Contribution of Fiscal Decentralization to Economic Growth: Evidence from Pakistan

Muhammad Zahir Faridi
Assistant Professor of Economics,
Bahauddin Zakariya University, Multan, Pakistan
Email: zahirfaridi@bzu.edu.pk

Abstract

Pakistan is an underdeveloped economy having not remarkable growth rate. There may be many sources of economic growth but present study focuses on the fiscal decentralization as the major source of economic growth. Fiscal decentralization improves the efficiency of the Public sector and its leads to economic growth. The analysis is based on the time series annual data covering the period 1972 – 2009. Autoregressive model is used for ordinary least square estimation. The findings show that the both fiscal decentralization variables like spending authority and revenue autonomy have positive and significant impact on economic growth. The study concludes that the federal government should delegate the fiscal power to provincial and local governments for raising the growth and welfare of the people of Pakistan.

Keywords: Autoregressive model; Govt. Expenditures; Govt. Revenue; Adjusted Revenue; Adjusted expenditures

I. Introduction

Fiscal decentralization means a process by which provincial or local level governments are provided authority or delegated powers over the economic activities in a province. Fiscal responsibilities of the various levels of governments are determined under the process of fiscal decentralization. It also involves such fiscal instruments and procedures that have the objective of supporting in handing over public goods (Bird et al; 1995). Akai and Sakata (2002) define fiscal decentralization as devolution of the power and authority linked with decision making to basic – level governments. According to Thiessen (2001) point of view, fiscal decentralization considers “a transfer of responsibility associated with accountability to sub – national governments”. Further, he maintains that fiscal decentralization is considered as the potential of sub – national governments to increase tax revenues, and make decision on how to allocate their monetary resources on various projects within the legal boundary. Generally, fiscal decentralization is observed as a portion of reform package for improving public sector efficiency, to raise competition among lower level government in supplying public goods and to accelerate economic growth (Bird and Wallick; 1993).

The main function of fiscal decentralization is to improve the efficiency of the public sector and it leads to long term economic growth and development. Economic efficiency is increased by decentralization because provincial and local levels governments are better informed and have perfect knowledge about their localities as compared with central governments. Local levels governments have close link with
institution and can manage them properly. These informational benefits permit sub-national governments to provide public goods and services at preferences and lower cost. In addition, fiscal decentralization is the main source of promoting competition among various levels of government, as a result, efficiency in resource allocation is increased and public goods are produced in bulk quantity under revenue constraints. Such competition may control or obstruct revenue maximization by governments and supply of social goods is enhanced.

In the recent literature, we have observed many studies on the issue of fiscal decentralization and economic growth in different countries. However, inconclusive results are found. The findings of the some studies indicate a positive relation between economic growth and fiscal decentralization while others give negative relationship. The main reasons of these inconclusive findings may be that different measures of fiscal decentralization have been used by different researchers. From the literature review, it is obvious that accurate measure of authority allocation is tedious (Bird, 2000). The use of incorrect or vague measures of fiscal decentralization may provide wrong conclusions or inferences about the influence of fiscal decentralization on economic growth (Ebel and Yilmaz, 2002). It is claimed by Akai and Skata (2002) that the use of defected or wrong measures by the some writers gave inverse relationship between economic growth and fiscal decentralization. The best and effective fiscal decentralization policy consists of (i) appropriate expenditure assignments (ii) appropriate tax and revenue assignments and (iii) the efficient design of a system of transfers and its proper implementation (Malik S. et al; 2006).

The main aim of the present analysis is to study the effect of fiscal decentralization on economic growth and development of Pakistan and to make decision whether fiscal decentralization policy is better or not for economic performance of the country. The rest of the study is structured as follows. A brief review of literature on growth and fiscal decentralization is given in section II. In the section III, model and methodological issues are presented. Estimation results are discussed in the section IV. Last section concludes the study.

II. Review of Past studies

There exists a lot of literature on the issue of fiscal decentralization and economic growth at the international level but few studies are available at national level. Different studies provide different conclusions regarding growth and decentralization. Phillips and Woller (1997) found significant negative relationship between economic growth and revenue decentralization considering the sample of 17 developed nations for the years 1947 – 1991. Their analysis failed to trace out the relationship between economic growth and fiscal decentralization in developing economies.

Davoodi and Zou (1998) studied the effect of fiscal decentralization on economic growth. They used panel data for forty six countries during the period 1970 – 1989 and estimated the parameters by using OLS method. The study concluded that there existed inverse relationship between fiscal decentralization and economic growth in developing economies but developed countries showed no relationship. Zhang and Zou (1998) investigated inverse relationship between provincial economic growth and fiscal decentralization of government spending over the last 15 years.
Xie et al. (1999) evaluated the effect of fiscal decentralization and economic growth in the economy of USA for the period 1948 – 1994. Three levels of government involved in the analysis. The study showed that the economic growth was inversely related with fiscal decentralization of government spending at local level and directly associated with state spending shares. But, the results of the study turned out to be insignificant.

Lin and Liu (2000) explored the effect of fiscal decentralization on growth by using panel data at province level in China. They covered the period of 23 years from 1970 – 1993 in their study. The study used regression analysis considering GDP as dependent variable and fiscal decentralization, rural reforms, per capita real GDP, population, ratio of the prices of farm product and non farm product, rural population and dummies of provinces as explanatory variables. They concluded that fiscal decentralization positively contributed in the process of economic growth. Their results also indicated that economic growth significantly influenced by rural reforms, capital accumulation and the development of non state sector.

Thieben (2001) discussed the merits and demerits of fiscal decentralization for OECD countries for the period of 1975 – 1995. The analysis based on pure cross sectional technique. The study concluded that economic performance of high income OECD countries and dependence of sub national governments on own revenue resources to meet their expenditure were not correlated.

Thiessen (2003) studied the influence of the fiscal decentralization on economic performance of OECD countries for the period 1973 – 1998. He used local share consolidated governments spending or revenue and the average of both as fiscal decentralization variable and average growth of income per working age person as growth variable. The study indicated that fiscal decentralization has positive and significant effect on growth. He concluded that fiscal decentralization promotes economic growth. However, there was a hump shaped association between fiscal decentralization and growth.

Ebel and Yilmaz (2004) discussed the issues of economic growth and decentralization of expenditure and revenue for six central and Eastern European countries. They used bivariate estimation technique for analysis. The study found that local tax and non tax revenue autonomy represented own resource revenue for local government and positively influenced growth. Jin et al. (2005) used the panel data for 29 Chinese provinces covering the time series period from 1970 – 1999. Two way fixed effects panel data method employed for analysis. Growth of non state non agricultural employment considered dependent variables and ratio of local expenditure to central expenditure in a province indicated fiscal decentralization variable. The analysis concluded that revenue fiscal decentralization had positive effects on private employment.

Malik S. et al. (2006) provided theory and evidence on the relationship between fiscal decentralization and economic growth for Pakistan, based on time series data for the period 1972 – 2005. They used OLS method based on difference operator for estimating parameters and also employed the first order moving average process. The study had given mixed type of results. They found some decentralization variables
positive and significant and other negative and insignificant. Overall study concluded that fiscal decentralization led to accelerate economic growth.

Hammond and Tosun (2009) traced out the effect of local decentralization on US county population, employment and growth of real income. The results of the study suggested that government organization signified or mattered for local economic growth but that the effects differ by government unit and by economic indicator. They found that single purpose governments per square mile had a positive influence on metropolitan population and growth of employment but there was no significant effect on non metropolitan counties. The findings suggested that fiscal decentralization at local government level mattered differently for metropolitan and non metropolitan counties.

III. Data, variables and Methodology
a). Data sources
The comprehensive and authentic research requires transparent and reliable data set. The under debate issue is concerned with macroeconomics like output and economic growth determination. So the secondary source of data is used for the present analysis. The study is based on the annual data on Pakistan and four provinces for the period of 1972 – 2009. In order to examine the effect of fiscal autonomy or decentralization of Govt. resources and expenditures on economic growth of Pakistan, we have used Gross Domestic Product at current factor cost in million rupees. Lin and Liu (2000), Malik S. et al. (2006) and Hammond and Tosun (2009) also have used the same dependent variables in their studies. The major sources of data for different variables used in the study are Pakistan Economic Survey (various issues), Hand book of Statistics on Pakistan Economy (2005) and Fifty years of Pakistan Statistics.

b). Construction of variables
Definitional issues and measurement problems regarding fiscal decentralization in empirical analysis have prime importance. Measurement of fiscal decentralization is not so simple and easy job (Bird 2000). The problem lies mainly in how to reckon for intergovernmental transfers. There has occurred the process of decentralization at so vast level that created some ambiguities in terminology (Martinez – Vazquez and Mc Nab, 1997). In the literature, three different forms of fiscal decentralization are observed, which make the sub national governments more independent in decision making (Bird and Vaillancourt; 1998) i.e. (a) Deconcentration, (b) Delegation, (c) Devolution. Deconcentration means dispere of responsibilities with in the central government. Delegation means transfer of power regarding performing functions and raising resources from central government to sub – national governments. Finally, Devolution is such process under which sub – national governments have a complete discretionay powers in managing their own affairs with out any interference by the central government. Practically, it is tough to draw a line of difference between devolution and delegation. So the most common used measures of decentralization are expenditure and revenue decentralization.

The present study has used both revenue and expenditures of government as a measure of fiscal decentralization. Various measures of decentralization are observed in literature like Phillips and Woller (1997); Lin and Liu (2000); Mello and Barenstein (2001); Thieben (2001), Zhang and Zou (1998), Malik S. et al. (2006); Feltenstein and
However, our study has incorporated the following well known variables of fiscal decentralization.

**Ratio of Provincial Expenditure (RPEP)**

It is straightforward measure of fiscal autonomy. It expresses the ratio of sub-national government expenditures to total government expenditure (Malik S. et al.; 2006). Theoretically, the expected effect of ratio of provincial expenditure on growth may be positive.

**Ratio of Provincial Revenue (RPV)**

Ratio of Provincial revenue is another measure of fiscal decentralization (Authority). It is also simply obtained by dividing the sub national government revenues to total government revenues. This variable was also used by Robalino et al. (2001) in their study for examining the effect of decentralization on health improvement. Similarly, Fisman and Gatti (2000) established the relationship between corruption and fiscal decentralization through revenue autonomy. Davoodi and Zou (1998) also studied the impact of fiscal decentralization on economic growth.

These two variables (i.e. RPEP and RPV) are simple and straightforward measures of fiscal decentralization. As mentioned in the literature, the sub national government expenditure and revenue shares are not only measures of decentralization, however, may be misleading [Bird; (2000), Ebel and Yilmaz (2002), and Martinez – Vazquez and McNab (2003)]. There may occur many problems and ambiguities, when all or some local level taxes and tax structure are settled by the federal governments, when the provincial spending are arranged or controlled by the central government, when grants – in – aid are specified for special purposes from federal government to provincial governments, or when the federal government takes the responsibility of debt servicing management and arrangements of defense expenditures (especially in Pakistan). So it is difficult to consider all of the above problems, two simple adjustments are feasible (Wasyleenko; 1987, Malik S. et al.; 2006).

**Adjusted Provincial Revenue (APR)**

This fiscal decentralization variable is constructed by deducting grant – in – aid from provincial government revenues and is expressed as the ratio of the total government revenues.

**Adjusted Provincial Expenditures (AEP)**

Adjusted provincial expenditure variable is defined as the ratio of total provincial expenditures to total government expenditures minus defense expenditures and debt servicing.

Except these decentralization variables, we have incorporated some additional variables for examining their impact on growth and employment.

**Openness (OPN)**

Trade openness plays a vital role in determining growth and employment. It is expressed as the ratio of the sum of exports and imports to Gross Domestic Product. Theoretically, it is expected that openness has direct effect on growth and employment.
This positive influence has occurred due to resource allocation benefits of external competition (Feder, 1983).

**Inflation (INF)**

The present study has used annual inflation rate in order to examine the performance of economy. The influence of inflation on growth may be positive or negative (Zhang and Zou; 1998).

**Literacy (LIT)**

We have included literacy rate as a control variable in order to investigate the impact of human capital on economic growth. Theoretically, it is hypothesized that higher literacy rate leads to higher economic growth and development.

**Total fixed Investment (TFINV)**

Total fixed investment has expected positive relationship with growth. The argument for incorporating the total fixed investment as a determinant of growth states that more investment leads to more employment opportunities an increase of economic overhead capital and more growth.

c) **Model Specification**

The present study based on the Neo – classical growth theory where growth depends on labor and capital. Simply the main driver of economic growth is capital and labor.

Neo classical production function is given as:

\[ Y_t = f(K_t, L_t) \]

Where \( Y_t \) = output in the current period, \( K_t \) = stock of capital in the current period, \( L_t \) = supply of labor in the current period.

We have used extended Neo classical growth model by incorporating decentralization variables and some other growth related variables.

\[ Y_t = f(K_t, L_t, FDi, OPN, INF) \]

Where \( Y \) is GDP at current factor cost. In our extended model, we have used total fixed investment as a proxy for capital stock and total literacy rate is proxied for labor stock or human capital stock. Fiscal decentralization variables are indicated by \( FDi \) (the core variables). The inflation and openness are control variables. We have formulated two specifications with lagged dependent variable as explanatory variables for avoiding Multicollinearity and other time series related econometric problems for estimation.

\[
\begin{align*}
LGD_{t} &= \alpha_0 + \alpha_1 INF + \alpha_2 OPN + \alpha_3 LIT + \alpha_4 RFV + \alpha_5 RPEP + \alpha_7 LGDP_{t-1} + \nu_i \\
LGD_{t} &= \beta_0 + \beta_1 INF + \beta_2 OPN + \beta_3 LIT + \beta_4 LTINV + \beta_5 APR + \beta_6 AEP + \beta_7 LGDP_{t-1} + \omega_i
\end{align*}
\]

\[ \cdots \cdots \cdots \cdots \cdots \cdots \cdots \cdots \ \ (1) \]

\[ \cdots \cdots \cdots \cdots \cdots \cdots \cdots \cdots \ \ (2) \]

The OLS technique is used to estimate the autoregressive model. Econometrics problems are identified and removed by employing various econometric tests.
IV. Estimation Analysis

This section discusses the estimation results obtained in the study. First, we provide statistical interpretation of some selected variables briefly. Secondly, estimation results are discussed in detail.

a) Statistical Analysis

Our complete data set based on 38 years of annual observations from 1972 – 2009 on the chosen variables. Table 1 reports the descriptive statistics on some selected variables. The average inflation rate is 9.6 for our period of analysis with variation of 5.76. On the average the literacy rate is 36.91 with a standard deviation of 12.52. The ratio of provincial revenue and provincial expenditure are 0.33 and 0.26 respectively on the average. Similarly, the average values for trade openness, total fixed investment and adjusted provincial expenditures are 0.34, 11.93 and 0.46 and the values of standard deviation 0.05, 1.58 and 0.13 are observed in the statistical analysis. If we consider the skew – ness of the variables, almost all variables are little bit skewed. Inflation rate, openness, literacy rate, ratio of provincial expenditure and adjusted provincial expenditure are positive skewed while ratio of provincial revenue and total fixed investment are negatively skewed.

Table 1: Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>INF</th>
<th>OPN</th>
<th>LIT</th>
<th>RPV</th>
<th>RPEP</th>
<th>LTFINV</th>
<th>AEP</th>
<th>APR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>9.60</td>
<td>0.34</td>
<td>36.91</td>
<td>0.33</td>
<td>0.26</td>
<td>11.93</td>
<td>0.46</td>
<td>0.29</td>
</tr>
<tr>
<td>Median</td>
<td>8.65</td>
<td>0.33</td>
<td>35.45</td>
<td>0.34</td>
<td>0.25</td>
<td>12.00</td>
<td>0.44</td>
<td>0.29</td>
</tr>
<tr>
<td>Maximum</td>
<td>30.00</td>
<td>0.48</td>
<td>58.00</td>
<td>0.48</td>
<td>0.37</td>
<td>14.42</td>
<td>0.85</td>
<td>0.44</td>
</tr>
<tr>
<td>Minimum</td>
<td>3.10</td>
<td>0.26</td>
<td>19.60</td>
<td>0.06</td>
<td>0.19</td>
<td>8.79</td>
<td>0.29</td>
<td>0.06</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>5.76</td>
<td>0.05</td>
<td>12.52</td>
<td>0.10</td>
<td>0.04</td>
<td>1.58</td>
<td>0.13</td>
<td>0.09</td>
</tr>
<tr>
<td>Skewness</td>
<td>1.91</td>
<td>0.75</td>
<td>0.23</td>
<td>-1.54</td>
<td>0.56</td>
<td>-0.23</td>
<td>0.59</td>
<td>-1.04</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>7.16</td>
<td>3.88</td>
<td>1.68</td>
<td>5.07</td>
<td>2.96</td>
<td>2.09</td>
<td>3.02</td>
<td>4.00</td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td>50.50</td>
<td>4.81</td>
<td>3.11</td>
<td>21.78</td>
<td>1.98</td>
<td>1.65</td>
<td>2.22</td>
<td>8.40</td>
</tr>
<tr>
<td>Probability</td>
<td>0.00</td>
<td>0.09</td>
<td>0.21</td>
<td>0.00</td>
<td>0.37</td>
<td>0.44</td>
<td>0.33</td>
<td>0.01</td>
</tr>
</tbody>
</table>

As far, kurtosis is concerned; it measures the peaked – ness or flatness of the data relative to normal distribution. The value of kurtosis indicates that the variables like inflation, openness, RPV and APR have a high peaked or lepto – kurtic distribution. The decentralization variables like RPEP and AEP have approximately normal distribution while the shape of distribution for literacy rate and total fixed investment variables are platy – kurtic. The Jarque – Bera (JB) test of normality provides joint hypothesis of Skewness and Kurtosis. Jarque – Bera (JB) test of normality suggests that if the computed P value of inflation rate, openness and RPV is zero or very low, as the value of the statistic very different from zero, it is stated that the residuals for inflation rate, openness and ratio of provincial revenue are not normally distributed. The residuals of all other variables included in the present study are normally distributed.
Table 2: Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>INF</th>
<th>OPN</th>
<th>LIT</th>
<th>RPV</th>
<th>RPEP</th>
<th>LTFINV</th>
<th>AEP</th>
<th>APR</th>
</tr>
</thead>
<tbody>
<tr>
<td>INF</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPN</td>
<td>0.41</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIT</td>
<td>-0.22</td>
<td>0.53</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RPV</td>
<td>-0.24</td>
<td>-0.41</td>
<td>-0.36</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RPEP</td>
<td>0.34</td>
<td>-0.06</td>
<td>-0.26</td>
<td>0.52</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LTFINV</td>
<td>-0.29</td>
<td>0.52</td>
<td>0.48</td>
<td>-0.27</td>
<td>-0.27</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AEP</td>
<td>0.20</td>
<td>-0.08</td>
<td>-0.18</td>
<td>0.45</td>
<td>0.93</td>
<td>-0.21</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>APR</td>
<td>-0.17</td>
<td>-0.28</td>
<td>-0.13</td>
<td>0.89</td>
<td>0.52</td>
<td>-0.09</td>
<td>0.46</td>
<td>1.00</td>
</tr>
</tbody>
</table>

The table 2 represents the degree of association among the variables. The results of the study indicate that there exists some degree of relationship between the variables. The pair-wise coefficient of correlation is useful to identify the problem of Multicollinearity. The high coefficient of correlation \( r_{x,y} \geq 80 \) shows severity of Multicollinearity. The variables like APR and APV, AEP and RPEP, have high value of correlation and are Multicollinear. So, we have used these variables in separate equations to avoid the problem of Multicollinearity.

b) Econometric Analysis

Table 3 and 4 provide the estimates of equation 1 and 2. The strength of the estimation analysis mainly bases on the measurement of variables, specifications of model, statistical and economic significance of the variables in the analysis. The reliability of our estimates depends upon the absence of the problems of OLS methods. The coefficient of determination \( R^2 \) and adjusted \( R^2 \) indicates the predictive power of the model. The high value of adjusted \( R^2 \) shows that the maximum variation in the regressand variable is explained by the explanatory variables. The value of the F – statistic, significant at 1 percent in both equations permits us to nullify the null hypothesis that all the estimated coefficients are not significantly different from zero. B – G Serial correlation LM test and White – test may not reject the null hypothesis that there is no serial correlation and Heteroskedasticity problem in both the equations. In most cases, macroeconomic variables are interdependent and have a tendency to move jointly, it would be difficult to avoid any collinearity among the independent variables. However, no evidence of Multicollinearity is found in the equations. The results for individual variables are interpreted and discussed below.

We have observed in the present study that almost the results of all the variables confirm theoretical expectations and fiscal decentralization is directly related with economic growth and development. Our results indicate a positive relationship between economic growth and fiscal decentralization variables in both equations. The coefficient of RPV is positive and highly significant. Similarly, the coefficient of RPEP turns out to be positive but statistically insignificant. The second equation of our analysis includes adjusted variables for fiscal decentralization as different from equation 1 in order to have

---

1 This is supported by the fact that the variance inflation factor (VIF) lies between 1.8 and 8.7 for variates. A VIF value being larger than 10.0 (A threshold level) shows a high degree of Multicollinearity (Hair et al; 1995)
a discernible impact on economic growth. Supporting to the previous results, the estimates of both adjusted decentralized variables (APR and AEP) have positive sign and are statistically significant at 1 percent level of significance. Our results support the arguments of Oates (1972) that fiscal decentralization raises the public sector efficiency and enhances the long term economic growth and development. Economic efficiency is increased by decentralization because provincial governments have better information at local level and may provide or deliver public utilities like health, education and recreation facilities at low cost than central government. In addition, the local or provincial government has more check and balance on the institution which leads more producer efficiency. These external and internal economies increase more production and employment opportunities and ultimately economic growth takes place. The results of the study further favor the argument (Brennan and Buchanan; 1980) that fiscal decentralization promotes the competitive atmosphere among various levels of governments. In resulting, the local or provincial governments produce public goods more efficiently. Not only the public goods are over supplied but revenue maximization by the monopoly governments is prevented due to such healthy competition. The results of fiscal decentralization are in line with the study of Malik et al. (2006). Our results also supports Lin and Liu (2000), Akai and Sakata (2002), Thiessen (2003), Ebel and Yilmaz (2004), Limi (2005), and Gemmell et al. (2009)’s findings that fiscal decentralization positively influence economic growth and development.

The present study incorporates the trade openness and inflation as control variables for examining the robustness. We have found that inflation rate have negative and highly significant effect on economic growth. High inflation retards the economic growth due to high cost of production. Our result is matched with Ahmad and Mortaza (2005), Burdekin et al. (2000), Frenkel and Mehrez (1998), Naqvi and Khan (1989) and De Gregorio (1996)’s findings that inflation limits growth mainly by reducing the efficiency of investment. The coefficient of trade openness is positive and has significant impact on economic growth. This shows the strong evidence of long run relationship between trade openness and GDP. Except these variables, we have used total fixed investment and literacy rate as additional growth variables. The results of these variables are highly significant and have positive effect on growth just supporting the theory.

Table 3: OLS Results with Gross Domestic Product as dependent variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>2.5390</td>
<td>0.53</td>
<td>4.82</td>
<td>0.00</td>
</tr>
<tr>
<td>INF</td>
<td>-0.0035</td>
<td>0.003</td>
<td>-1.12</td>
<td>0.27</td>
</tr>
<tr>
<td>OPN</td>
<td>0.3564</td>
<td>0.29</td>
<td>1.22</td>
<td>0.23</td>
</tr>
<tr>
<td>LIT</td>
<td>0.0304</td>
<td>0.01</td>
<td>4.60</td>
<td>0.00</td>
</tr>
<tr>
<td>LTFINV</td>
<td>0.1030</td>
<td>0.06</td>
<td>1.81</td>
<td>0.08</td>
</tr>
<tr>
<td>RPV</td>
<td>0.7744</td>
<td>0.13</td>
<td>6.01</td>
<td>0.00</td>
</tr>
<tr>
<td>RPEP</td>
<td>0.2714</td>
<td>0.33</td>
<td>0.83</td>
<td>0.41</td>
</tr>
<tr>
<td>LGDP(-1)</td>
<td>0.6166</td>
<td>0.09</td>
<td>6.52</td>
<td>0.00</td>
</tr>
</tbody>
</table>

R-squared 0.99 F-statistic 6100.56
Adjusted R-squared 0.99 Prob (F-statistic) 0.00
Durbin-Watson stat 1.62 Sample Size 38

Diagnostic Tests

Breusch – Godfrey Serial Correlation LM Test
F - Statistic 0.8195 Probability 0.4513
Table 4: OLS Results with Gross Domestic Product as dependent variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>2.7666</td>
<td>0.52</td>
<td>5.28</td>
<td>0.00</td>
</tr>
<tr>
<td>INF</td>
<td>-0.0079</td>
<td>0.003</td>
<td>-2.75</td>
<td>0.01</td>
</tr>
<tr>
<td>OPN</td>
<td>0.6279</td>
<td>0.28</td>
<td>2.26</td>
<td>0.03</td>
</tr>
<tr>
<td>LIT</td>
<td>0.0289</td>
<td>0.01</td>
<td>4.73</td>
<td>0.00</td>
</tr>
<tr>
<td>LTFINV</td>
<td>0.1321</td>
<td>0.05</td>
<td>2.45</td>
<td>0.02</td>
</tr>
<tr>
<td>APR</td>
<td>0.6615</td>
<td>0.10</td>
<td>6.93</td>
<td>0.00</td>
</tr>
<tr>
<td>AEP</td>
<td>0.2380</td>
<td>0.09</td>
<td>2.65</td>
<td>0.01</td>
</tr>
<tr>
<td>LGDP(-1)</td>
<td>0.5761</td>
<td>0.09</td>
<td>6.32</td>
<td>0.00</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.99</td>
<td>F-statistic</td>
<td>7181.05</td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.99</td>
<td>Prob (F-statistic)</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Durbin-Watson stat</td>
<td>2.02</td>
<td>Sample Size</td>
<td>38</td>
<td></td>
</tr>
</tbody>
</table>

V. Conclusion

The present study mainly discusses the issue of fiscal autonomy and authority in Pakistan. The prime aim of the analysis is to get acquainted with the fiscal decentralization stance of Pakistan and its influence on economic growth of the country over the long run. The issue of recourse mobilization between provincial and federal governments is not so simple and straightforward but is considered difficult and complex phenomenon. In the present study, we have addressed both (Govt. Revenues and Expenditure) indicators of the fiscal policy. The study concludes that both fiscal decentralization variables (Tax authority, Expenditure autonomy) have positive and significant effect on economic growth.

Based on the empirical results, study suggests that provincial and local levels governments should be given more autonomy and authority in fiscal matters. No doubt, fiscal autonomy would generate more resources; enhance confidence and also make federating unit more accountable. Further, fiscal decentralization would reduce provincial dependency on central and development; and process would accelerate at the grass root level. In addition, the concentration of federal Govt. on the national issue would be increased and economic growth would be accelerated. In nutshell, the economic loss which results from lack of capacity building mechanism in provinces and central involvement in provincial matters would be resolved.
References


