Pakistan Economic and Social Review
Volume 56, No. 1 (Summer 2018), pp. 21-46

FISCAL POLICY FOR INCLUSIVE GROWTH: A CASE STUDY OF PAKISTAN

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Abstract. Fiscal policy plays a significant role in achieving inclusive economic growth as it can reduce inequalities, mitigate poverty and generate productive employment opportunities by regulating public expenditures and taxes. Current research examines the role of fiscal policy in plummeting poverty, reducing inequality, generating productive employment and last but not the least in attaining broad based inclusive economic growth for Pakistan. Various components of government expenditure and taxes are evaluated by estimating multiple vector autoregressive (VAR) models and by computing elasticities on the basis of cumulative impulse response functions (IRFs). The analysis suggests that fiscal policy is not playing an effective role in promoting broad-based inclusive economic growth. The frail linkage between fiscal policy and inclusive economic growth is countermand to very essence and spirit of the former in a developing country like Pakistan.

Keywords: Fiscal policy, Income inequalities, Inclusive growth, Productive employment, Poverty, VAR estimation, Impulse response functions

JEL Classification: C22, D31, O12, O43, D63

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I. INTRODUCTION

The notion of inclusive economic growth has gained remarkable attention in developing Asia due to prevalence of widespread income and non-income disparities. Macroeconomic policies are vital in pursuing poverty alleviation, reducing income inequalities, fostering economic growth and generating productive employment opportunities. Birdsall (2007) concluded that macroeconomic policies can shape the environment and incentives for inclusive growth in three important areas: fiscal discipline-the more rule-based the better, a "fair" fiscal policy with respect to revenues and expenditures, and a business-friendly exchange rate. Although these policies are not underlying causes of growth, they can control and alter growth outcomes in many ways. These policies can be used to achieve economic growth with a human face. Khatiwada (2013) observed that "*Over time macroeconomic policies have evolved as faceless policy measures……and can be given a human face. We can cite several areas of macroeconomic policies with human face they are linked with Inequality, poverty, gender, and inclusion"*.

It is suggested that nurturing inclusive growth, creating decent jobs and endorsing equality should be important pillars of macroeconomic policy. Fiscal policy, in pursuit of inclusive growth, becomes particularly relevant. Lopez et al (2010*)* concluded that *"Fiscal policy is one of the most powerful instruments that governments use to maintain macroeconomic stability for growth, as well as for intra and intergenerational transfers of wealth. Governments often have at their disposal between 25% and 40% of GDP for spending, including redistribution across social groups."* Hence, composition of government spending can have remarkable effects on level and outcomes of economic growth. For example, government spending on public goods has a strong association with poverty alleviation and reduction in inequalities. In contrast government spending on private goods has negative implications for both growth and equity. Similarly, tax policies directly affect households and their consumption and saving behavior and have inferences for income distribution and economic growth.

Asian Development outlook (2014) proposed that *"One important instrument available to the government for bringing about a more inclusive society is fiscal policy. Governments can design spending*

programs and tap revenue sources in ways that reduce inequality". Fiscal policy can play an important role in regulating aggregate demand, the distribution of income and economy's capacity to produce goods and services (Musgrave, 1959). Therefore, correct choice of composition and combination of these policies has become crucial in achieving a broad-based path of economic growth across countries. Estrada et al (2014) highlighted the important role governments can play in achieving goal of inclusive economic growth through well devised fiscal policy. Public spending on infrastructure development enhances productivity of whole economy and public spending on education leads to human capital formation and helps reduce inequalities. The reduction in economic disparities has assumed more importance due to increased focus on Inclusive growth. It is in this background that there is a need to explore role of government policies in reducing economic inequalities, alleviating poverty, creating productive employment opportunities and maintaining desired economic growth rate (see Benabou; 2000, Seshadri & Yuki; 2004).

II. LITERATURE REVIEW

There are many studies which pronounce effective fiscal policy and focused government spending as viable policy options in reducing inequalities and promoting inclusive growth. Bastagli et al. (2012) stated that fiscal policy can influence income distribution by affecting current disposable incomes and impacting future earnings of individuals. A government may utilize public expenditure for provision of public services or to attain equitable income distribution. Claus et al. (2014) concluded that public spending on education & health are the two most effective means of reducing inequality in developing Asia.

Thomas, *et al*. (1999) concluded that fiscal policy is vital for allocation of resources and maintaining equilibrium between various types of assets of an economy. Their growth or reduction is dependent on encouragements generated by tax policies and allocation of resources through public spending policies. Widmalm (2001) explained that different types of taxes have different growth effects. Taxes which distort consumption patterns and discourage investment are harmful for economic growth. Similarly, taxes can be effectively used to attain equitable income distribution. Kneller *et al*. (1999) propounded that

public expenditure, financed by non-distorting taxes, increases growth in a small public sector while an increase in distorting taxation will reduce economic growth. The benefits of tax exemptions and subsidies are mostly grabbed by the influential high income individuals, which has undesirable implications for economic growth and income equality.

Ahmed (2007) highlighted the importance of composition of public expenditures for economic growth and poverty alleviation. Expenditure on health, education and infrastructure has positive impact on economic growth when controlled for other factors. Several studies have explained the significance of fiscal policies in shaping pattern of economic growth via two types of public spending i.e. spending on public & private goods and on subsidies. Roberts (2003) concluded that if public spending is increased on education it may create opportunities for poor to get education, however demand side factors may reduce this effect. Such factors may include perceptions regarding paybacks of education, income of the household and other costs to parents for sending their children to educational institutions.

Chu *et al*. (2000) surveyed studies for a large set of developing economies and concluded that in most economies, government spending on education sector helped the poor more as compared to rich. Public spending on primary education was comparatively well directed in a way that share of advantages going to lowest quintile were higher than the benefits accruing to the richest quintile. David & Petri (2013) used the data based on various surveys for analysis and suggested that there is a need to divert public spending towards the areas that are more helpful in attaining inclusive economic growth. It is also suggested in literature that public spending can be productive only if it develops infrastructure that is used as an input for private investment (Devarajan, et al. 1996). There are numerous studies which confirm that well directed public spending on human capital enhances economic growth. (Guellec & Pottelsberghe; 1997, Diamond;1999, De la Fuente & Doménech; 2006, Heitger; 2001). Public spending on consumption and social security either have no effect or negative impact on economic growth (Aschauer; 1989, Barro & Sala-i-Martin 1990; Grier & Tullock 1989).

Habito (2009) examined the reasons why poverty reduction patterns accompanying economic growth have varied so widely across Asia. It

suggested that sectoral composition of economy, nature, size and patterns of public investments (particularly on social services and agriculture); and quality of governance affect poverty reduction and pattern of economic growth. Results confirmed the role of governance, public expenditure on social services and contribution of agriculture to GDP growth. Similarly, it also highlighted the important role manufacturing sector can play in attainting inclusive economic growth and recommended to take a broader view of poverty for policy prescription.

There are many existing studies (see Khan& Hashmi; 2015, Arif & Farooq; 2011, Irfan & Baber; 2014, Sherani; 2006, Faridi &Nazar; 2013, and Mahmood &Sadiq; 2010) which have evaluated the effectiveness of macroeconomic policies in motivating economic growth in Pakistan. Most of the empirical evidence about macroeconomic effects of fiscal policies is based on separately estimated regressions, analyzing the growth effects, the distributive effects or role of fiscal policy in poverty reduction. Besides that, most of previous studies consider public expenditure and tax revenue as a whole ignoring the fact that different components of revenues and expenditures can have varied impact on growth, income distribution, poverty and employment. For example, current expenditure, due to its non-productive nature, has different consequences for poverty, inequality, employment and economic growth as compared to development expenditure. Similarly, direct and indirect taxes influence income distribution, economic growth and employment generation differently. Government expenditure on health and education facilities can determine access level of these facilities. If major portion of expenditures is non-productive it can lead to lack of provision for necessities of life. Well directed public expenditure stimulates economy, generates productive employment and contributes to inclusive growth. Similarly, taxation structure is no less important in affecting equity, poverty reduction and income redistribution all of which constitute Inclusive growth.

However, despite its demonstrated relevance, the joint response of economic growth, income inequality, poverty, employment and inclusive growth to different measures of fiscal policies has largely been overlooked in Pakistan. It is astonishing to find that there is not even a single study which focuses the impact of fiscal policy on Inclusive growth in Pakistan. It is in this background that present study aims at

filling this significant gap in existing literature. The study provides an in-depth evaluation of the role of fiscal policy in attaining a broad based, inclusive growth in Pakistan.

III. DATA AND ECONOMETRIC METHODOLOGY

This section provides a brief description of data used in present study. Annual data for the period 1980-2015 on various variables is collected from different sources including Economic Survey of Pakistan, Labor Force Survey (LFS) of Pakistan, International Financial Statistic (IFS) and World Development Indicators (WDI). Time series data on poverty was extracted from various publications of Social policy and development center (SPDC), and the data base Knoema supported by World Bank indicators. Data on inequality (Gini-coefficient) is taken from Standardized World Income Inequality Database (SWIID) version 3.1. Table 1 provides a description of variables used in this study. All variables are used in log form.

TABLE 1

Description of the Variables

Variables	**Description**
GDP	Growth rate of Gross Domestic Product
IG[1]	Inclusive Economic Growth
GINI	Gini Coefficient
POV	Poverty head count ratio
CE	Current Expenditure as percentage of GDP
DE	Development Expenditure as percentage of GDP
EE	Education Expenditure as percentage of GDP
HE	Health Expenditure as percentage of GDP
DT	Direct taxes as percentage of GDP

[1] Inclusive growth is measured by composite inclusive growth variable consisting of poverty, inequality and inverse of employment to population ratio following Ramos et al (2013). IG is interpreted opposite of its sign.as fall in poverty, inequality and inverse of employment ratio imply a higher level of inclusive growth.

Variables	**Description**
IT	Indirect Taxes as percentage of GDP
GDPE	GDP per person employed
GFCF	Gross fixed Capital Formation as percentage of GDP

ECONOMETRIC METHODOLOGY

Vector Autoregressive (VAR) models are extensively used to estimate effects of monetary policy. However, many recent studies on macroeconomic effects of fiscal policy have also used this approach (see Capet; 2004, Kamps; 2005, Marcelino;2006, Perotti; 2005). Ramos & Roca-Sagales (2008) supported the use of VAR approach to analyze the effects fiscal policy as follows

> *"VAR models are particularly appropriate to estimate the medium and long term impact of public policy for at least three reasons. Firstly, they take due account of the dynamic feedback between variables as well as their effect on other variables both in the short and long term. Second, VAR models are especially suitable when the variables of interest are endogenous Finally VAR models are not too demanding on the data, which has surely contributed to the recent proliferation of empirical research on the macroeconomic effects of fiscal policy"*

Hamilton (1994) advocated that even with co-integrated relations among key variables, use of basic VAR can be feasible because parameters are estimated consistently and the estimates have same asymptotic distribution as those of differenced data. The VAR methodology utilized in present study, developed by Sims (1980), is an ad hoc dynamic multivariate model, treating simultaneous set of variables equally, in which each endogenous variable is regressed on its own lags and of other variables in a finite order system. The objective of the approach is to examine dynamic response of system to shocks without having to depend on incredible identification restrictions inherent in structural models. Following Christiano et al (2005), Bernanke & Blinder (1992) a representative reduced form VAR can be written as:

$$X_{t=}\ u_0 + A(L)X_{t-1}\ + u_t$$

Where $X_{t=}$ k-dimensional vector of endogenous variables

A (L) = an auto-regressive lag polynomial, and

μ_t = The vector containing reduced -form residuals, which in general will have non-zero correlations.

In current study six different VAR models are estimated to cover various dimensions of Inclusive growth. Existing literature advocates that reduction of income inequality; poverty alleviation and generation of productive employment are important pillars of Inclusive Economic growth. (see Ali &Son; 2007, McKinley; 2010, Anand et al.; 2013, Bhorat et. al.; 2015). In order to analyze the role of fiscal policy in attaining Inclusive growth present study has utilized framework proposed by Hur (2014). This model is extended to add more dimensions of inclusive growth particularly poverty and productive employment in Pakistan.

IV. EMPIRICAL IMPLEMENTATION

STATIONARITY TESTS

In terms of empirical implementation, the first step is to determine the order of Integration of each variable. For this purpose, Augmented Dicky Fuller (ADF) test and Phillip-Perron (PP) tests are used. Akaike Information Criterion (AIC) and Schwartz Information Criterion (SIC) are used for optimal lag selection. Test results suggest that all the variables are integrated of Order one which means non-stationary in levels but stationary in first difference. The VAR models are therefore estimated in first differences of log-levels or growth rates following Ramos & Sagales (2008), and Gallo & Sagales (2014).

VAR MODELS AND IMPULSE RESPONSE FUNCTIONS (IRFS)

The study has estimated six different VAR models and an effort is made to include most of the relevant variables to avoid omitted variable bias. The analysis is primarily based on impulse Response Functions (IRF) derived from these models considering the effects on income inequalities, poverty, productive employment and inclusive growth of a one-off one percentage point shock in the growth rate of fiscal policy variable. Impulse response analysis in time series analysis is important in

determining the effects of external shocks on variables of the system. Simply put, an Impulse Response Function (IRF) shows how an unexpected change in one variable in the initial time period affects another variable over time. It should be emphasized that we are not looking at how one variable affects another variable. In most of the analysis the impulse response functions converge within first 5 or 6 years implying that long-term effect on income equality, poverty, Productive employment and Inclusive economic growth are zero. In levels, however, such shocks cause lasting changes in inequality, poverty, productive employment and inclusive growth due to permanent changes in the level of fiscal variables. We are looking at shocks coming from the error term related to fiscal variables (various components of expenditure and taxation in case of present study).

CHOLESKY DECOMPOSITION AND ORDERING OF VARIABLES

In literature, the standard procedure to accommodate contemporaneous correlations among shocks in different variables is the Cholesky decomposition of Variance-Covariance matrix of estimated residuals. (See Kamps;2005, Fatas & Mihov; 2001, Favero & Rovelli; 2003). The same procedure is adopted in present study. It is important to choose right ordering of the variables as it may have greater impacts on estimated policy responses. In present analysis, economic relationships and logic are used to order the variables. Government Spending, both current and development, is assumed to be exogenous following Blanchard & Perotti (2002) and De Castro (2006). It implies that Inclusive Growth, income inequality, Poverty and productive employment react to variations in Public spending but not vice versa. It can also be interpreted that policy is implemented at one point in time but its effects take place with a time lag. It is assumed that tax revenue reacts contemporaneously to inequality, unemployment, poverty and output shocks. This assumption is in line with Bernanke & Mihov (1998) and Blanchard & Perotti (2002). Another assumption is that indirect taxes do not contemporaneously affect direct taxes and current spending does lead development spending. Keeping in view this economic background and logic, to estimate impulse response functions variables are considered in the order current expenditure, development expenditure, inclusive

growth, inequality, poverty, employment, direct taxes, and Indirect tax revenue as per the requirement of each model.

V. EMPIRICAL RESULTS

The results of empirical estimation are presented in this section.

UNIT ROOT TESTS

Table 2 summarizes the results of Augmented Dicky Fuller (ADF) and Phillip-Perron (PP) test. These tests are conducted on all the variables used in various models to determine the order of integration of each variable. For both tests, null hypothesis is that the series is non-stationary or contains a unit-root and the rejection of null hypothesis is based on MacKinnon critical values. The results of both ADF and PP tests suggest that all variables are stationary in first difference or in other words integrated of order one.

TABLE 2

Unit Root Analysis (ADF and PP test)

Variables	ADF Test			PP test		
	Level	1st difference	Conclusion	Level	1st difference	Conclusion
IG	-0.1254	-6.3257	I(1)	-0.1033	-6.915	I(1)
GDP	-1.101	-7.783	I(1)	-0.936	-7.824	I(1)
Gini	3.104	-8.256	I(1)	0.443	-8.974	I(1)
POV	-2.946	-4.614	I(1)	-2.103	-3.553	I(1)
CE	-2.754	-5.570	I(1)	-2.729	-6.074	I(1)
DE	-1.617	-6.359	I(1)	-1.577	-6.421	I(1)
EE	-0.730	-9.298	I(1)	-1.015	-23.114	I(1)
HE	-1.114	-6.213	I(1)	-2.775	-11.707	I(1)
DT	-2.110	-4.944	I(1)	-2.223	-4.953	I(1)
IT	-2.430	-6.658	I(1)	-2.356	-6.666	I(1)
GDPE	-2.366	-5.490	I(1)	-2.366	-5.490	I(1)
GCFC	-1.946	-4.827	I(1)	-2.146	-4.774	I(1)
EMPM	-1.592	-5.964	I(1)	-1.620	-5.963	I(1)

SPECIFICATION TESTS

It is important to ensure that models are correctly specified and model residuals are free from first order auto-correlation, heteroscedasticity or non-normality. In this regard, VAR residual LM test for autocorrelation, VAR residual heteroscedasticity test and Jarque- Bera test for normality are applied. The results of specification tests are summarized in Table 3.

TABLE 3

Specification Tests (p-values)*****

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Autocorrelation	0.7175	0.6777	0.4707	0.9255	0.6102	0.5081
Heteroscedasticity	0.2495	0.1216	0.2702	0.4377	0.3179	0.2118
Normality	0.3140	0.0763	0.3627	0.3011	0.5327	0.7139

*specification tests are based on the residuals from the estimation of unrestricted VAR for each model. AR residual LM test is used to test for autocorrelation. If value of LM statistic is greater than the critical Value, the errors have auto- correlation. (If $p \geq 0.05$, the error terms have no auto correlation) VAR residual heteroscedasticity test. For normality, Jarque-Bera test (Lutkepohl, 1991) was applied. Under the null of normally distributed residuals the test statistic is asymptotically distributed $\chi 2$ with 2 degrees of freedom.

It is clear from the results of various tests that all the models are correctly specified and free of auto-correlation, heteroscedasticity and non-normality. Inverse roots of AR characteristic polynomial were also calculated to investigate stability of the models. For all the models values of roots are less than unity and lie within the unit circle hence confirming that estimated VAR models are stable.

FISCAL ELASTICITIES

Following table summarizes estimated elasticities derived from accumulated impulse response functions (IRFs) [see Appendix I)] obtained by using Choleski decomposition. These elasticities measure long-term accumulated effects of one percentage point initial shock to relevant fiscal variable on income inequality, poverty, productive employment and inclusive growth in Pakistan. The sum of significant responses is provided in the brackets.

FISCAL POLICY AND INCOME INEQUALITY

This section presents fiscal elasticities which are derived from the accumulated impulse response functions which are obtained from Choleski decomposition. These elasticities provide an assessment of long term accumulated effect on various dimensions of inclusive growth (inequality, poverty, productive employment) of a one percentage point initial shock to the pertinent fiscal variable. The first two columns of table present estimated Inequality elasticities derived from accumulated impulse response functions (IRFs). The sum of significant responses is provided in the brackets.

TABLE 4

Inequality, Poverty, Productive Employment and Inclusive Growth Elasticities
(Range of results)

Fiscal Variable	Inequality Elasticities		Poverty Elasticities	Productive Employment Elasticities		Inclusive Growth Elasticities
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
GDP		0.042 (0.042)	-0.1086 -0.0361)	-0.1031 (-0.010)	0.0621 (0.0501)	-0.0452 (-0.0314)
GFCF		0.039 (0.039)				-0.0331 (-0.0201)
CE	0.064 (0.064)		0.1602 (0.000)	-0.1320 (0.000)	(-0.0354) (0.0000)	
DE	0.0040 (0.000)			-0.0221 (0.000)	0.0245 (0.000)	
EE		-0.042 (-0.042)	-0.2345 (-0.1523)			-0.0764 (-0.0721)
HE		0.019 (0.006)	-0.0521 (0.000)			-0.0456 (0.000)
DT	0.0453 (0.0453)		-0.2123 (-0.083)	-0.0564 (-0.0061)	-0.0523 (-0.0362)	0.0012 (0.0012)
IT	0.0086 (0.000)		0.0321 (0.000)	0.0457 (0.0162)	0.0435 (0.0171)	0.01741 (0.0102)

Source: Calculated and compiled by the author

GDP growth has a positive effect on income inequality i.e. Income inequality increases with economic growth. If there is a 1% shock to GDP growth it increases income inequality by 0.04%. Economic growth does not seem to promote equity and Inclusive growth. The inequality elasticities suggest that expansionary fiscal policy has adverse effect on income inequality. Current expenditure has positive effect on income inequality. With a 1% shock to current expenditure income inequality increases by 0.06%. Development expenditure has no significant impact on income inequality in case of Pakistan. This negative government spending elasticity is in line with many previous studies. (see Ali & Ahmad; 2010, Gallo & Sagales; 2014). Gross fixed capital formation (GFCF) is also adversely impacting income distribution in Pakistan. Brennenman & Kerf (2002) suggested that ideally GFCF should reduce income disparities, as it helps in connecting to markets, enhances access to employment, health and educational opportunities. But this has not happened in Pakistan where GFCF has led to increased income inequalities. In Pakistan, GCFC, particularly public investment in physical infrastructure, is concentrated in some specific areas which is promoting regional and spatial income inequalities. This unequal distribution of public spending has resulted in unequal access to various opportunities and has negative implications for inclusive growth. These findings are in line with Hur (2014).

Education spending however has positive contribution regarding reduction in inequality i.e. a 1% shock to education expenditure leads to 0.021% reduction in income inequalities. Health expenditure does not significantly income distribution. Inequality effect of direct taxes is positive, 1% percentage shock in direct taxes leads to 0.045% increase in income inequality. This finding suggests that taxation structure is regressive in nature. Ramos &. Sagales (2008) suggested that taxes deteriorate income distribution in a country and public expenditures have a greater potential to reduce income inequalities. Indirect taxes have a negative but insignificant impact on income distribution. These results are in line with Khan and Hashmi (2015) who also concluded that indirect taxes have no significant impact on income inequalities in Pakistan. Based on these findings it can be concluded that fiscal policy tools are not effective in reducing income inequalities in Pakistan.

FISCAL POLICY AND POVERTY REDUCTION

Habito (2009) defined inclusiveness of economic growth as GDP growth that leads to significant poverty reduction. Poverty reduction is an important pre-condition for achieving Inclusive growth. In order to access the contribution of Fiscal policy in poverty reduction, poverty is incorporated in VAR Model 3 along with various fiscal variables and these elasticities are presented in Table 4. The sum of significant responses is provided in the brackets. The results suggest that GDP growth leads to poverty reduction i.e. poverty decreases with growth. If there is a 1% shock to GDP growth it reduces poverty by 0.10% if all responses are considered. However, it is difficult to conclude that economic growth is pro-poor in Pakistan particularly if we take into account only significant responses where response of poverty reduction is just 0.03%.

This finding is supported by many previous studies in literature like Omer & Jafferi (2008,). Current expenditure has positive effect on poverty. If there is a 1% shock to current expenditure poverty increases by 0.16%. It might be attributed to the non-productive nature of current expenditures. However current expenditure has no significant effect on poverty level in long-run. Expenditure on education not only increases productivity of available work force but also increases their chances of employment and helps reduce poverty. This linkage is confirmed by present analysis; if there is a 1% point shock to education expenditure it reduces poverty by 0.234%. These results are supported by many previous studies. (See Ahmad & Batul; 2013 Khan et al; 2010, Riasat et al ;2011, Janjua & Kamal; 2011). Health expenditure also reduces poverty but its impact is relatively smaller as compared to education expenditure. If there is 1% shock to health expenditure poverty reduces by 0.05% however, this impact is not significant in long run.

Direct taxes are found to reduce poverty significantly, if there is 1%-point shock to direct taxes poverty reduces by 0.21%, if all responses are considered, and reduces by 0.08% if only significant responses are considered. Indirect taxes lead to increase in poverty; however, this impact is not significant. These results are in line with economic theory as indirect taxes are regressive in nature and add to the miseries of poor people who are mostly exempted from direct taxes. The analysis implies

that only expenditure on education has significant poverty reduction impact in Pakistan. All other components of government spending either increase poverty or, have no significant implications for poverty reduction and Inclusive growth.

FISCAL POLICY AND PRODUCTIVE EMPLOYMENT

Productive employment is an important pillar of Inclusive growth. Many developing countries have shown tremendous economic growth but unfortunately this growth has not created sufficient productive employment to lift large number of people out of poverty. (see Kapsos; 2005, McKinsey;2012; Fox & Gaal; 2008). Access to productive employment is vital for Inclusive economic growth. Szirmai et al (2013, pp.03) suggested that "*Access to productive employment is essential for inclusion of the poor in society*. *Productive employment does not only provide the poor with better incomes it also stimulates learning and skill acquisition and participation in society"*. Hence, poverty reduction and social inclusion are linked to economic development through the channel of productive employment. (Kremer et al.;2009).

ILO (2012, pp.03) defined productive employment "*as employment yielding sufficient returns to labor to permit workers and their dependents a level of consumption above the poverty line"*. Productive employment can be generated through rapid economic growth, optimal utilization of under-employed labor force and technical change. In empirical literature, various indicators of productive employment are proposed i.e. share of total employment in industry, share of own account and family workers in total employment (McKinley;2010) and employment to working age population, average wage growth, sector specific wage growth, and whether workers are more productively employed (Hansen & Sperling; 2013).

However, the main problem is availability of requisite data on these indicators making it difficult to quantify the idea. In present study employment in industry, as percentage of total Employment and labor productivity growth[2] (measured as an annual change in GDP per person

[2]According to ILO (2009) the labor productivity growth rate is measured as the annual change in Gross Domestic Product (GDP) per person employed.

employed), is used as indicators of productive employment following ILO (2009) and McKinley (2010).. Model 4 and 5 analyze the role of fiscal policy in generating productive Employment in Pakistan. Model 4 is based on Indicator I (employment in industry as percentage of total Employment) and Model 5 is based on Indicator II (Labor Productivity Growth). The elasticities based on first indicator of productive employment (employment in industry) show that GDP growth has negative impact on productive employment generation. It implies that employment opportunities generated by growth process are in less productive sectors of economy and employment in productive sector is shrinking instead of expanding. Similarly, none of government expenditure items has significant impact on productive employment. Direct taxes have negative but insignificant impact on productive employment. However, 1% increases in indirect taxes lead to 0.045% increase in productive employment. In case of model 5, none of the expenditure items has a significant impact on productivity growth of labor force. Direct taxes have negative and indirect taxes have positive impact on GDP per person.

Productive employment is a vital ingredient of Inclusive growth. For growth process to be inclusive it is critically important that sufficient productive employment opportunities are generated to ensure mass participation in growth process. Quality employment generation is key to enhancing access and participation. The analysis submits that economic growth in Pakistan can be termed as "jobless growth" as it is unable to generate adequate employment opportunities in the productive sectors of the economy. Fiscal policy does not seem to be very effective in generating productive employment to ensure inclusiveness of growth process.

FISCAL POLICY AND INCLUSIVE ECONOMIC GROWTH

An important contribution of present study is the analysis of the role of fiscal policy in attaining a broad based inclusive economic growth for Pakistan. As mentioned above Inclusive economic growth is measured by utilizing the methodology proposed by Ramos et.al. (2013). Inclusive economic growth variable is incorporated into VAR model 6 along with GDP growth and various fiscal variables. The elasticities presented in last column of the table show the long-term accumulated effects of one

percentage point initial shock to GDP and relevant fiscal variable on inclusive economic growth in Pakistan. The sum of significant responses is provided in the brackets.

The connection between GDP growth and increase in level of inclusiveness is weak. Although GDP growth increases the inclusiveness but the magnitude is negligible *i.e.* as a 1% shock to GDP growth increases inclusiveness just by 0.04%. It further reduces to 0.03% if only significant responses are considered. This analysis suggests that economic growth process in Pakistan is not inclusive as it is unable to reduce poverty, mitigate inequalities and generate employment opportunities. The connection between GDP and Inclusiveness is either missing or too weak to make an impact.

Gross fixed Capital Formation (GFCF) has positive consequences for inclusive economic growth. A 1% shock to GCFC increases inclusiveness by 0.03% which is not very inspiring. Expenditure on education leads to increase in inclusiveness of economic growth as 1% shock to education expenditure leads to 0.07% reduction in inclusive growth variable. This finding is in line with economic rationale as education promotes inclusiveness through the channels of enhancing productivity of labor, reducing income inequalities and by increasing access to productive employment opportunities. Health expenditure does not significantly impact the level of inclusiveness of economic growth. Taxes both direct and indirect lead to reduction in inclusiveness. It might be due to the fact that Pakistan relies heavily on indirect taxes which are more regressive in nature. The tax system seems to promote inequalities and is least effective in poverty reduction.

VI. CONCLUSION AND POLICY IMPLICATIONS

Macroeconomic Policies, particularly fiscal Policy can play vital role in reducing poverty and income inequality leading to coveted target of Inclusive economic growth. Present study has analyzed the role of fiscal policy in promoting a more broad-based inclusive economic growth in Pakistan. The findings suggest weak linkage between fiscal policy and inclusive economic growth in Pakistan. GDP growth reduces poverty up to certain extent but falls short of mitigating inequalities and creating productive employment opportunities. Government expenditures particularly current expenditures are inversely affecting poverty

reduction, income inequality and productive employment. Taxes are also found not supportive to inclusive growth process.

A well-targeted and coordinated fiscal policy can play an important role in reduction of poverty and inequality while stimulating productive employment to ensure inclusive growth. Composition of government expenditure should also be reviewed to achieve afore-mentioned targets. There is a dire need to curtail non-productive current expenditures and spend more on public goods, which will help attain more inclusive economic growth through channels of employment and equity. Fiscal policy should aim at reducing both income and non-income inequalities and should promote access to education and health facilities as it has direct implications for Inclusive growth. Gross fixed capital formation should be equitably distributed to promote access and opportunities for people living in backward areas. Hence, expenditure on education and health and gross fixed capital formation should be particularly focused to make the growth process more inclusive.

The current taxation system does not seem to play any significant role in achieving inclusive growth in Pakistan. It should be over hauled to promote equity in the society as taxes can play a very effective role towards fair distribution of growth dividends. Pakistan, with low tax to GDP ratio, large tax evasions and heavy reliance on indirect taxes, seem to have all the ingredients for inequality to grow and inclusive growth to retreat in society. Effective and broad based tax reforms are a key to pull the country out of social and economic quagmire of unequal distribution of wealth & resources.

REFERENCES

Ahmad, K. and Wajid, S. (2013) What matters for economic growth in Pakistan: Fiscal policy or its composition? Asian Economic and Financial Review, 2013,3(2):196-215

Ahmad, M. (2000) Estimation of Distribution of Income in Pakistan Using Micro Data. The Pakistan Development Review 39:4, 807–824.

Ahmad, Z. and Batul, T. (2013) Relationship among Poverty, Education Expenditure, and Education Status: Empirical Evidence from Pakistan Proceedings of the World Congress on Engineering & Computer Science. Vol. 1, p 1

Ahmed, S. (2007). More and Better Growth in India: Role of Fiscal Policy. Background paper for "More and Better Growth" Project, Independent Evaluation Group, World Bank, Washington, DC.

Ali, I. (2007) Inequality and imperative for inclusive growth in Asia. Asian Development Review, Vol. 24, No. 2

Ali, S. and Ahmad, N. (2010) The Effects of Fiscal Policy on Economic Growth: Empirical Evidence based on the Time Series data from Pakistan. The Pakistan Development Review, 49 (4):497-512.

Ali, I. and H. H. Son (2007); Measuring Inclusive Growth. Asian Development Review, Vol. 24, No. 1

Anand, R., A., Mishra, S. & J. Peiris (2013); Inclusive Growth: Measurement and Determinants. IMF Working Paper 13/135; available under http://www.imf.org/external/pubs/ft/wp/2013/wp13135.pdf

Arif, G. M., & Farooq, S. (2011). Poverty, Inequality and Unemployment in Pakistan. Pakistan Institute of Development Economics, Islamabad.

Asian Development Outlook (2014). Fiscal policy for inclusive growth. Asian Development Bank.

Aschauer, D. (1989). Is government spending productive? Journal of Monetary Economics, 23(2), 177-200.

Barro, R. J., & Sala-i-Martin, X. (1990). Economic Growth and Convergence across the United State. NBER Working paper, (3419).

Bastagli, F., Coady, D.& Gupta, S. (2012) Income Inequality and Fiscal Policy. IMF Staff Discussion Note. SDN/12/08

Benabou, R., (2000), Unequal Societies: Income Distribution and the Social Contract. American Economic Review, Vol.90 (1), 96-129

Bernanke, B. & Mihov, I. (1998) Measuring Monetary Policy. Quarterly Journal of Economics. 869- 902

Bhorat, H., Stanwix, B., and Yu, D., (2015) Non-Income welfare and Inclusive growth in South Africa. Brookings Africa Growth Initiative Publications No.36

Birdsall, N. (2007). Reflections on the Macro Foundations of the Middle Class in the Developing World. Center for Global Development. Working Paper Number 130 http://www.cgdev.org/content/publications/detail/14696/

Blanchard, O. and R. Perotti (2002), An Empirical Characterization of the Dynamic Effects of Changes in Government Spending and Taxes on Output. Quarterly Journal of Economics, 117(4), 1329-68.

Brennenman, A., Kerf, M., (2002). Infrastructure and Poverty Linkages: A Literature Review. The World Bank, Mimeo

Capet S. (2004) The Efficiency of Fiscal Policies: A Survey of the Literature. CEPII, Working Paper No. 2004 – 11.

Christiano, L., M. Eichenbaum and C. Evans (2005) Nominal Rigidities and the Dynamic Effects of a Shock to Monetary Policy. Journal of Political Economy 113: 1-45.

Chu, M. K. Y., Davoodi, M. H. R., & Gupta, M. S. (2000). Income distribution and tax and government social spending policies in developing countries. (No. 0-62). International Monetary Fund.

Claus, I.,Martinez-Vasquez, &V. Vulovic. (2014) Government Fiscal Policies and Redistribution in Asian Countries. In Kanbur, R., C. Rhee, and J. Zhuang, eds. Inequality in Asia and the Pacific: Trends, Drivers and Policy Implications. London and New York: Routledge and Manila: ADB.

David, A.C., and Petri, M. (2013) Inclusive Growth and the Incidence of Fiscal Policy in Mauritius— Much Progress, But More Could be Done. IMF Working paper. WP/13/116.

De Castro, F. (2006) The Macroeconomic Effects of Fiscal Policy in Spain. Applied Economics, 913-24.

De la Fuente, A. and Doménech, R. (2006) Human capital in Growth Regressions: how much difference does data quality make? Journal of the European Economic Association, 4(1):1–36

Devarajan,S., Swaroop, V., & Zou, H. F. (1996).The composition of public expenditure and economic growth. Journal of monetary economics, 37(2), 313-344

Diamond Jr, A. M. 1999). Does federal funding "crowd in" private funding of science? Contemporary Economic Policy, 17(4),423. Discussion Note. Washington, DC: International Monetary Fund.

Estrada, G. Lee, S.H. and Park, D. (2014) Fiscal policy for Inclusive growth: An overview. ADB working paper series No. 423.

Faridi, M.Z. and Nazar, R. (2013) Impact of Fiscal autonomy on Poverty in Pakistan. Pakistan Journal of Commerce and Social Sciences, Vol. 7(1):41-56

Fatas, A. & Mihov, I. (2001). Government Size and Automatic Stabilizers: International and Intranational Evidence. Journal of International Economics 55, p. 3-28

Favero, C. A. and R. Rovelli, (2003), Macroeconomic Stability and the Preferences of the Fed. A Formal Analysis, 1961-1998. Journal of Money, Credit and Banking, 35(4), 545-556

Fox, L. and Gaal, M. (2008) Working out of Poverty: Job creation and the quality of growth in Africa. Washington DC: World Bank.

Gallo, L. & Oriol Roca-Sagalés (2014) Is the Fiscal Policy Increasing Income Inequality in Uruguay. Journal of Economics and Development Studies. 2(3): 137-156

Government of Pakistan, Pakistan Economic Survey (Various issues), Ministry of Finance, Islamabad.

Grier, K. B., & Tullock, G. 1989). An empirical analysis of cross-national economic growth: 1951–1980. Journal of Monetary Economics, 24(2), 259-27

Guellec, D., & Van Pottelsberghe de la Potterie, B. (1997). Does government support stimulate private R&D"? OECD Economic Studies, 95-122.

Habito, C.F. (2009). Patterns of Inclusive Growth in Asia: Insights from an Enhanced Growth-Poverty Elasticity Analysis. ADB Working Paper Series, No. 145. Tokyo, Asian Development Bank Institute.

Hamilton, J.D. (1994). Time Series Analysis. Princeton: Princeton University Press.

Hansen & Sperling (2013) Inclusive Growth in Africa: Measurement, Causes and Consequences. International Policy Centre for Inclusive Growth. Helsinki, Finland.

Heitger, B. (2001). The Scope of Government and Its Impact on Economic Growth in OECD Countries. Kiel Working Paper No. 103, Kiel.

Hur. S.K. (2014). Government Spending and Inclusive Growth in Developing Asia. ADB Economics Working Paper Series. No.415. Asian Development Bank.

ILO (2012). Understanding Deficits of Productive Employment and Setting Targets. A Methodological Guide. Geneva.

Irfan & Baber (2014) Fiscal imbalance, poverty and inequality in Pakistan. Public Finance Quarterly Vol.1:86-93

Janjua, Z. & Kamal, A. (2011) The role of Education and Income in Poverty Alleviation: A Cross-Country Analysis. Lahore Journal of Economics, 16(1), 143-172

Kamps, C. (2005) The Dynamic Effects of Public Capital: VAR Evidence for 22 OECD Countries. International Tax and Public Finance, l2 (4): 533-558. 210

Kapsos, S. (2005) The employment intensity of growth: Trends and macroeconomic determinants. Employment Strategy Papers, International Labor Office.

Khan, A. & Hashmi, B. (2015) Fiscal Policy and Income Inequality in Pakistan: An ARDL Approach. European Journal of Economic Studies. (13(3):161-174.

Khatiwada, Y.R. (2013) Poverty: A threat to human security. Nepal institute of Policy studies and South Asia Regional coordination office of NCCR (North –South) Kathmandu.

Klasen, S. (2010). Measuring and Monitoring Inclusive Growth: Multiple Definitions, Open Questions, and Some Constructive Proposals. ADB Sustainable Development Working Paper Series, No. 12. Mandaluyong City, Philippines, Asian Development Bank.

Kneller,R., Bleaney, M. F., & Gemmell, N. (1999). Fiscal policy and growth: evidence from OECD countries. Journal of Public Economics: 74(2), 171-190.

Lopez, R.E. Thomas,V. and Wang, Y. (2010). The effect of fiscal policies on the quality of growth. Evaluation brief 9, The World Bank, Washington, D.C. 213

Mahmood & Sadiq, (2010) The Relationship between Government expenditure and Poverty: A cointegration Analysis. Romanian journal of Fiscal policy, 1(1) 29-37.

Marcelino, M. (2006): Some Stylized Facts on Non-systematic Fiscal Policy in the Euro Area. Journal of Macroeconomics, 28: 461-479.

McKinley, T. (2010). Inclusive Growth Criteria and Indicators: An Inclusive Growth Index for Diagnosis of Country Progress. Centre for Development Policy and 214

McKinsey (2012), Africa at work: Job Creation and Inclusive Growth. Report, McKinsey Global Institute.

Musgrave, R. (1959) "The theory of Public Finance" (New York: McGraw Hill).

Omer, M. and Jafri, S. (2008) Pro-Poor growth in Pakistan: An Assessment over the past four decades. South Asia Economic Journal June. 9(1): 51-68

Perotti, R. (2005) Estimating the Effects of Fiscal Policy in OECD Countries. CEPR Discussion Paper No 4842.

Ramos, R., Ranieri, R., Lammens, J. (2013) Mapping Inclusive Growth. International Policy centre for Inclusive Growth(IPC-IG), Working Paper No.105

Ramos, X. and O. Roca-Sagalés, (2008), Long-Term Effects of Fiscal Policy on the Size and Distribution of the Pie in the UK. Fiscal Studies 29(3):387–411.

Riasat, S. Atif, R., Zaman, K. (2011) Measuring the impact of educational expenditures on economic growth: evidence from Pakistan. Educational Research, 2(13):1839-1846.

Roberts, J. (2003). Poverty reduction outcomes in education and health: Public expenditure and aid. Overseas Development Institute.

Seshadri and Yuki (2004). Equity and efficiency effects of redistributive policies. Journal of Monetary Economics, 51(2004):1415-1447

Sherani, S. (2006) Pakistan's Fiscal and Monetary System. Lahore Journal of Economics, Special Edition: 13-25

Sims, C. and T. Zha, (1999) Error Bands for Impulse Responses. Econometrica, 67(5):13–24 221

Sims, C.A. (1980), Macroeconomics and reality. Econometrica, 48:1-48.

Szirmai, A., Ghebreyesus, M., Guadagno, F. and Verspagen, B. (2013) Promoting productive employment in Sub-Saharan Africa: A review of the literature. United Nations University, Working Paper Series, #2013-062 222

Thomas,V., Dailami, M., Dhareshwar, A., Kaufmann, D., et al. (1999). The quality of growth. Ekistics, 66(394/395/396):13-20.

Widmalm, F. (2001). Tax structure and growth: are some taxes better than others? Public Choice, 107(3-4):199-219.

APPENDIX

FIGURE 1

GINI Responses to Shocks in Current Expenditure, Development Expenditure, Direct Taxes and Indirect Taxes

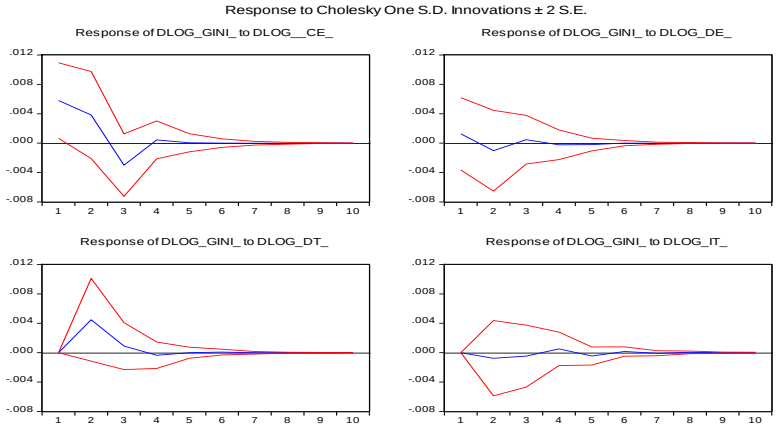

FIGURE 2

GINI Responses to Shocks in Gross Fixed Capital Formation, Expenditure on Education and Expenditure on Health

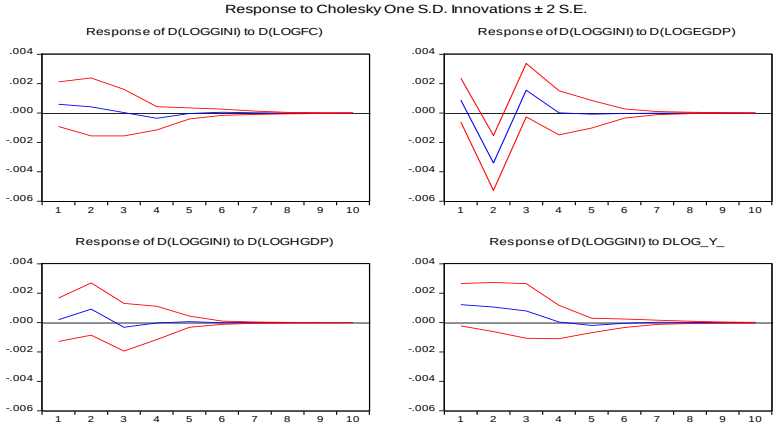

FIGURE 3

Poverty Responses to GDP, Current Expenditure, Education Expenditure, Health Expenditure and Taxes

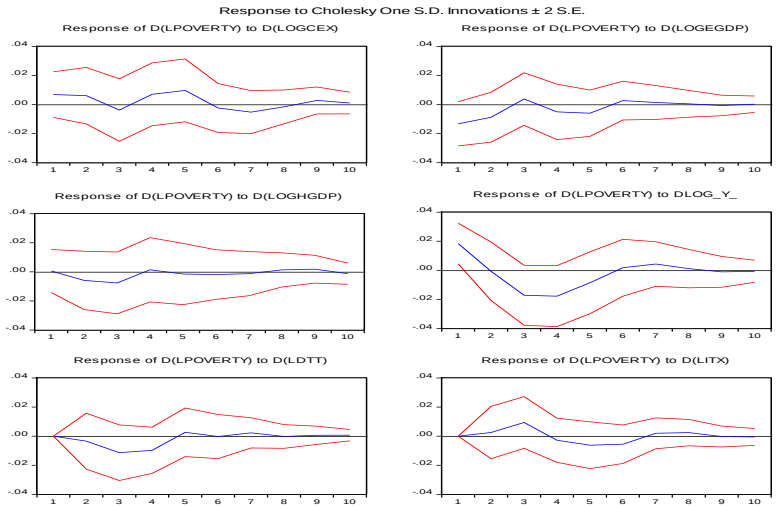

FIGURE 4

Productive Employment (Indicator 1) responses to Shocks in Current Expenditure, Development expenditure, Direct Taxes and Indirect Taxes