



**The Fiscal Impacts of Privatization Reforms in Pakistan:**

**A Dynamic Analysis**  
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**Abstract**

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There are various reasons of privatization attraction for the regime of the developing nations. These revenues from the sale of state owned enterprises can demonstrate a possible resolution to persistent deficits. The study initiates a fresh avenue of research by evaluating the fiscal impact of privatization receipt. The factors that leads to persistent fiscal budget deficits and explain how empirical research on the fiscal impact of privatization would be a legitimate extension of this inquiry. For the long run and short run analysis Co-integration and VECM techniques are used. In present study it is found that there exist short run and long run relation among the macroeconomic variables, but the result of short run suggest that though there exists a short run relation the effects are not positive. Moreover, in the long run privatization caters only a minimal proportion of government expenditure. While Gross Domestic Product, Gross Fixed Capital Formation, GDP per Capita, Real Effective Exchange Rate, Unemployment have a positive and significant impact on government in the long run. Macroeconomic instability shows a negative impact in the long run. In short run the Gross Domestic Product, Gross Fixed Capital Formation and Real Effective Exchange Rate have significant positive impact while macroeconomic instability, GDP per Capita and Unemployment have no immediate impact in the short run. The study also confirms that there exist a causal relationship between Privatization and Government Expenditure.

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**Keywords:** Privatization; Fiscal Impact; VECM; Cointegration.

**JEL Codes:** H3; H62 ; C22.

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## **1. Introduction:**

In the discussion of economic policy, fiscal policy holds an important role. The fiscal policy is considered as a stimulator of economic growth. There is huge literature available on the role of fiscal policy in improving economic growth. If an economy faces a budget deficit, most of the times they will hardly come out this crisis. Such deficit is harmful for both growth and development of an economy. The aim of fiscal policy is mainly to stimulate the social and economic development and make a balance among Taxation, Borrowing, and Expenditure so that economy may attain growth in the long run (Zagler-Durnecker, 2003 and Gomez, 2008).

From a macroeconomic point of view, one of the fundamental outcomes from former research on developing countries it is found that a reasonable fiscal policy, lower budget deficit and lower public debt is a key component in promoting economic growth, that indirectly lowers the level of poverty and improves social indicator (Ravallion, M., & Chen, S 1997, Rodrik, D. (2000), Dollar, D., & Kraay, A. (2001), Easterly, et'al 1994). According to Gavin and Hausmann (1998) and Flug, Spilim Bergo and Wachtenhein (1998) the absence of fiscal crisis improves the macroeconomic variables such as rate of investment, growth and attainment of education.

Similar to other developing economies, Pakistan economy is also faced by huge fiscal deficits and found tough to fulfill its inter-temporal budget constraint with conventional revenue and public borrowings. Macroeconomic disturbances are also slowing down the economic growth and investment opportunities which in turn transformed in a rise in the level of poverty (Shaheen and Turner, 2010). Pakistan has faced a huge fiscal deficit over the last three decades and budgetary imbalance persisted as one of the key macroeconomic problems. Pakistan is facing a rise in public debt and fiscal imbalances which poses concerns about fiscal sustainability of the economy (Shaheen and Turner, 2010). One of drawback with Pakistan is that it never comes up with a political consensus on the tax base broadening and its substantive growth in amount of revenue generation as a percentage of GDP, on the other hand political instability and administrative incompetence raise the deficit. The policy in the era of 1980s and 1990 was to curtail the growing fiscal deficit and accompany the public indebtedness with the efforts to control the increasing cost of debt servicing (Haque and Montiel, 1994).

The option available for policy makers to counter the issue of budget deficit is either to increase tax rate or to curtail the government expenditure. Such an action to alleviate the deficit could in-turn leads to lower level of growth and the economy might go into another cyclical deficit. Some of the developing countries like Jordan, Morocco and Pakistan have opted to reschedule the fiscal deficit and pick the policy of cutting expenditure to counter the problem of fiscal deficit. While on the other hand India and China comes up with cyclical fiscal adjustments that are supported by increasing revenues and cutting expenditure. Financial shortage in rising economies is relied upon to stay at 2.5 percent in 2014 against 2.1 percent in 2012 and in low Income economies it is required to climb by 3.9 percent in 2014 from 2.8 percent in 2012 (Economic Survey of Pakistan).

The other option available to serve the deficit is decentralization/privatization of state owned asset which suggest that "to transfer the ownership of those public asset to private enterprises". It is clear option available for the government to begun privatization as a tool

to cover the fiscal deficit (Pinheiro, Schneider, 1994, Patrick Plane, 1997, Sunderland, 2011, Przeworski, 1991). The gross revenue received from the sale of publically owned enterprises sighted as a potential solution to these consistent deficits (Young 1998, Davis et'al 2000). The central authorities can use the revenue earned not only for the reduction of public debt but also for curtailing the fiscal deficit in the long run (Davis et'al, 2000). The favourable fiscal impact of privatization is expected from the sale proceeds being used to retire national debt, as well as elimination of losses of the public sector units as the losses were being financed from the budget (Khan A, 1991).

### **1.1 Problem Statement and Rationale for Research:**

The efforts of gaining the revenue, supporting the budgetary deficit and of raising funds for the necessary take up of the developmental and non-developmental projects through the process of privatization. The question regarding inter relationship between privatization, fiscal policy and macroeconomic aggregates in Pakistan remain unanswered. This research will add to literature in a number of ways. (a) This is the first comprehensive analytical study examining the impact of privatization on fiscal policy and its interactional effects on macroeconomic aggregates in Pakistan. (b) Highlight and check a causal relationship between Pakistan's privatization reforms and macro-economic variables within the period under review. Thus, the specification of the model appears appropriate c) the unit root test we use can detect structural break in the series. (d) We apply the Co-integration testing approach to check long run relationship among macroeconomic variables and privatization and Vector Error Correction Model (VECM) is used to check if there exist a relationship in short run (e) the innovative accounting technique is used to examine the direction of causality (f) both long-run and short-run dynamics would provide guideline for the preparation of temporary and permanent polices.

1. The impact of the process of privatization on fiscal policy and its interactional effects on macroeconomic aggregates in Pakistan, in short-run and long-run dynamics.
2. Objective is to check if there exists a causal relationship between Pakistan's privatization process and macro-economic variables within the period under consideration.

The further topics covered in the research are as follows, section 2 presents a detailed review of existing literature, section 3 provides a brief theoretical framework on and fiscal impacts of privatization and cover the methodology used in the research and section 4 contains the results and analysis while section 5 concludes the study and provides policy recommendation.

## **2. Review of Literature**

Since the last three decades or so, in many developing and transition economies privatization is a central component of structural reforms. While taking decision on privatization government set a variety of target related to efficiency gains, amending the fiscal situation especially in those economies where the government are unable to cover the fiscal deficit in the public sector enterprises. Empirical literature on the macroeconomics effects of privatization is significantly less. The literatures, that does focus on the fiscal

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impact of privatization tend to ignore developing countries, and instead on high-income economies.

Privatization has a significant impact on the government expenditure Regina, OA (2014) his study also found a strong interrelationship among the privatization and macroeconomic aggregate. Privatization has no impact on economic growth in Nigeria due to presence of political instability and inadequacy of previous policies in achieving desired results Ifionu and Regina (2013). Adams, & Mengistu (2008) examined that privatization has no significant impact on income inequality and economic growth. While Al-Otaibi, (2006 ), found privatization has positive and significant impact on economic growth. He also showed robust effect of privatization on productivity which leads to improve the investment opportunities in developing economies.

G. A. Mackenzie (1998) analyzed the short run macroeconomic effects of privatization and argues that privatization does not modify the stance of fiscal policy. The study also argues to have better fiscal effect. The revenue received from privatization proceed should not be treated as revenue but for the purpose of financing. Bennett et al, (2007) examined the different methods of privatization and their impact on growth in the transition economies and found that only the voucher privatization are significantly impacting the growth rate. Katsoulakos and Likoyanni, (2002) examined the relationship between privatization proceed, budget deficit, public debt, output growth and unemployment rate. The estimation results indicated that there is no statistically significant relation between GDP growth rates and the privatization proceeds of the previous period.

Sunderland (2001) concluded that revenue received from the sale of state owned enterprise could be served as possible solution to persistent deficit. The author also found that an increment in privatization revenues receipt is correlated with a deterioration of the fiscal budget balance. Kouser, R., et'al (2011) in their study found that as the ownership transferred from government control to private owners the firms showed a better performance, productive efficiency and also profitability. But for making a privatization successful it is necessary that there should exist macroeconomic stability, liberalization and improved governance especially in low income countries. Fatima and Rehman (2012) in their study worked on two key influences of privatization on state owned industries on economy of Pakistan in terms of foreign direct investment (FDI) and employment opportunities. The results of the study showed positive impact of foreign direct investment and employment opportunities. The results also explored negative impact of privatization on the economy by creating uncertainty in the employees that are working in the government organizations and possess potentials to be privatized. Khan, I. A., & Hijazi, S. T. (2003) found that privatization has negative impact on employment. They further found that privatization has insignificant negative impact for managers and also for output. The empirical findings also suggested that privatization has a negative impact in short run on structural adjustment program. Privatization is also related to decline in inflation and economic growth Tunç, H. (2005).

Goel, R. K., & Budak, J. (2006) empirically examined the determinants of privatization the transition economies for the period 1997-2001. They found different response of various determinants with the scale of privatization. The scales of privatization were subtle in economic growth, low inflation and higher unemployment will lead to small scale privatization on the other hand larger deficit will leads to a large scale privatization.

Countries with large geographical size drive to privatization while government size does not matter in transition economies.

Bokhari S (1998) concluded that in Pakistan, with the passage of time privatization is institutionalized with the objective to achieve transparent and corruption free transfer of asset to private sector. He also suggested that the job is not yet done for privatization commission as there are other non-performing industrial sector prevails in the economy that must be privatized. This will help in accelerating the macroeconomic development for of country.

### **3. Empirical Strategy:**

Relevant literature contains various theoretical and empirical models to investigate the impacts of privatization reforms on fiscal and macroeconomic performance of an economy. Johansen Co-integration Technique is used to find out if there long run relationship exists among privatization reform in Pakistan on fiscal management and national macroeconomic aggregates and Error Correction model t is used to find the short run impacts. In the final step we employ Granger Causality Test. Model for Fiscal Impacts of Privatization is as follows:

$$GEXP_t = f(PRI, GDPC, UNEMP, GFCAP, REER, GDP, INF) \quad (1)$$

where, Government expenditure = GEXP, Privatization Proceed = PRI, GDPC= GDP per Capita Unemployment Rate = UNEMP, Gross Fixed Capital Formation = GFCAP, Real Effective Exchange Rate = REER, Gross Domestic Product = GDP, Inflation = INF

#### **3.1 Unit Root Test**

When we analyze time series data, we need to test stationarity of variables before going for any further estimation. In order to test the presence of a unit root in time series for each variable in the model, Augmented Dickey-Fuller (ADF) is most commonly used. The formerly used Dickey fuller test assumes that the error term is not correlated. For the case that error terms are correlated Dickey Fuller developed a new test, famous as augmented Dickey Fuller test. To conduct the test by “augmenting” Dickey Fuller added the three new equations by adding the lagged value the dependent variable.

The ADF test whether the value of  $\alpha=0$ , and ADF test uses the same asymptotic distribution as in formerly proposed DF test, this suggest that same critical values can be used.

#### **3.2 Co-integration Test**

The co-integration concept is first introduced by Granger in (1981) which is further elaborated by Engel and Granger in (1987), Philips (1986, 1987) and some others. Regression result of single time series variable on one or more time series variables may provide spurious output, which is often called a spurious regression. To avoid such regression is by checking the time series is co-integrated. Co-integration means that in

spite of being a variable is independently nonstationary, but a linear combination of two or more time series can be stationary. The co-integration among two or more time series variables shows that there is equilibrium or the variables have a long run relationship.

According to Engle and Granger (1987), co-integrated variables must have an ECM representation. The main reason for the popularity of co-integration analysis is that it provides a formal background for testing and estimating short-run and long run relationships among economic variables. Furthermore, the error correction mechanism ECM strategy provides an answer to the problem of spurious correlation. The (ECM) developed by Engle and Granger is a means of integration the short-run behavior of an economic variable with its long-run behavior.

Consider for example two series  $X_t$  and  $Y_t$  both integrated of order (d). Engle and Granger have described that their linear combination will in general also be I (d). It is an empirical fact that many macroeconomic variables appear to be integrated of order (d) [or I (d) in the terminology of Engle and Granger (1987)] so that their changes are stationary. For the purpose of examining the long-run relationship among the variables, they must be co-integrated. Two or more variables are said to be co-integrated if their linear combination is integrated to any order less than 'd'. The co-integration test provides the basis for tracing the long-run relationship. Two tests for co- integration have been given in the literature [Engle and Granger (1987) and Johansen and Juselius (1990)]. In the multivariate case, if the I(1) variables are linked by more than one cointegration vector, the Engle–Granger procedure is not applicable.

The study aims to find out the order of integration among the series of data for the analysis of long run relationship between the variables (GEXP, PRI, GDPC, UNEMP, GFCAP, REER, GDP and INF). These variables must be co-integrated so that the long run relationship is examined. The variables are said to be co-integrated (two or more variables) if their linear combination is integrated of any order less than "d".

### **3.3 Source of Data:**

In the study secondary data is utilized to measure the fiscal impact of privatization reforms in Pakistan. The data on privatization proceeds by the sale of government enterprises taken from World Bank Privatization Database. The database contains sale price of transaction for developing countries, the time period covers for the years 1990 to 2008. The data of sales/ proceeds is recorded in dollar terms at the time of sales. The other variables for example GDP, GDPC, GFCF, GEXP, INF and REER in log from also taken from World Bank Database of the world bank. The data on UNEMP is taken from International Financial Statistics Database. The UNEMP data is taken as a percentage. Other major data sources are as follows:

- World Bank's Pakistan Data Base
- Economic Survey of Pakistan (ECP)
- Pakistan Statistical Year Book
- Labor Force Survey (LFS)

There is very scarce empirical and theoretical literature available concerning with the macroeconomic impact of privatization, and even lesser of it, is empirical. This study will be serves to fill the gap in the literature and will test empirically the impact of privatization

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on a government's finances. In the situation of financial crisis privatization of state owned enterprises is seen as a potential solution for the solution (Pinheiro, Schneider, 2004; Mansoor 1987, Przeworski 1991). This section discusses the theoretical relationship of macroeconomic variables associated with the government expenditure and privatization.

The macroeconomic variables used for the purpose of analysis by others researchers includes GDP growth, unemployment rate, inflation rate, population growth, (Sunderland, 2011) The model is unable to confirm the hypothesis that the budget balance is affected significantly on the macroeconomic performance. GDP growth, inflation rate and unemployment rate do not have a significant impact on the budget (Sunderland, 2011). Under fiscal crisis decision of sale of publically owned enterprises is perceived as a major solution to the problem. Such a decision not only provide the revenues to offset public debt but also reduce the burden of providing subsidy to these enterprises.(Katsoulakos and Likoyanni, 2002 and Bennett S, 2000) suggest that the revenues received can be for the better functioning of the overall fiscal performance of the government.

Privatization proceeds is good measure for the magnitude of privatization (Plane,1997,Cook and Uchida,2003 and Barnett 2000).Regina, OA, (2014) and Ifionu & Regina, (2013) found that privatization has positive and significant impact on government expenditure ,while on the contrary Alexander H. Sunderland ,(2011) found a significant negative relation between privatization revenues and budget balance. Privatization is also associated with a decrease in unemployment, despite the fact that many claim that state owned enterprises with a "soft" budget are likely to be overstaffed and privatization will lead to many losing their jobs (Davis et al, 2000).

Unemployed labour force is self-driven in a fast track towards a state of hunger and famine. Megginson argued that private sector raises the level of investment through numerous channels that depresses rate of unemployment in host country. On the contrary it is investigated by Haskel and Szymanski that commercialization takes the economy towards unemployment. Therefore the concept of creating and not creating job opportunities is something that cannot be left aside from the idea of privatization. By such expenditure the economy develops it infrastructure and provide basis for the economic condition flourish. The literature has extensively used GDP as a measure of growth and development.

According to Wagner's hypothesis as the per capita income increase the need for the social goods such communication, transportation and education also increase so government must invest in the social capital as the part development process. This suggests that GDP per capita has a positive relation with the government expenditure.

Inflation is used here as the proxy of macroeconomic stability. Theories suggest a negative relation between economic growth and instability (Fischer, 1993; Bruno and Easterly, 1998).As the instability increase then government needs more and more funds to stabilize the economy. We control for using the annual inflation rate (INF) (Ifionu, Ebele Patricia & Ogbuagu, Anuli Regina 2013) ((Ogbuagu, Anuli Regina 2009).

4. Empirical Analysis

Table 4.1 Unit Root Results

Variables	CV 1%	Difference order	t-Stat level	Prob.*	t-Stat 1st Df	Prob.*	t-Stat 2nd Df	Prob.*
<b>LGDP</b>	-3.526	I(2)	-0.299	0.915	-2.369	0.154	-29.778*	0.000
<b>LGEXP</b>	-3.526	I(2)	-0.449	0.894	-3.054	0.035	-17.437*	0.000
<b>LGDP</b>	-3.526	I(2)	0.495	0.985	-2.789	0.065	-17.338	0.000
<b>LGFCF</b>	-3.526	I(1)	-0.204	0.933	-9.037*	0.000	-9.648	0.000
<b>LINF</b>	-3.526	I(1)	-1.051	0.731	-8.512*	0.000	-8.341	0.000
<b>LPRI</b>	-3.526	I(1)	-1.667	0.442	-7.733*	0.000	-5.875	0.000
<b>LREER</b>	-3.526	I(1)	-1.107	0.709	-8.811*	0.000	-10.174	0.000
<b>LUNEMP</b>	-3.526	I(2)	-1.989	0.291	-2.389	0.149	-13.613*	0.000

Note: \* Significance at 1%. CV indicates Critical values.

Augmented Dickey Fuller (ADF) test statistics check the stationarity of time series data<sup>2</sup>. ADF is applied here to check the existence of unit root in the level, first difference and second difference on each of the variables used. The results of unit are summarized in table 4.1, shows that LPRI, LGFCF, LINF and LREER are stationary at first difference while other variables LGDP, LGDPC, LGEXP and LUNEMP are stationary at second difference. The test provided the basis of using co-integration technique for the further long run and short run analysis. After checking the stationarity of variables under consideration, for the long run relationship the traditional Johansen's co-integration is applied among the variables LPRI, LGFCF, LINF, LREER, LGDP, LGDPC, LGEXP and LUNEMP.

Table 4.2 Co-integration Result Based on Trace Statistics

Null Hypothesis	Alternative Hypothesis	Eigen Values	Trace Statistics <sup>8</sup>	Critical Vaules at 5%	Prob.**
c=0	c=>1	0.986	823.47*	187.470	0.000
c<=1	c=>2	0.958	532.77*	150.558	0.000
c<=2	c=>3	0.858	315.58*	117.708	0.000
c<=3	c=>4	0.663	182.40*	88.803	0.000
c<=4	c=>5	0.502	108.42*	63.876	0.000
c<=5	c=>6	0.419	60.88*	42.915	0.000
c<=6	c=>7	0.228	23.86*	25.872	0.087
c<=7	c=>8	0.087	6.262	12.517	0.427

Note: (\*) indicates statistical Significance at 5%

<sup>2</sup> There are other types of unit root testing in the literature. However we assume linear relationship that we have used linear ADF test. For the nonlinear versions you can see Omay and Yildirim (2014), Omay (2015), Hasanov (2014) and Çorakcı et. al. (2017).

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The Johanssen's co-integration results are summarized in the table 4.2, based in Trace statistics having null hypothesis of no-integration against the alternative hypothesis of co-integration. If we start with the hypothesis of no co-integration ( $c=0$ ) among the variables considered, the value of Trace statistics is 8235.47 which is above 5% level value of 187.47, this rejects the null hypothesis of no co-integration. The null hypothesis of no co-integration  $c \leq 1$  against  $c=2$ ,  $c \leq 2$  against  $c=3$ ,  $c \leq 3$  against  $c=4$ ,  $c \leq 4$  against  $c=5$ ,  $c \leq 5$  against  $c=6$  all were rejected as evident by above mentioned tables 5.3 while other hypothesis of  $c \leq 6$  against  $c=7$  and  $c \leq 7$  against  $c=8$  are accepted. The trace statistics shows that there are 6 co-integrating relationships and this also concludes that there exists a long run relationship among the LGEXP, LPRI, LGFCF, LINF, LREER, LGDP, LGDPC and LUNEMP.

**Table 4.3 Co-integration Result Based on Max Eigen Values**

Null Hypothesis	Alternative Hypothesis	Eigen Values	Max-Eigen Statistic	Critical Values at 5%	Prob.**
$r=0$	$r \geq 1$	0.986	290.70*	56.70	0.000
$r \leq 1$	$r \geq 2$	0.958	217.18*	50.59	0.000
$r \leq 2$	$r \geq 3$	0.858	133.18*	44.49	0.000
$r \leq 3$	$r \geq 4$	0.663	73.98*	38.33	0.000
$r \leq 4$	$r \geq 5$	0.502	47.53*	32.11	0.000
$r \leq 5$	$r \geq 6$	0.419	37.02*	25.82	0.001
$r \leq 6$	$r \geq 7$	0.228	17.60*	19.38	0.089
$r \leq 7$	$r \geq 8$	0.087	6.262628	12.51	0.427

**Note:** (\*) indicates statistical Significance at 5%

The result of Table 4.3 is based on Max Eigen Values statistics having null hypothesis of no-integration against the alternative hypothesis of co-integration. The hypothesis of no co-integration ( $c=0$ ) among the variables are considered, the value of Max Eigen Values statistic is 290.70 which is above 5% level value of 56.17 rejecting the null hypothesis of no co-integration. The null hypothesis of no co-integration based on Max Eigen Values statistics criteria  $c \leq 1$  against  $c=2$ ,  $c \leq 2$  against  $c=3$ ,  $c \leq 3$  against  $c=4$ ,  $c \leq 4$  against  $c=5$ ,  $c \leq 5$  against  $c=6$  also rejects as evident by above mentioned tables 5.4 while other hypothesis of  $c \leq 6$  against  $c=7$  and  $c \leq 7$  against  $c=8$  are accepted. The Max Eigen Values statistics also shows that there are 6 co-integrating relationships which is similar to result based on Trace statistics.

Therefore, after analysis of results based on the Trace Statistics and Max Eigen Statistics it is concluded, that there exist a long run relationship among the LGEXP, LPRI, LGFCF, LINF, LREER, LGDP, GDPC and LUNEMP<sup>3</sup>.

<sup>3</sup> For details results of Trace Statistics and Max Eigen Values Statistics see Appendix (C).

**Table 4.4: Normalized Coefficients of Integration**

<b>Variables</b>	<b>Coefficients</b>	<b>Std. Err</b>	<b>t-values</b>
<b>LPRI</b>	0.0049*	0.001	3.8
<b>LGDP</b>	0.721*	0.125	21.7
<b>LGFCF</b>	0.0346*	0.040	-9.4
<b>LGPDC</b>	1.95*	0.074	2.1
<b>LINF</b>	-0.14*	0.006	-10.5
<b>LREER</b>	2.09*	0.065	-28.3
<b>LUNEM</b>	0.201*	0.015	-22.8
<b>C</b>	8.727*	0.842	10.4

**Note:** \*,\*\* Shows significance at 1% and 5% .

The purpose of analysis is to attempt to find that whether the proceeds received from the sale of State Owned enterprises (SOE's) helps in reducing the burden of expenditure of the government or whether it is failed to do so. Table 4.4 summarized the result of long run coefficient. Here LPRI is taken as a core variable for analysis while other variables LGFCF, LINF, LREER, LGDP, GDPC and LUNEMP are taken as controlling tool.

The results suggest a significant positive impact of privatization on the government expenditure which are similar to the results of Regina, (2014) and Ifionu & Regina, (2013) while contrary to Sunderland, (2011). The results also suggest that in the long run the proceeds contribute a very minimal part in expenditure which is less than 1 percent of total expenditure incurred. This is due to the fact that the assets are sold on very low prices and the investors are less interested in buying as other factors like law and order, government intervention in process of bidding and political influence (favoritism) during the process of privatization and lack of infrastructure contribute in making investment less preferred for local and foreign investor. Such corruption results in limited proceeds as compare to what can actually be received.

The signs of controlling are also according to the theory and they are also statistically significant. The LGDP has significant and positive impact on the LGEXP suggesting that in long run a percentage increase on the GDP will leads to increase the GEXP by 72.1 %because in the long run as more and more funds will be required for development of infrastructure. Gross fixed capital formation LGFCF is used here as the proxy of investment which suggests that in the long run as the investment increase it will increase the amount of expenditure in future. There is more amount require to develop the infrastructure as the investment.

The sign of LGDPC is according to theory and it is also significant. A percentage increase in the LGDPC will increase the government expenditure by 19.5 percent; increase LGDPC will improve the overall economic condition of the economy so the demand for both public and private goods will increase in the economy so government has to increase the expenditure to improve the social welfare.

LINF is taken as proxy of economic instability. The sign here is not according to the theory it is significant. The theories suggest that if an economy is facing instability than it requires more and more funds to regain stable economic position. The other fact is that uncertainty also retard economic growth, the period considered for the analysis taken here has

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gone through lots of political ups and downs. Not a single elected party completed its tenure so that it can spend resources on the development. After 1999 there were some development projects initiated but these were restricted to some areas only. The whole economy was facing war on terror which leads lesser chances of development and leads to lower expenditure as compare to what is required. While the UNEMP has a positive and significant relation which suggest that a percentage increase in the UNEMP will lead to increase the GEXP by 20.1%, the sign is according to theory because as the unemployment increase the government will increase its spending on different cash transfer and may start training projects and pay a stipend to cater the problem of unemployment. The discussions on result of short run are as follows,

**Table 4.5. Short Run: Error Correction Results**

Variable	Coefficient	F-stats .
<b>CointEq1</b>	-0.286	-5.85
<b>D(LGEXP(-1))</b>	-0.904*	-10.24
<b>D(LGEXP(-2))</b>	-0.796*	-10.72
<b>DLGDP(t-3)</b>	0.924*	38.40
<b>D(LGFCF(t-3))</b>	0.108*	4.60
<b>DLGDPC(t-3)</b>	-0.219	1.72
<b>DLINF(t-3)</b>	0.007	1.12
<b>DLPRI(t-3)</b>	-0.003*	5.2
<b>DLREER(t-3)</b>	0.041*	2.35
<b>DLUNEMP(t-3)</b>	-0.031	1.52
<b>RESID01(-1)</b>	0.365*	2.74
<b>C</b>	0.000*	-0.03

Note: \*,\*\* Shows significance at 1% and 5% .

Table 4.5 report the result of Error Correction Model (ECM). According to Engel-Grander (1987) co-integrated variables must represent a short run relation. This also provides answer to issue of spurious regression. In theory, the ECM measures the speed of adjustment back to co-integration relationship. The variables in lagged forms of the macroeconomic variables LPRI (-3), LGFCF (-3), LINF (-3), LREER (-3), LGDP (-3), GDPC (-3) and LUNEMP (-3) are short run parameter that measures the immediate impact of independent variables LGEXP. The result suggests that there exists a short run relationship among the macroeconomic variables.

The coefficients of lagged values LGDP and LGFCF are statistically significant shows a positive and immediate impact on the government expenditure. The LGDPC and LINF do not show significant impact on government expenditure in the short run. While the coefficient of lagged values LPRI is statistically significant but the sign here is not according to theory. The result are similar with the Sunderland (2011), he argues that although the privatization is taken as justification that revenues from the sales of asset will help in balancing the budget but the impact were not found positive in the short run. He also elaborated that mostly the revenues that government earn from state owned enterprises were spent which should be saved. The other reason of not a positive impact of privatization in short run is that the process is slow and the revenues are not given in a lump sum amount but in different installment.

## **5. Conclusion**

The objective of the study is to find the long run and short run relationship between Privatization and macroeconomic variables. The results suggest that privatization impacts significantly on government expenditure in the long run but there are no immediate impact in short run. Other variables also impact the government expenditure only in long run, but the impact is very low. This is due to the fact the in the process of privatization the prices of state owned enterprises were set very low and policy makers have not consulted the stakeholders as they are not taken on board at the time of bidding. This in turn ends up with low revenues which are not enough to counter government deficit and this is the reason that there are no immediate revenues. Other exogenous factors also contributed in the low revenues include corruption and selling the assets to relatives at low prices. It can be said that the benefits can be achieved in the long run but in the short run there is no significant impact on the government expenditure. The evidence also suggests that to gain the efficient result in the short run, the process must follow the proper theoretical procedures and methods, not only that other factors must be taken into consideration which may include reducing the chances of corruption in the process of transfer of asset, making better assessment of assets which are considered as sick industry or unit resented for privatization. The objective need to be very clear for the authorities who are given a task for privatization that either the assets were sale to bring efficiency and to gain revenues which could be used to wipe off the deficit.

The study found a causal relation among the variable of interest of the study which also have strong policy implications that privatization could cater the government expenditure in long run and may make the macroeconomic condition better. Based on the results there are some suggestion for success and acceleration of privatization

- The theoretical difficulties must be avoided at time of privatization, and to get better earning authorities must bring more buyers to enhance competition
- Reduce persistent budget deficit so that those asset could be saved from privatization which are of have revenue generation potential
- To avoid any faulty transfer of asset an independent and credible body is formed which also set a minimum price of assets
- Government must provide market friendly environment to private sector and also make market free to increase the interest of investors in the local market

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