



A Study of Linkages between Fiscal Decentralization and Macroeconomic Performance in Pakistan (2000–2015)

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Abstract

This study has mainly examined the association “between Fiscal decentralization and Macroeconomic performance in” Pakistan. “The time series data 1980 to 2018 has been used for the above-stated purpose”. This empirical study has used the Eviews9 software and estimation technique regression for the empirical analysis. “The study has found the significant association between Macroeconomic performance and fiscal decentralization in the” country. The “chief variables of fiscal decentralization are revenue transfer to the provinces and revenue generated by federating units and results of both variables” suggest the higher extent of fiscal devolution. The horizontal resource distribution mechanism among the provinces and vertical resources sharing method between provinces and federal has remained a very hot and blistering subject of debate since the inception of the country.

Key Words: Fiscal Decentralization, Linkages, Economic Growth, Estimation,

Introduction

The term fiscal decentralization has been defined in many ways. Fiscal decentralization paves the way to assign various responsibilities to the local authorities and governments. Fiscal decentralization does not only include the authority to provincial and local governments for various economic tasks and functions but also to generate economic resources and consume them according to need of the masses, Oates 1999. The fiscal procedures and instruments are the main elements of fiscal decentralization that promote the efficient deliverance of various utilities, Bird et al, 1995. Akai and Sakata, 2002 have defined the fiscal decentralization by expressing that it is a procedure in which the lower level of governments are authorized to make the economic decision at a lower level in the country. Thiessen 2001 shed the light on fiscal decentralization by spreading the fragrance of knowledge and philosophy that it entails the sovereignty including the accountability of local and provincial governments. Further, he explained that fiscal decentralization is a stable and capable boat that sails the local and provincial governments to generate their own revenue and spend it rationally in the given legal framework for the economic development of the nation. McNab and Martinez-Vazquez, 2001 discussed that economic growth is the outcome of fiscal decentralization public policy although there could be possible implications for economic resource allocation in the economy. Fiscal decentralization has been often observed as a capable and powerful engine that promotes the effectiveness of the public sector and to develop the competitive atmosphere among the various federation units in the provision of public goods and services, Wallich and Bird, 1993.

The recent scientific debate on a suitable and appropriate level of fiscal decentralization in various economies of the world have gained great importance. Even in the United Kingdom and the European Union, the discussion regarding fiscal autonomy has been reignited. There are substantial academic and public policy discussions that closely analysis the significant and non-significant levels of revenue decentralization and expenditure decentralization in various countries of the world. The available literature on fiscal decentralization is chiefly normative in nature whereas in more recent time the positive approach has been adopted by various researchers all over the world. According to the World Bank (2000), if the fiscal decentralization is carefully

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implemented that will result in more political stability, it enhances governments' efficiency and improves the living standard of the masses. Fiscal decentralization that reflects the degree of fiscal sovereignty and responsibility assigned to provincial governments and local governments has been an imperative subject matter in the policy equation of various developed and developing economies of the world. The fundamental quintessence and essence of fiscal decentralization is an appropriate and efficient distribution of government resources and consumption of resources by the different levels of government (Tanzi, 1995 and Oates 1972).

The macroeconomic performance of every developing country of the world has become the chief concern and objective of economic policy engineers all over the world, since the 1990s. The developing countries were advised and suggested to strengthen their economic position by utilizing their economic resources at a potential level. Further, they suggested implementing an appropriate and efficient economic policy that promotes economic growth, macroeconomic stability and reduces the burden of foreign debt, (Aigbokhan 1999). The federal governments were seriously criticized and attacked in many countries against the non-provision of basic needs of life to its masses at the grass-root level, Oates, (1972). The various studies shared that the central governments usually face the imbalance between its expenditures and income. Due to this, they are always made responsible for slow economic growth.

The fiscal decentralization system has been adopted by sixty countries out of seventy-five developing countries that have more than five million populations in their economies according to Dillinger, 1994. Lsesao and Arachi, (2002) and Moreno (2002) explained that the various advanced and developed nations have also embarked and initiated to lessen the degree of centralization in their public sectors. Fiscal decentralization has been advocated for the implementation of different reforms in economic system, such as to maintain and guarantee the economic progression, reduce and eradicate the poverty, create new job opportunities and lessen the unemployment, improve the position of balance of payments and balance of trade, curtail and control the rate of inflation and increase the stock of capital goods etc in the economy. It was debated earlier to 1980 that the economic development heavily depends on the markets and circumstances in which it operated. Subsequent to 1980 the fiscal decentralization has become the leading and inevitable public policy for economic growth and development all over the world. Sakata and Akai 2002, fiscal decentralization is a mechanism through which the regional and provincial governments are authorized to make all economic decisions. In many countries of the world and even in the United States of America there has been an increasing trend of fiscal decentralization for the last few decades. The theme summary of the international conference on Federalism, 2002 in the USA had paid the attention on fiscal decentralization and fiscal federalism. The findings of these scientific studies are not similar and unique. The positive and significant association has been found on the above topic by various researchers and whereas others have found a negative and insignificant correlation. The appropriate and appealing measures of the linkages between fiscal decentralization and Macroeconomic performance are very essential and necessary for accurate and reliable conclusions, Yilmaz and Ebel, 2002. The handsome number of an empirical study on fiscal decentralization has been carried out by various researchers in advanced and less advanced economies all over the world. In the case of Pakistan, a very small quantity of empirical research on linkages between fiscal decentralization and Macroeconomics performance has been carried out. So the diminutive quantity of research on the Linkages between fiscal decentralization and Macroeconomic performance in Pakistan is quite appealing for the researchers to carry out the empirical study on it. Hence this study has empirically examined the linkages between fiscal decentralization and Macroeconomic performance in Pakistan. This scientific research on the above topic will add the empirical findings and knowledge in the existing literature at the national level and eventually at the international level.

Literature Review

M Zahir Faridi et al (2019) examined the Fiscal decentralization and economic growth in South Asian countries by using non-stationary panel data from 1990 to 2016. This empirical study found the significant impact of revenue and expenditure decentralization on economic growth. Further other two variables. i.e. foreign direct investment and gross fixed capital formation have also a significant positive influence on economic growth in these countries. This study suggests the more fiscal decentralization for better economic growth and prosperity.

Bojanic Antonio N (2018) did empirical research on the impact of fiscal devolution on economic development, inflation and Gini coefficients in twelve countries of the Americas. This study found the significant influence of revenue and expenditure devolution on economic expansion. Further, the study has found a positive impact on income inequality. But the study could not conclude about the relationship between fiscal devolution and price stability.

Numera Anwar et al (2017) carried out a study on the impact fiscal decentralization on public services delivery particularly education in Pakistan by using time series data from 1972 to 2009. The study found the insignificant relationship between fiscal devolution and public services delivery but it supports the theoretical proposition about the improvement in gross enrollment at the early school level in the country. The research concluded that the higher level of fiscal devolution at the local level improves the enrollment proportion in the economy.

Ivohasina F. Razafimahefa and Moussé Sow (2015) did empirical research on the influence of fiscal devolution on the efficiency of public service delivery. The stochastic frontier method has been used by this study to examine the said impact. This study has found the positive and significant association between them in given circumstances i.e. (i) plenty political and institutional decentralization and (ii) an appropriate level of expenditures decentralization (iii) an adequate amount of revenue decentralization. This study warns that without decentralization in these, the efficiency of public service delivery can deteriorate.

Nasreen Iqbal and Aneel Salman (2011) analyzed the association between fiscal devolution and Social capital in Pakistan. These researchers highlighted that the various developing countries have adopted the mechanism of fiscal decentralization including administrative, financial and political since the 1990s. The transformation of the authority of revenue generation and expenditures from central government to provincial, provincial to local governments is a long-term gradual process. Fiscal decentralization benefits to the masses in many ways. It increases the efficiency in service delivery, strengthens democracy, enhances the degree of accountability and improves citizen participation. As the regional and local government leaders are close and well known about the needs. They can easily deliver at a lower cost which results in the improvement in social capital and economic growth. They further argued that transferring more powers to the local people in fiscal matters causes dynamic economic activities.

Abdul Salam Lodhi and Manzoor Ahmed (2013) examined the impact of fiscal devolution on education and health care outcomes in Pakistan. The main objectives of the scientific research were to explore the affiliation among fiscal decentralization and two important social services i.e. education and healthcare by using simple time-series data set and panel data set that covers all four provinces of the country from 1975 to 2009. The researchers had empirically investigated the influence of fiscal decentralization over literacy rate, crude death rate and infant mortality rate in Pakistan. The research has used the Ordinary Least Square method and Generalized Method of Moment Econometric technique to get the consistent and robust results of research. The results of this research is significant and very supportive to fiscal devolution. It is further explained that fiscal decentralization improves the quality and delivery of education and healthcare services in the economy.

Sally Wallace et al (2014) conducted the research on the association between fiscal decentralization and economic growth in Pakistan. This research used the time series data for the period of 38 years from 1972 to 2010. It has been observed by the research that fiscal decentralization (expenditures and revenue decentralization) policy is a useful tool to promote economic escalation in the country. Enhancement in the share of provincial governments' expenditures will gear up more new development projects that will consequently promote economic growth and economic development in the country. Further, this research has found a significant association between more revenue devolution and economic development. Fiscal decentralization and economic growth has significant and positive affiliation in Pakistan, but our economy is a developing economy so the number of constraints that can reduce the efficiency of fiscal decentralization policy tool is higher in the comparison of advanced countries of the world.

Ghani Ejaz et al (2013) examined the affiliation of fiscal devolution and economic expansion and fiscal decentralization and democratic institutions in Pakistan. This research has used the endogenous growth model improved with the inclusion of democratic institutions and fiscal decentralization. The three various approaches of fiscal devolution has been used in this empirical study for capturing the

multidimensionality. The findings of this scientific analysis support the fiscal decentralization in the economy, because the revenue decentralization accelerates the pace of economic growth. But the expenditure decentralization reduces the momentum of economic growth of the economy. Moreover, democratic institutions can also play a momentous role by realizing the significant paybacks of fiscal decentralization in the country. The various implications of fiscal decentralization for economic expansion, stability and development i.e. revenue decentralization, expenditure decentralization have been suggested by the study.

Mascagni Giulia (2016) carried out the empirical study on does fiscal decentralization delivers its promises in developing countries? The advocates of fiscal devolution squabble that it would bring significant and positive consequences either political or economic in nature. In fiscal decentralization, the authorities of local and regional governments are much close and connected to the people. They are well aware of the difficulties and needs of the masses and their more accurate and efficient remedies, which can bring the desired consequences. The fiscal decentralization could result in a significant and positive impact on the political participation of various localities and their accountability. These and many other benefits that have been achieved in the real-world are quite open theories to be discussed. The results of this empirical study support to adopt the fiscal decentralization policy for economic development and political stability in developing countries. When provincial and local governments are authorized constitutionally and morally, this would create a platform of competition among the provincial and local governments for providing better results. Every local authority would try to give better performance for its political development to lead the nation at the national level. This leadership would be very sound and more perfect in designing efficient economic policies for better and more stable economic growth and expansion. This will pave the way for using more natural resources which are bestowed by nature for better living standards. The higher living standard will boost up the human capital and its participation at the national level and international level.

Research Methodology and Data Sources

This empirical study has used the time series data from 1980 to 2018 to examine the linkages between fiscal decentralization and Macroeconomic Performance in Pakistan. The research has used the revenue approach to measure the linkages between fiscal decentralization and Macroeconomic performance. The same approach had been used to check out the financial authority of federating units in the federation by Lars et al, 2004. Further, the couple of the variables depict the income sovereignty of federating units in this empirical study. The ratio of the federating units' tax revenue to the federation's tax revenue is the initial variable that examines the tax sovereignty of federating units. This variable shows the fiscal dependence of federating units and their substantial authority over the taxes in the economy. Whereas the second measure of fiscal decentralization has been reflected by the second variable i.e. the revenue transfers from federation to its federating units. In addition, the same variable has been used as the proportion of GDP to be "familiar with incremental enhancement and real conduct of the central government's transfers to the federating units. Another variable of the model is Gross Fixed Capital Formation which portrays the investment position of the country in the economy. Furthermore the openness of the economy has been used in the regression. The trade liberalization has been explicated through the summation of imports and exports and divided it by the Gross Domestic Product at market prices. The openness of the economy influences employment and the performance of the economy. The unemployment rate and literacy rate have been included in the model. The unemployment rate portrays the output the economy has scarified during the period of time. This empirical examination has utilized the Handbook of Statistics on Pakistan Economy piled up by Federal Bureau of Statistics, the annual reports of the State Bank of Pakistan and the various issue of the Economic Survey of Pakistan.

Model Estimation Technique

The study has used the Autoregressive Distributed Lag Model (ARDL) technique to estimate the models with lagged decentralization variables. In Autoregressive Distributed Lag Model the dependent variable and its own lag value. Autoregressive Distributed Lag Model is one of the most general dynamic unrestricted models in Econometric literature. The Eviews version 9 statistical software has been used in this empirical study. The Autoregressive Distributed Lag Model is relatively user-friendly and frequently used in empirical studies. The

Autoregressive Distributed Lag models have been found very successful in forecasting the time series variable models in the field of economics. The Autoregressive Distributed Lag regression models are being utilized for decades but in more recent times these models have remained very handy to produce very important and valuable mechanisms to examine the existence of short-run and long associations among various economic time series.

The Autoregressive Distributed Lag Cointegration Technique has been frequently utilized to determine the long-run relationship between series with various order of integration (Pesaran and Shin 1999, and Pesaran et al 2001). The F-statistic has been utilized to notice the long run affiliation between the economic series. Through this technique and approach, the long-run association of the series is said to be established if the F-statistic exceeds the critical value band.

The Test for Stationarity

The reliability of research primarily depends on the accuracy of results and the tests that have been conducted by researchers. The engineers of economics have developed the various techniques, tools, tests and methods in order to avoid misleading and erroneous results. This research has first examined the stationarity of the data series in order to set up a suitable estimation plan and to avoid the counterfeit regression results. There is number of statistics to test for the stationarity, but the three methods have been commonly used, such as the Sargan-Bhargavan Durbin-Watson (SBDW), the Augmented Dicky-Fuller (ADF) test and the Dickey-Fuller (DF) test. Because of the drawback of the Dicky-Fuller test which assumes that the data generation process is an AR 01 process so the Augmented Dicky-Fuller (ADF) test is usually used.

Estimation Model of Fiscal Decentralization

This empirical study has used the theoretical model of Davoodi and Zou (1998). This is the clearest and healthy elaborated model encompassing the pressure of fiscal decentralization upon economic growth and expansion.

The endogenous growth model of Barro (1990) had been extended by them which states the production function has two inputs i.e. capital and public spending. Keeping in the view Pakistan’s state of affairs, it has been assumed that over the time, public expenditures are done by the two tires of the government i.e. provincial and federal.

Equation

$$REP = \beta_0 + \beta_1RTF + \beta_2RFU + \beta_3TTE + \beta_4OE + \beta_5GIE + \beta_6RU + \beta_7RL + \beta_8FDI + \beta_9RI + \epsilon$$

Here, Real Economic Performance (REP), Revenue Transfer to Federating units (RTF), Revenue of Federating Units (RFU), Tax to Total Economy (GDP) (TTE), Openness of the Economy (OE), Gross fixed Investment in the Economy (GIE), Rate of Unemployment (RU), Rate of Literacy (RL), Foreign Direct Investment (FDI), Rate of Inflation (RI), ϵ Error term and β is Coefficient.

Econometric Analysis and Software Eviews9

The Econometric analysis in this empirical examination has been carried out by using the Eviews9 Software to be acquainted and received reliable and accurate results. In the Econometric analysis, the fitness of the research model has been checked and analyzed. For the above-said purpose and examination, the Augmented Dickey-Fuller (ADF) Stationary test has been ordered. Further, the research has used the Autoregressive Distributed Lag (ARDL) Method to check the short-run and long-run relationship between the dependent and independent variables. The Heteroskedasticity problem and Autocorrelation problem have been tested through respective tests. This empirical research ran the data on Eviews9 software and received the following results.

Table 1. shows the results of the ADF Stationary test of all variables at the level and at 1st difference.

Variables	Level/1st difference	t-Statistics/ t calculated	t tabulated	Probability
FDI	Level	6.049681	4.219126	0.0001
GIE	1 st difference	4.590981	4.226815	0.0040
OE	Level	5.198547	4.219126	0.0007

REP	Level	4.644286	4.219126	0.0033
RFU	Level	6.158972	4.219123	0.0000
RI	Level	4.644286	4.219116	0.0022
RL	1 st difference	5.016590	4.226815	0.0013
RTF	Level	6.459698	4.219126	0.0000
RU	1 st difference	8.208676	4.226815	0.0000

Source: authors own calculation by using Eviews9 software.

In this table, it can be noted that all the above variables are stationary at the level or at first difference because t Statistics is greater than two (2) or t calculated is greater than t tabulated at 1%, 5% and 10% level. The p-value of all variables is less than 05 percent.

Autoregressive Distributed Lag (ARDL) Method

Method: ARDL

Table 2. shows the short-run relationship between the dependent and independent variables

Variable	Cointegrating Form			
	Coefficient	Std. Error	t-Statistic	Prob.
D(GIE)	37.832202	16.831237	2.247737	0.0318
D(OE)	30.230402	26.552088	1.138532	0.2636
D(RFU)	0.000019	0.000041	0.468265	0.6429
D(RTF)	0.046534	3.877510	0.012001	0.9905
D(RL)	1.2358412	0.050201	1.2541236	0.8901
D(RU)	2.2365478	0.023156	1.3698741	0.7254
D(RI)	4.2358711	12.125471	1.9852012	0.9125
CointEq(-1)	-0.923168	0.177532	-5.199998	0.0000

Source: authors own calculation by using Eviews9 software.

Table number two shows the short-run relationship between the variables. The CointEq (Cointegration equation) values in minus term clearly show that there is disequilibrium in the short run between the dependent and independent variables. Further, this term is also significant. The cointegration equation value is -0.92316 showing the speed of equilibrium adjustment.

Autoregressive Distributed Lag (ARDL) Bound Test for a long-run relationship

Table 3. Autoregressive Distributed Lag (ARDL) Bound Test

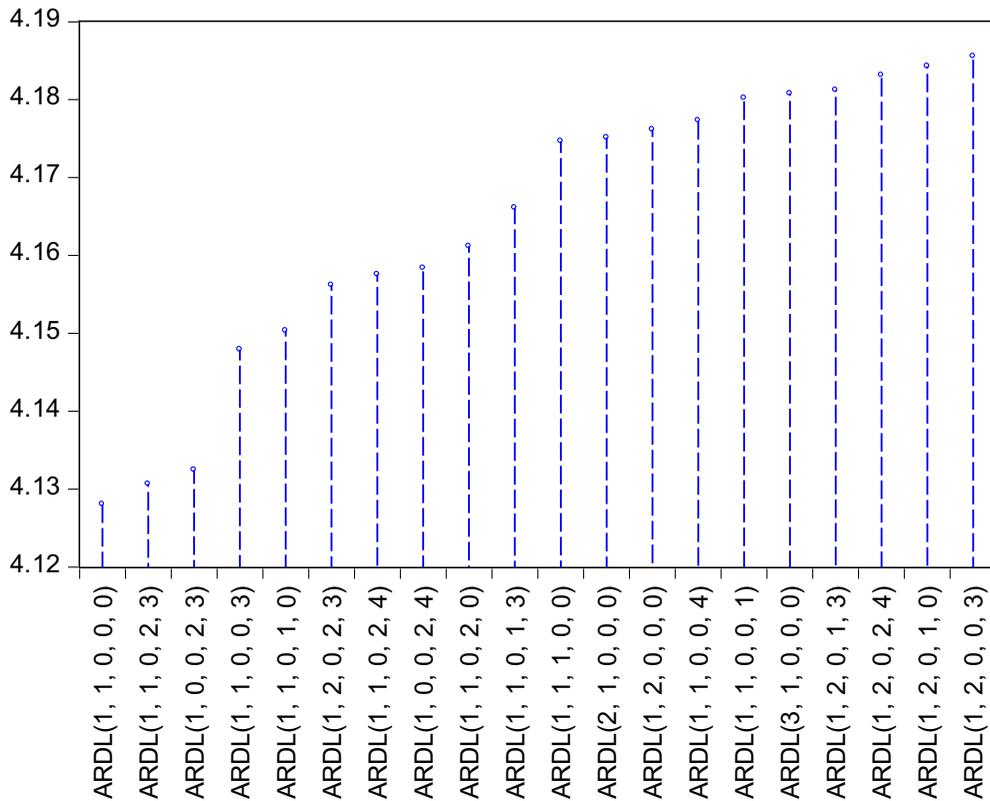
Test Statistic	Value	K
F-statistic	6.158327	7
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06

Source: authors own calculation by using Eviews9 software.

The table number three depicts the results of Autoregressive Distributed Lag (ARDL) Bound Test. The results suggest that there is a long-run relationship between the dependent variable and independent variables. As it can be seen that F Statistics value is greater than two "2" or F calculated value is greater than F critical at all levels.

Figure number one shows the Akaike Information Criteria, top 20 models

Akaike Information Criteria (top 20 models)



Heteroskedasticity Test

Table 4. Heteroskedasticity test Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.113043	Prob. F(6,31)	0.3774
Obs*R-squared	6.735285	Prob. Chi-Square(6)	0.3460
Scaled explained SS	3.460872	Prob. Chi-Square(6)	0.7492

Source: Author's own calculation by using Eviews9 Software.

It can be noticed in the above table that there is no Heteroskedasticity problem. The value of F-statistic is 1.113043 and less than two. Further, the P is insignificant and its value is 0.3774.

Autocorrelation Test

Table 5. Autocorrelation Test

F-statistic	0.062011	Prob. F (2,29)	0.9400
Obs*R-squared	0.161820	Prob. Chi-Square (2)	0.9223

Source: Author's own calculation by using Eviews9 Software.

It can be noticed in the above table that there is no Autocorrelation problem. The value of F-statistic is 0.062011 and less than two. Further, the P is insignificant and its value is 0.9400.

Model Specification Test

Ramsey Reset Test

Table 6. Autocorrelation Test

Variables	Coefficient	t-Statistic	Probability
RFU	0.000141	2.222233	0.0340
RTF	1.276213	0.349927	0.0490
TTE	11.212	2.96541	0.0032
RI	0.0813	8.13417	0.0621
RU	-0.0107	-0.7393	0.4666
RL	0.0744	9.2124	0.0000
GIE	21.2422	2.729131	0.0105
OE	20.6176	2.666091	0.122
C	22.30703	3.102663	0.0042

Source: Author's own calculation by using Eviews9 Software.

It can be noticed in the above table that most of the variables are significant except the Openness of economy and Rate of Unemployment. The coefficients of all variables except the Rate of Unemployment are positive. The results of this empirical study show the positive linkages between fiscal decentralization and Macroeconomic Performance in Pakistan.

Conclusion and Recommendations

The financial resources allocation mechanism of Pakistan has been chiefly examined and discussed in this empirical study. The prime objective of this empirical examination is to be well-known about the fiscal decentralization mechanism, status and its influence on economic performance, which eventually has an impact on poverty reduction, the living standard of masses and other Macroeconomics indicators in the country. It has been observed by the study that the mechanism of financial resources allocation between the federal and federating units remained much intricate since the incepting the country. The horizontal resource allocation among the provinces which is made on the basis of the population has remained much controversial in the country for long. This parameter of resource distribution has been criticized and rejected by most of the provinces except Punjab. It has been observed that disagreeable mechanisms of financial resources among the federating units proved lethal and deadly, resulting in the country was divided into two parts at an early age. After the long wait, quarrel, frequent requests and demands of other little provinces were merely honored in the 7th National Finance Commission Award. The other parameters with population were the first time included in the mechanism of financial resource distribution among the provinces in the county. But the minor weight was assigned to these new factors. While the lion weight about 82 percentage was assigned to the population factor even in the last 7th NFC award. The new included factors, i.e. poverty, revenue generation and inverse population were assigned a very meager and minor share of financial resources about 10.3 percent, 5 percent and 2.7 percent respectively.

The imbalances on vertical and horizontal distribution of financial resources have been caused socio-economic problems in the country. Especially the three small provinces faced much shortage of financial resources to mobilize their economic resources, provide public services and trained to their human capital which results in their slow economic growth and ultimately nation's. The horizontal distribution of financial resources has been made on the basis of population which has only benefited one province. Whereas other provinces have badly suffered and faced poverty, low living standards, poor and low rates of education, poor health services and a vulnerable state of security. An appropriate and inclusion of other factors in the distribution of financial resources mechanism are inevitable for robust and stable economic growth. The lion weight may be assigned to revenue generation rather than population which will cause the healthy competition among the provinces. If the proper and appropriate foreign policy is designed then the country can move on the trajectory of a favorable balance of trade and balance of payment which can boot and stables the value of the currency in exchange. Furthermore, the lion weightage assigned to revenue generation will create healthy competition among the provinces in the

country. No province will make responsible for any other province for its miseries, social disorder, poverty, poor education and health services and despondent economic situation. Each federating unit will be financially rich and self-sufficient to provide the best health and education services to its masses. The provincial government can carry out many social and healthy activities in their respective jurisdictions. The main variables of fiscal decentralization are Revenue Transfers to Federating units (Provinces) and Revenue of federating units (Provinces). The findings of both variables suggest the positive influence on economic growth of the country. The coefficient of RF and RTF is 0.000141 and 1.27762 respectively. The other variables of our research equation and their results also support the fiscal decentralization in the country. The results of this empirical study recommend more fiscal decentralization in the country. If the surgeons and engineers of economics and policy designers authorize the provinces to generate more revenue and receive higher financial resources from the center that will promote better and stable economic progression in the country. Stable and positive economic growth generates more working opportunities for the masses in the country. Furthermore, the positive change in the economy affects in many ways i.e. reduction in poverty, significant diminution in social crimes, better future of coming generations, improve the position of balance of trade and balance of payments, stable currency, higher literacy rate and respect in the world.

References

- Abdul Salam and Manzoor Ahmed (2013). Impact of Fiscal Decentralizations on Education and Healthcare Outcomes: Empirical Evidence from Pakistan. *J. App. Em. Sc* 4(2).
- Akai, N. and M. Sakata. (2002). Fiscal Decentralization Contributes to Economic Growth: Evidence from State-Level Cross-Section Data for the United States. *Journal of Urban Economics*, 52, 93 – 108.
- Antonio N. B. (2018). The impact of fiscal decentralization on growth, inflation and inequality in the Americas, CEPAL Review N° 124. - 174 -
- Anwar, N. & AUF, A. (2017). Fiscal decentralization and delivery of public services: evidence from education sector in Pakistan. *Studies in Business and Economics* no. 12(1) 10.1515/-0013
- Atushi, L. (2004). Decentralization and economic growth. *Journal of Urban Economics* 57, 449-461.
- Bird, R. M & Wallich, C. I. (1993). Fiscal Decentralization and Intergovernmental Relations in Transition Economies: Towards a Systematic Framework of Analysis. *Policy Research Working Paper WPS 1122*, World Bank, Washington, D.C.
- Bird, R. M., Ebel, R. D. & Wallich, C. I. (1995). Decentralization of the Socialist State. Washington D.C.: World Bank.
- Davoodi, H. & Zou, H. (1998). Fiscal Decentralization and Economic Growth: A Cross-Country Study. *Journal of Urban Economics*, 43, 244 – 257.
- Frenkel, M. & Gil M. (1998). Inflation and Endogenous Technological growth. Department of Economics, WHU Koblenz, Otto Beisheim Graduate School of Management, Burgplatz 2, 56179 Vallendar, Germany.
- Ghani, E.N., & Musleh, D. (2013). Fiscal Decentralisation and Economic Growth: Role of Democratic Institutions, PIDE Working Papers: 89 Government of Pakistan (Various Issues). Pakistan Economic Survey. Federal Bureau of Statistics, Islamabad.
- Ivohasina, F.R., & Moussé, S. (2015). Fiscal Decentralization and the Efficiency of Public Service Delivery. IMF Working Paper, International Monetary Fund WP/15/59
- Lin, J. Y. & Liu, Z. (2000). Fiscal Decentralization and Economic Growth in China. *Economic Development and Cultural Change*, 49(1), 1 – 21.
- Li Zhang, S.G., & Xiangyi, M. (2014). Fiscal Decentralization and Life Satisfaction: Evidence from Urban China. *Soc Indic Res* 119:1177–1194 DOI 10.1007/s11205-013-0552-z
- Muhammad, Z.F., & Khawaja, A.M. (2019). Fiscal Decentralization and Economic Growth in South Asian Countries. *Pakistan Journal of Commerce and Social Sciences* 13 (2), 529-546 *Pak J Commer Soc Sci*
- Oates, W. (1972). *Fiscal Federalism*. Harcourt Brace Jovanovich, New York.
- Oates, W. (1994). Federalism and Government Finance, in *Modern Public Finance*. J. Quigley and E. Smolensky, (Eds). Cambridge, MA: Harvard University Press, pp. 126 – 151.
- Oates, W. (1999). An Essay on Fiscal Federalism. *Journal of Economic Literature*, 37, 1120 – 1149.
- Robert D. Ebel. S Yilmaz (2002). Measurement and Impact of Fiscal Decentralization
- Sally, I., & Imran, H. (2014). Fiscal Autonomy and Economic Growth Nexus: Empirical Evidence from Pakistan. *Pakistan Journal of Social Sciences (PJSS)*, 34(2), 767-780
- Thiessen, U. (2001). Fiscal Decentralization and Economic Growth in High-Income OECD Countries. *Economics Working Papers* 001. *European Network of Economic Policy Research Institutes*.
- Xie, D., Zou, H. & Davoodi, H. (1999). Fiscal Decentralization and Economic Growth in the United States. *Journal of Urban Economics*, 45, 228 – 239.