estimating such kind of a relationship can rightly be pointed out as the "Cointegration technique".

To estimate cointegrating long run relationship among the variables, several methods are in practice and data properties often dictate their selection. Available techniques include the single equation residual based Engle and Granger (1987) technique, the maximum likelihood approach of Vector Autoregressive (VAR) by Johansen (1988, 1991, 1995), Johansen and Juselius (1990), the semi parametric approach by Phillips (1991) and quite recently, the ARDL approach is catching attention. Pesaran (1997), Pesaran and Shin (1995) and Banerjee, *et al.* (1986, 1993, 1996) presented the Autoregressive Distributed Lag (ARDL) model where the short run and long run coefficient estimates are presented in an ARDL specification. The most noticeable improvement in the ARDL single equation approach is that it is the only cointegration technique that allows for the inclusion of I(0) and I(1) variables in the single equation estimation. ARDL cointegration technique yields comparatively better results in small sample.

In our case, we have a small sample of 36 annual observations and data set contain variables that are integrated of different orders i.e. I(1) and I(0) thus, we will use the ARDL approach following Banerjee, *et al.* (1986, 1993). Describing the advantages of ARDL models that it encompass all the nested models, authors used the Error Correction Mechanism (ECM) set up to suggest a test for cointegration. The test uses the lagged dependent variable as the error correction term to represent the existence of long run relationship. The unrestricted dynamic model presented by Banerjee, *et al.* can be written as:

$$\Delta y_t = \alpha \Delta x_t + \beta y_{t-1} + \theta x_{t-1} + \epsilon_t$$

Where  $y_t$  is the dependent variable while  $x_t$  is the set of independent variables. In the above equation " $\alpha$ " represents the short run effects of changes in  $X$  on  $Y$ , while " $\theta$ " are used to present long run coefficients for set of independent variables. Lastly, the coefficient of lagged dependent variable i.e., " $\beta$ " indicates the error correction term and shows that with each passing period how much of the disequilibrium is adjusted. " $\beta$ " can also be explained as the rate at which model achieves equilibrium in the long run. The value of the error correction term lies between zero and two, where depending on significance 'zero' means no long run relationship among the variables while value of 'one' suggest that disequilibrium is adjusted in the same period. However, any value between 'one' and 'two' would be exhibiting explosive roots.

Table 5 present the results obtained by the General-to-specific (Gets) model selection procedure [Krolzig and Hendry (2001)]. According to Gets, analysis should start with the full model, then removing the insignificant variables and consulting the diagnostic checks till the final specification is reached where all the variables are significant. Gets approach in our case would benefit the analysis by eliminating the insignificant variables thus providing better degree of freedom for the rest of the variables to be estimated. Thus, applying the Gets approach to the ECM for the model discussed above has produced results as reported in Table 5. All the diagnostic tests are satisfied thus we can rely on the results that are produced.

Table 5

*Results*

Dependent Variable for the All the Models is "DPCGDP"			
Independent Variables	Model 1	Model 2	Model 3
Constant	2.221***	2.069***	2.931***
D.invtgdp	0.129**	0.121**	0.105**
D.getgdp	-0.043*	-0.038*	
D.openbop	-0.074*	-0.071**	
D.ptaxftaxr	0.049*	0.046**	
D.ftranstgdp	0.056**		
D.rftrans		0.060***	
D.ftranstpr			0.041*
L.pcgdp	-0.268***	-0.251***	-0.347***
L.invtgdp	0.163***	0.152***	0.119***
L.openbop			0.085**
L.ptaxftaxr	-0.035**	-0.034**	-0.054***
L.ftranstpr			-0.027*
dnps	-0.013*	-0.013**	-0.013*
Trend	0.005*	0.001***	0.007***
N	35	35	35
p	11	11	10
R-sq	0.68465	0.71625	0.67997
Radj^2	0.55326	0.59803	0.56476
Chow(2006:1)	0.3101	0.2770	0.6565
F( 4, 24)	(0.8678)	(0.8894)	(0.6289)
Normality Test	3.8020	4.1224	2.6036
chi^2( 2)	(0.1494)	(0.1273)	(0.2720)
AR 1-4 Test	0.6714	0.6435	1.2651
F(4, 24)	(0.6195)	(0.6378)	(0.3149)
ARCH 1-4 Test	0.1777	0.1892	0.7977
F(4, 24)	(0.9479)	(0.9420)	(0.5372)
Hetero Test	24.1197	25.6131	
Chi^2( 12)	(0.1916)	(0.1413)	

Legend: \* p<0.05; \*\* p<0.01; \*\*\* p<0.001, For Diagnostic tests, p-values in parenthesis.

Results obtain using PcGets, by DF Hendry and H-M Krolzig, 1998-2005, version 1.18b.

### Results Interpretation

Analysis has produced interesting results and it has proved the existence of long run relationship among the given set of variables. Results are interesting in the sense that they separate the short run effects from the long run influences of the variables. Three models, using different proxies for FD are presented here. Although, results are complicated but in line with facts related to the economy of Pakistan and is a true representation of the period under the analysis. The most important point to emphasis is that there exist a long run relationship between the fiscal decentralisation and economic

growth and it has pointed out the weaknesses of the FD mechanism in Pakistan. FD has long run contribution to the economic growth of Pakistan but it needs certain corrections for consistently positive results. The error correction term obtained from the lagged dependent variable has a significant coefficient ranging between 25–35 percent for different models. This shows that if there is any disequilibrium, one fourth of it would be adjusted with each passing year although the specific speed of adjustment depends on the variables under consideration in different models.

First looking at the variable of interest, the ratio of 'provincial tax revenue to federal tax revenue' has an interesting implication in the model. During the short run (where variables are expressed in differenced form), the 'provincial tax to federal tax revenues' ratio has led to a positive impact on the economic growth. Similarly the other indicator of provincial revenues representing FD i.e., 'federal transfer to GDP', 'real federal transfers' and 'federal transfers as ratio to total provincial revenue' has also the same short run positive impact. Thus proxies of FD have produced almost the same results by posting a positive sign for coefficients in the short run.

Short run analysis indicate that if there is an increase in provincial tax revenues with respect to federal tax revenues, it's immediate effect on the economy would be positive. Same is true for federal transfers which indicates that if provinces receive more funds to spend at local levels, it will positively affect economic growth in the short run.

However, despite the fact that we got positive and significant short run results for FD variables but in the long run, the accumulated effect of FD overtime has negative implications for the economic growth of Pakistan. Long run relationship (denoted by lagged levels of variables) exhibit that only two proxies i.e., ratio of 'provincial to federal tax revenue' and ratio of 'federal transfers to total provincial revenue' have produced long run significant effects. Thus, factors that were measured with respect to provincial finances have turned significant in the long run. Nevertheless, both the proxies of FD have produced negative coefficients for the long run.

These results are somewhat contradictory but one can think that they are in line with the economic situation in Pakistan. Provinces had negligible taxation powers which means that they always remained under-capacitated with respect to tax collection experience and at the same time they remained dependent on federal finances to fulfil their obligations. In these conditions if provinces are given higher taxation powers relative to federal government, this will incur efficiency losses because federal government is always considered more efficient in tax collection as compared to lower tiers of government. Higher taxation powers at the cost of federal government collections will result in long run losses to the economy and thus produced negative long run coefficient for 'ptaxtftaxr' variable.

On the other hand, although any increase in federal transfers to provinces will help provinces with more funds availability but these funds might have certain strings attached to it for its consumption. Federal transfers increases provincial finances but these does not necessarily goes to the sector prioritised according to local needs rather they might be spent to achieve overall national goals set by federal government. Hence, if increased spending is not in accordance with local needs, it cannot achieve the results that are expected from fiscal decentralisation. Excess dependence on federal transfers might undermine provincial autonomy which will

have negative effects according to the theories of FD. Federal transfers merely represent transfer payments to the provincial governments as they are already collected by the federal government therefore it will have no effect on the economic efficiency of the provinces. In Pakistan, as these transfers are being decided only on the basis of population only thus it fails to enhance the provincial capacity. Moreover, increased federal transfers may also result in higher consumption spending which will have positive impact on the economy in the short run but does not have same long run implications for the economic growth. Lastly, Positive effects from increased federal transfers to provinces in short run is out-balanced by the negative implications of reduction in federal revenues because an increase in federal transfers is a drain on federal government resources. Less resources at federal level retards long run economic growth. Pakistan has the lowest tax to GDP ratio (currently at 9 percent, while it hovered around 11 percent on average throughout the period of analysis in this study) and thus further reduction in federal resources will put constraints to finance mega projects that are necessary for long term economic growth.

In addition, when the provincial government has more tax revenue in comparison with the federal government, it negatively affected economic growth. This indicates that provinces were inefficient in the realisation of efficiency gains from the revenue decentralisation due to their capacity issues. Thus in the long run, negative efficiency losses has dominated the positive welfare gains due to higher taxation powers of the local governments. On the other side, the fact remains that federal government had delegated only those taxes to the provinces which were not buoyant so it required more effort thus failed to have a long run positive effect on the economic growth in case of Pakistan.

Thus, one can say that provinces were not better positioned to take advantage of increase in finances. This reflects that provinces do not possess such a decentralised system which can make them more responsible, innovative and productive. Lastly, the inconsistencies occurred with respect to FD in the country might also be responsible for the negative relationship. Thus, it is concluded that the FD mechanism adopted in Pakistan during the period has failed to produce optimum results. Poor provincial capacity to efficiently generate own resources as well as provincial dependence on federal transfers has negatively affected the long run economic growth of Pakistan. Thus, the uni-criterion resource distribution mechanism has fails to affect economic growth of Pakistan positively in the long run.

For the other explanatory variables, investment has a positive impact both in the short run and long run in all the models. On the other hand, two other variables i.e., 'government expenditures at the national level' and 'trade openness' have produced negative effects on the economic growth of Pakistan in the short run. As the government consumption spending includes the spending on defence and security for maintaining law and order, therefore instability in the country has often resulted in huge spending. This increased spending coupled with the political instability (which also has a negative coefficient, as expected) has produced the negative short term effects. 'Trade openness' although has negative sign in the short run due to persistent huge trade deficits, it ultimately posted a positive impact in the long run when it becomes significant in the 3<sup>rd</sup> model.

## CONCLUSION AND RECOMMENDATIONS

This study mainly discussed the fiscal resource distribution mechanism of Pakistan. Main objective of the study was to get acquainted with the fiscal decentralisation stance of Pakistan and its impact on economic growth of the country over the long run. In this connection, all the important concepts and systems that took place in Pakistan, were discussed at the start.

The issue of resource distribution among federal and provincial governments never proved to be simple and is always considered a much complex issue. This study identified several issues in fiscal resource distribution mechanism of Pakistan. The most important issue was that the National Finance Commission adopts a single criterion (population) for resource redistribution among the constituent parts. There is a need to consider, evaluate and choose among a range of other indicators of development and fiscal needs. Among the important variables; infrastructure, poverty, backwardness, revenue generation capacity, efficiency aspects, inverse population density and likewise should be reviewed and most appropriate of these should be taken into account for solving the economic discrepancies of provinces through adequate resource transfer.

A best working federal transfer system should take both the competitive as well as cooperative aspect of federalism. Although, these aspects are somewhat contrary to one another but to ensure balanced growth and considering welfare of the people, a balance should be brought between the two sides of federalism. A transfer system should be such that it can enhance economic efficiency and productivity through incentives as well as competition. Competitive federalism would take provinces towards innovation in revenue generation and better service provision through the increased competition among the federating units. Thus competitive federalism would induce higher economic growth that result from increased efficiency and would also help in achieving better governance.

To sum up, key to successful public service delivery is adequacy, sufficiency, transparency and regular flow of funds to the stake holders. There should be an integration of other resource distributions tied to the development unit and all channels of resource flow to the provinces should be identified. Thus a bottom up approach is required which include all levels of formula, straight transfers and non-formula adhoc transfers. This should be accompanied with clearly identified aims and objectives of the financing and service delivery assignments; this will lead to an optimal level of growth and equity. Government had tried the devolution of power to local governments, which if accompanied with an adequate financial devolution would result in maximum economic returns.

There should be more provincial autonomy and national cohesion that would result in better understanding of the needs of the federating units keeping the regional affiliation at the side. Financial autonomy will give more resources, more confidence and would also make the federating unit more accountable. Decentralised set up will reduce the dependence of the provinces on the centre and centre would be allowed to concentrate more on the national issues and only engage in the collection of those resources which can improve efficiency gains at the federal level. Thus the economic loss due to absence of capacity building mechanism in the provinces as well as engagement of the centre in the provincial matters would be resolved. Provinces should be encouraged and incentivised to generate their own resources instead of being dependent on federal government.



In the light of the given discussion, following recommendations can be suggested which would enhance the performance of the federation and result in higher economic growth:

- (1) Administrative decentralisation should be accompanied with the adequate fiscal decentralisation and capacitating the provinces with the delegation of appropriate financial autonomy.
- (2) Specialised and independent institutions should be developed to ensure smooth and judicious Intergovernmental resource distribution.
- (3) There should be a permanent body of NFC with a specialised secretariat and professionals of the subject as consultants.
- (4) The criteria used for addressing horizontal resource distribution should be broadened by incorporating criteria which can ensure efficiency.
- (5) Data availability and its quality should be improved to ensure better assessment of sub-national revenue potentials as well as to enhance transparency in resource flow.

#### REFERENCES

- Ahmed, Iftikhar, U. Mustafa, and M. Khalid (2007) National Finance Commission Awards in Pakistan, A Historical Perspective. PIDE, Islamabad. (PIDE Working Paper Series No. 33).
- Banerjee, A., J. J. Dolado, D. F. Hendry, and G. W. Smith (1986) Exploring Equilibrium Relationships in Econometrics Through Static Models: Some Monte Carlo Evidence. *Oxford Bulletin of Economics and Statistics* 48, 253–277.
- Banerjee, A., J. J. Dolado, J. W. Galbraith, and D. F. Hendry (1993) *Co-integration, Error Correction and the Econometric Analysis of Non-Stationary Data*. Oxford: Oxford University Press.
- Banerjee, Anindya, Juan J. Dolado and Ricardo Mestre (1998) Error-Correction Mechanism Tests for Cointegration in a Single-Equation Framework. *Journal of Time Series Analysis* 19:3, 267–283.
- Barro, R. (1990) Government Spending in a Simple Model of Endogenous Growth. *Journal of Political Economy* 98, 103–125.
- Bird, R. and M. Smart (2002) Intergovernmental Fiscal Transfers: International Lessons for Developing Countries. *World Development* 30:6, 899–912.
- Davoodi, Hamid and Heng-fu Zou (1998) Fiscal Decentralisation and Economic Growth: A Cross-Country Study. *Journal of Urban Economics* 43, 244–257.
- Engle, R. F. and C. W. J. Granger (1987) Cointegration and Error-Correction: Representation, Estimation, and Testing. *Econometrica* 55, 251–276.
- Ghaus, A. F. Aisha and Hafiz A. Pasha (1994) Dynamic Budgetary Consequences of the 1991 NFC Award. *The Pakistan Development Review* 33:4, 627–645.
- Gordin, Jorge P. (2004) The Institutional Determinants of Fiscal Decentralisation: Argentina and Spain in Comparative Perspective. VII Congreso Español de Ciencia Política y de la Administración: Democracia y Buen Gobierno.
- Jaffery, Nighat Bilgrami and Mahpara Sadaqat (2006) NFC Awards Commentary and Agenda. *Pakistan Economic and Social Review* 44:2, 209–234.

- Johansen, S. (1988) Statistical Analysis of Cointegration Vectors. *Journal of Economic Dynamics and Control* 12, 231–254.
- Johansen, S. (1991) Estimation and Hypothesis Testing of Cointegration Vectors in Gaussian Vector Autoregressive Models. *Econometrica* 59, 1551–1580.
- Johansen, S. (1995) *Likelihood-Based Inference in Cointegrated Vector Autoregressive Models*. New York: Oxford University Press.
- Johansen, S. and K. Juselius (1990) Maximum Likelihood Estimation and Inference on Cointegration—with Applications to the Demand for Money. *Oxford Bulletin of Economics and Statistics* 52, 169–210.
- Krolzig, H-M. and D. F. Hendry (2001) Computer Automation of General-to-Specific Model Selection Procedures. *Journal of Economic Dynamics and Control* 25, 831–866.
- Lars, P. Feld, Horst Zimmermann, and Thomas Doring (2004) Federalism, Decentralisation and Economic Growth. Phillips-University Marburg, Public Finance Group. (Discussion Paper Series “Fiscal Federalism and National Growth”, No. 1).
- Lin, Justin Yifu, and Zhiqiang Liu (2000) Fiscal Decentralisation and Economic Growth in China. *Economic Development and Cultural Change* 49:1, 1–21.
- Mello, de L. and M. Barenstein (2001) Fiscal Decentralisation and Governance: A Cross-Country Analysis. (IMF Working Paper No. WP/01/71).
- Pakistan, Government of (1991) Report of the National Finance Commission. National Finance Commission Secretariat. Islamabad.
- Pakistan, Government of (1997) Report of the National Finance Commission. National Finance Commission Secretariat. Islamabad.
- Pakistan, Government of (2006a) The Gazette of Pakistan, “An Order Further to Amend the Distribution of Revenues and Grants-in-Aids Order, 1997”. Order No.1 of 2006. Ministry of Law, Justice and Human Rights.
- Pakistan, Government of (2006b) Inter-governmental Fiscal Relation. <<http://www.mng.gov.pk/icfd/presentations/default.asp>>
- Pakistan, Government of (2009) *Pakistan Economic Survey*. Islamabad: Finance Division, Government of Pakistan.
- Pakistan, Government of (Various Issues) *Pakistan Economic Survey* (1980 to 2007). Islamabad: Finance Division, Government of Pakistan.
- Pesaran, M. H. and Y. Shin (1995) An Autoregressive Distributed Lag Modelling Approach to Cointegration Analysis. Faculty of Economics, University of Cambridge. (Cambridge Working Papers in Economics 9514).
- Pesaran, M. Hashem (1997) The Role of Economic Theory in Modelling the Long Run, *Economic Journal, Royal Economic Society* 107:440, 178–91.
- Phillips, Kerk K. and G. Woller (1997) Does Fiscal Decentralisation Leads to Economic Growth? Department of Economics, Brigham Young University.
- Phillips, R. F. (1991) A Constrained Maximum Likelihood Approach to Estimating Switching Regressions. *Journal of Econometrics* 48, 241–262.
- Rodden, Jonathan, Gunnar Eskeland, and Jennie Litvack (eds.) (2002) *Decentralisation and the Challenge of Hard Budget Constraints*. Cambridge, MA: MIT Press.
- Rondinelli, Dennis A. (1981) Government Decentralisation in Comparative Perspective: Theory and Practice in Developing Countries. *IRAS* 2, 133–145.

- State Bank of Pakistan (2005) *Handbook of Statistics on Pakistan Economy*. Karachi: State Bank of Pakistan.
- Thieben, Ulrich (2001) Fiscal Decentralisation and Economic Growth in High Income OECD Countries. European Network of Economic Policy Research Institutes. (Working Paper No. 1).
- Von Hagen, Jurgen, Massimo Bordignon, Matz Dahlberg, Bhahan Grewal, Per Petterson, and Helmut Seitz (2000) Subnational Government Bailouts in OECD Countries: Four Case Studies. Inter-American Development Bank. (Working Paper R-399).
- Xie, Danyang, Heng-fu Zou, and Hamid Davoodi (1999) Fiscal Decentralisation and Economic Growth in the United States. *Journal of Urban Economics* 45, 228–39.
- Zhang, Tao and Heng-fu Zou (1998) Fiscal Decentralisation, Public Spending, and Economic Growth in China. *Journal of Public Economics* 67, 221–240.