Globalization and Saving Behavior of Pakistan: An Empirical Analysis

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Abstract
The paper attempts to investigate the Globalization and Saving Behavior of Pakistan by using the time series data from 1972 to 2010. This paper takes into account the importance of Globalization a core determinant of national, private and public savings. Ordinary Least Square method is used for empirical analysis. The analysis is made in two stages. In the 1st stage descriptive statistics and correlation matrix are described. In 2nd stage, Multivariate analysis explains saving behavior of Pakistan is determined by Globalization. The study concludes that the consumer price index, real interest rate, workers’ remittances have positive and significant influence on savings. Government deficit has marginally significant impact on savings while foreign direct investment have negative but significant impact on national and private savings. Public savings are directly and insignificantly influenced. Trade openness has positive and insignificant impact on national saving but it has negative and insignificant impact on private and public savings. Keeping in view the role of Globalization and saving behavior in Pakistan it is suggested that Government should provide enabling environment and fiscal incentives for enhancing the foreign direct investment. This will increase the savings in the country. For this purpose, the industrial and agricultural sectors of the country must be stable. Moreover, there is a need of creating an investment friendly business environment in Pakistan.

Keywords: Workers’ remittances; Globalization; Deposit rate; Surplus labor; Trade Openness; Pakistan

I. Introduction
The issue of saving decision has short run and long run importance for macroeconomics analysis as concerned to Pakistan. Basically aggregate saving determines the size of capital stock and is major source of standard of living. From an economic point of view, savings can play a significant role in raising the employment, growth and creating economic stability. Moreover, saving can increase the aggregate demand by increasing the domestic consumption, level of investment, interest rates, exchange rate as well as the growth rate of the economy. Efficient utilization and
mobilization of domestic resources are the main goals today for the self reliance and sustained growth (Khan 1993). Because of these reasons, analysis of saving behavior and the knowledge of the determinants of saving is necessary for policy making (Nasir & Khalid 2004).

In order to promote economic growth and welfare of the underdeveloped countries, savings are considered to be the essential factor. Moreover, the credit and insurance markets are inefficient and underdeveloped in poor countries like Pakistan. Savings are the essential source of raising the household wealth and assets through organized financial markets and smooth out the unexpected variation in their incomes. In addition, savings are the only source of raising wealth and assets of the society. Theoretically, savings enhance growth through investment and further creating employment opportunities.

Globalization also plays an important role in boosting the economy not only of developed countries but also in underdeveloped countries. Globalization refers to the process of integration across societies and economies. The phenomenon encompasses the flow of products, goods and services, labor, ideas and information moving across national borders. The frequency and intensity of the flows relate to the upward or downward trend of globalization. A primary economic rationale for globalization is to remove barriers to trade for the betterment of all societies. Moreover, globalization plays an important role in boosting up of saving, investment and employment level of the economy.

Saving and Globalization are much important for growing economy. In Pakistan, many times it is attempted to globalize the economy through liberalizing its trade and investment according to the framework of World Bank and IMF. Evidence shows that despite offering attractive incentives to foreign investors, Pakistan's performance is still poor. At the same time, trade performance has also been declined despite the intensive efforts of trade liberalization.

World system theory of globalization shows the advances in production and free trade between different countries. By establishing the economic relationship among different countries, the exchange of different goods and services increase in the form of exports and imports and influencing the saving of a country as well. According to dynamic model of Harrod Domar, growth rate depends upon the saving level and capital output ratio of the economy. While the Solow model shows that the saving is a key determinant of the steady state capital stock and the growth rate of the economy through capital accumulation.

The main objective of the present study is to examine the relationship between globalization and saving behavior of Pakistan by analyzing different global as well as some other determinants of saving behavior in Pakistan. The rest of this paper is organized as follows. Saving trends of Pakistan are interpreted in section 2. Section 3 discusses the review of literature at national and international level on the Globalization and Saving Behavior of Pakistan. While Data source, methodological issues and model specification are described in section 4 and 5 respectively, section 6 explains the results of study. Concluding remarks and policy implications have also offered in the last section.
Muhammad Zahir Faridi, Ms. Asma Arif

II. Saving Trends of Pakistan

According to Economic Survey of Pakistan 2010-2011, real GDP is estimated to grow at 2.4 percent based on the performance of services sector which is lower than its target of 4.5 percent. Such slow growth is because of the slower growth in the manufacturing and agricultural sector.

It is also observed in table 1 that there is positive association in savings and investment, if the savings rates are high, the investment is high or vice versa. Both the savings and investment jointly determine the growth rate of economy. Therefore, the present study provides the empirical analysis of the determinants of the saving in Pakistan considering the globalized economy.

Table 1 Saving trends (As Percentage of GDP- Current Market Price)

<table>
<thead>
<tr>
<th>Years</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth Rate</td>
<td>2.0</td>
<td>3.1</td>
<td>4.7</td>
<td>7.5</td>
<td>9.0</td>
<td>5.8</td>
<td>6.8</td>
<td>3.7</td>
<td>1.7</td>
<td>3.8</td>
<td>2.4</td>
</tr>
<tr>
<td>Total Investment</td>
<td>17.2</td>
<td>16.8</td>
<td>16.9</td>
<td>16.6</td>
<td>19.1</td>
<td>22.1</td>
<td>22.5</td>
<td>22.1</td>
<td>18.2</td>
<td>18.4</td>
<td>13.4</td>
</tr>
<tr>
<td>National Saving</td>
<td>16.5</td>
<td>18.6</td>
<td>20.8</td>
<td>17.9</td>
<td>17.5</td>
<td>18.2</td>
<td>17.4</td>
<td>13.6</td>
<td>12.5</td>
<td>13.1</td>
<td>13.8</td>
</tr>
<tr>
<td>Foreign Saving</td>
<td>0.7</td>
<td>-1.9</td>
<td>-3.8</td>
<td>-1.3</td>
<td>1.6</td>
<td>4.5</td>
<td>5.1</td>
<td>8.5</td>
<td>5.7</td>
<td>2.0</td>
<td>-0.4</td>
</tr>
<tr>
<td>Domestic Saving</td>
<td>17.8</td>
<td>18.1</td>
<td>17.6</td>
<td>15.7</td>
<td>15.4</td>
<td>16.3</td>
<td>15.6</td>
<td>11.5</td>
<td>9.8</td>
<td>9.3</td>
<td>9.5</td>
</tr>
</tbody>
</table>

Source: Economic Survey of Pakistan (2010-2011)

The true picture of saving trends of Pakistan economy is shown in table 1. In 2000,s, growth rate was 2.0 percent. After that growth rate rose very rapidly to 7.5 and 9.0 in the years 2003 and 2004 respectively. But in the last three years growth rates were so low and declined up to 2.4 in 2010. In 2003, Pakistan has achieved a very high growth of 7.5 percent. It shows a great performance of the country. Although the foreign saving is negative in current year but national and domestic savings growth rate is positive and high. But after 2003, foreign saving has started increasing up to 8.5 percent in 2007 but it was again negative in 2010s. After 2003, foreign saving has started increasing but domestic savings as well as national savings has declined up to 9.5 percent of GDP and Pakistan has achieved growth rate of just 2.4 percent. That is relatively low due to less domestic savings as well as national savings. The history of Pakistan shows that domestic or household savings have played an important role to increase capital accumulation and attaining high growth rate. But a decrease in domestic savings also decrease the capital accumulation and growth rate as Solow suggested in his study of 1956.

III. Review of the Literature

There is plenty of literature available on the study of saving behavior and its determinants theoretically and empirically. According to classical school of thought, savings are influenced mainly by rate of interest. Keynesian emphasizes on the national income as the main determinants of saving behavior. Some past studies at national or international level are reviewed here.

Burney and Khan (1992) analyzed the impact of household income and saving behavior of Pakistan. Data was taken from the household income and expenditure Survey (HIES) for the year 1984-1985. The Ordinary Least Squares (OLS) technique was used for estimation. It was found that the propensity to save of the rural household was much higher as compared with their urban counterparts. The research concluded that household income and earning status of household head, employment status of household head and occupation of household head were found to be positively related to savings.
Hussain (1995) studied long run trend of the private saving behavior in Pakistan, and compared it with the Southeast Asian economies. The study found that during 1970-92 the saving rate in Pakistan was 50 percent lower than Southeast Asian countries. Econometric analysis was conducted by using time series data for the period of 1970-93. Co integration methodology was employed to analyze the long run behavior of saving. The research concluded that the proportion of working members of the population, income growth and financial depending were positively associated with saving behavior. Agarwal (2000) attempted to deal with the empirical analysis of the determinants of savings and investment in South Asia. The study made the causality analysis between saving rate and GNP growth rate. The analysis used Pooled time series data of South Asian countries from 1960-1996 for saving model and from 1960-1998 for investment model. For estimation purposes, Ordinary Least Square Method was employed. Granger Causality test was used for examining causality. Variables were used as percentage of GDP. The results of the study showed that Foreign Direct Investment and Net total foreign borrowing were positively affecting total investment and also to Private Investment. Growth rate of real GDP, Money Supply, and Lagged Dependent variable were positively affecting. Age dependency ratio, Foreign Savings and Private Saving’s rate as well.

Kenrick (2004) demonstrated that remittance had positive impact on financial deepening and policymakers considered that enhancement of remittances flow influencing saving behavior. The author utilized panel data for the microeconomic variable for the period 1983-2001 complied from 18 countries and examined by using OLS method. The research concluded that in case of income variable, the estimated coefficients were negative and statistically significantly related to remittance. The country intercept terms was positive and statistically significant for the countries like Bangladesh, China, Costa Rice, Egypt, Indonesia, Korea, Mexico, Philippines, Thailand and Turkey. The estimated coefficient for high income countries was negative and statistically significant. The result implied that high income countries tend to receive less remittance flows than low income countries. Another variable remittance as a share of the product of income times the interest rate (iY) had positive significant impact on remittance as well as on financial deepening and saving.

Hasnain et al. (2006) estimated the determinants of household saving in the process of economic development in Pakistan during the period 1972-2003. Data used in this study was arranged by State bank of Pakistan in the years 1980-03, Economic Survey of Pakistan, and World Development Series. Johansen Multiple Co-integration and Error Correction Model were used to estimate long run and short run relationship. The study concluded that Growth rate per capita income, per capita income and interest rate were positively and young dependency ratio, old dependency ratio and inflation rate were negatively influencing public saving in the long run as well as in the short run. Error Correction term -0.05 showed that model would be converged towards long run equilibrium with 0.05 percentage point adjustment each year.

Fasoranti (2007) examined the impact of rural saving mobilization on economic development of rural households. Primary data were collected through questionnaire of 100 respondents from 5 villages of Nigeria. For estimation purposes, Ordinary Least Square method was used. Results of this study showed that income, Human Capital, Investments and assets were positively related to total savings. It was also found that 98
percent variation in total saving was explained by income, Human Capital, Investment and assets. It was also proposed that rural households should be properly mobilized to join co-operative societies.

Horioka (2009) surveyed the saving behavior of the aged in Japan. The study analyzed micro data for the years 1990-2008. For this purpose, the Family Income and Expenditure Survey were conducted to collect information on saving rates by considering age group of the households head. The study found that dis-saving had been made at retired age, working age and even at early ages. Moreover, there had been a sharp increase in the dis-saving of the retired aged since 2000 because of the reduction in social security benefits, increased in consumption expenditures, and increased in taxes and social insurance premiums. These findings were consistent with the life cycle model and suggested that this model was highly applicable in case of Japan.

Chaudhry et al. (2009) examined the effects of foreign debt and foreign debt servicing on saving and investment efforts in country. In this study, annual time series data from 1973 to 2006 was taken from Economic Survey of the Ministry of Finance and from various Annual reports of the State Bank of Pakistan. Augmented Dickey Fuller test was used to test all variables for unit root. Real gross domestic product and its growth rate were found stationary at level 5 percent. All other variables were found stationary at first difference. The study concluded that real GDP and real interest rate were adversely related to savings. The regression coefficients of real interest rate, growth rate of real GDP and lagged investment were according to the theory.

Chaudhry et al. (2010) attempted to deal with the determinants of national saving of Pakistan in the long run as well as in the short run. In this study, time series annual data from 1972 to 2008 was used. All the variables were taken in million US dollars as a percentage of GDP. The study used Johansson Co-integration approach to examine long run relationship and VECM for short run dynamics among variables. The result concluded that in the long run, CPI, workers remittance, interest rate, exports and government consumption has positive impacts on national savings of Pakistan while public loans influenced negatively in the long run. For the short run it was observed that remittance as percentage of GDP and rate of interest were positively influencing National Saving.

Faridi et al. (2010) estimated the determinants of households saving in Multan district of Pakistan. The author used the primary data of total 293 respondents. The data was collected through field survey in 2009-10. In multivariate analysis, multiple regressions had run using OLS method. It was concluded that Spouse participation, total dependency rate, total income of household and size of landholdings had a significant positive relationship with household saving. While education household head, children’s educational expenditures, family size, liabilities to be paid, marital status and value of house had a significant negative relationship with household saving. The study also supported existence of Life cycle hypothesis.
IV. Data, Model and Methodology

The issues relating to data sources, methodology and model specification are discussed below;

A. Nature and Sources of Data

This section discusses the nature and sources of data used in the present study. Annual time series data regarding the related variables for the period 1972-2010 is used in this analysis. For savings, the concept of national saving, public saving and private saving is considered in the analysis separately because the national saving is the sum of public and private savings.

For this analysis, the annual data for the variables National savings, Public savings, Private savings, Consumers Price Index, Real Interest Rate, Budget Deficit, Workers Remittances and Trade Openness are obtained from The Hand Book of Statistics of Pakistan Economy 2010 which was published by Federal Beauruo of statistics. Some data has also been obtained from The Economic Survey of Pakistan 2010-11. All variables are taken in million rupees.

B. Methodological Issues

The methodology applied to examine the Globalization and saving behavior of Pakistan is the time series analysis. Whenever an econometric measurement is taken into account there may be some methodological issues in hand. Usually the econometrics time series face the problem of non stationarity and spurious regression. In the presence of non stationarity or in case of spurious regression the OLS method becomes inefficient. If all the variables are stationer at level I (0) or the value of the DW is greater than R², the ordinary least square method is useful and applicable. In the present study, we have found that the variable meet the property of stationarity at level I (0).

Ordinary Least Square Method

Carl Friedrich Gause, a German mathematician in 1974 was introduced the method of OLS. Under certain assumption, the method of least squares has some very attractive statistical properties that have made it one of the most powerful and popular method of regression analysis. Ordinary least square method is basically used to estimate the relationships of the variables. Usually this method is employed when all the variables are stationary at level. This technique is also useful in multivariate data analysis. The multiple regression equation takes the form as:

\[ Y = \beta_1 + \beta_2X_2 + \beta_3X_3 \ldots + \beta_nX_n + \mu \]

Where
- \( Y \) = Regressand variable
- \( X_i \) = set of explanatory variables and
- \( \mu \) = disturbance term.

Model Specification

Model specification is based on multiple regression technique. Our saving model is specified into three specifications. These three specifications are given below. Considering the properties of data, we have followed the log linear model in the present study.
LNSAV = $\alpha_0 + \alpha_1\text{CPI} + \alpha_2\text{DR} + \alpha_3\text{GD} + \alpha_4\text{WREM} + \alpha_5\text{OPEN} + \alpha_6\text{FDI} + \mu_i$ \hspace{1cm} (1)

PRSAV = $\beta_0 + \beta_1\text{CPI} + \beta_2\text{DR} + \beta_3\text{GD} + \beta_4\text{WREM} + \beta_5\text{OPEN} + \beta_6\text{FDI} + \mu_i$ \hspace{1cm} (2)

PBSAV = $\gamma_0 + \gamma_1\text{CPI} + \gamma_2\text{DR} + \gamma_3\text{GD} + \gamma_4\text{WREM} + \gamma_5\text{OPEN} + \gamma_6\text{FDI} + \mu_i$ \hspace{1cm} (3)

Where

LNSAV=Log of National Savings
LPRSAV=Log of Private Savings
LPBSAV=Log of Public Savings
CPI=Consumer Price Index
DR=Deposit Rate
GD=Government Deficit
WREM=Workers Remittances
OPEN=Trade Openness
FDI=Foreign Direct Investment
$\mu_i$ =Error Term

C. Description of the Variables

National Saving

National savings are the sum of private savings and public saving. The present study used the data on national savings in million rupees. The natural log of national savings is used in this study.

Private Saving

Private saving is the difference of disposable income and consumption. The term $(Y-T-C)$ is private saving. The private saving is also in million rupees. The natural log of private saving is used in this study.

Public Saving

Public saving is the difference between government revenues and government spending. The term $(T-G)$ is public saving. (If government spending exceeds government revenue, the government runs a budget deficit, and public saving is negative and vice versa. So, National Saving is shown by the term $(Y-T-C) + (T-G)$. Again the natural log of public saving is used in this study.

Consumer Price Index

Average rate of prices in the economy is measured by Consumer price index. If price level in the economy rises it has two implications:

a). Because of increases in Price level, Producers charge high prices of their products and in this way they earn more profits which increase National Savings. From producer’s point of view, there is positive relationship between Consumer Price index and National Saving. Kazmi (1993) and Chaudhry et al. (2010) have also found positive relationship between National Savings and inflation.

b). Because of an increase in price level, there is found a negative relationship between Consumer Price Index and national saving from consumer’s point of view. Hasnain et al. (2006) has found negative relationship between National Savings and inflation rate. So, the consumer Price Index numbers has positive as well as negative influence on the National Savings as well as Public and Private Savings.
Workers’ Remittances
Workers’ remittances are also taken in million rupees. It is earning of the people who are working abroad and sending their money to their relatives back to Pakistan. National saving increases with increase in workers’ remittances. There is positive relationship between workers’ remittances and national saving [Nasir and Khalid (2004), Kenrick (2004)].

Rate of Interest
We have used deposit rate of interest in the present study. With increase in interest rate, people are encouraged to save more income and consume less in order to earn more return on bank’s deposits in the long run. There is positive relationship between National saving rate and Interest rate [David and Mackinnon (1983), Nasir and Khalid (2004), Kazmi (1993), Hasnain et al. (2006), chaudhry et al. (2010)].

Trade Openness
Trade openness may be defined as the ratio in percentage of the sum of imports of goods and services and exports of goods and services to GDP. It can be defined as
\[ \text{Openness} = \frac{(X+M)}{GDP} \]

Government Deficit
Government deficit or surplus means the gap between Govt. revenues and Govt. expenditures. If the expenditures are in excess of Govt. revenues it shows the Govt. deficit and vice versa. Government deficit sometimes positively influencing the national saving as accord to the Ricardian Equivalence theory. Usually it is negatively influenced the public saving but sometimes it has a negative influence on private savings because of irrationality of consumers.

Foreign Direct Investment
Foreign direct investment is the net inflows of investment to acquire a lasting management interest in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long run capital and short run capital (IMF, World Bank). Pakistan has been introducing reforms to attract the inflows of investment. Foreign direct investment as positively related to national savings Agarwal (2000).

V. Results and Discussions
The results are discussed at two stage level. In first stage we have provided descriptive analysis and empirical analysis is made in the second stage.

A. Descriptive Analysis
Descriptive statistics analysis presents the basic characteristics of the data like Arithmetic Mean, Standard Deviation, Maximum and Minimum values of data series. It also describes the degree of association among the variables.

Table 2 shows that on the average National Saving (NSAV) are 323701.70 with variability about mean is 418670.40. Similarly average values of the Private and Public Savings are 11.75 and 9.08 respectively with the standard deviation of 1.56 and 3.01 respectively. The workers’ remittances (WREM), government deficit (GD) and foreign direct investment (FDI) are on the average 1979.57, 105055.10 and 690.92 million rupees.
respectively, with standard deviation of 1270.29, 105559.90 and 1284.47 respectively. On the average consumer Price Index (CPI), interest rate (DR) and trade openness (OPEN) are 62.00, 5.86 and 0.34 respectively with the variability about mean are 43.56, 1.89 and 0.04 respectively.

Table 2 Descriptive Statistics of the Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Maximum</th>
<th>Minimum</th>
<th>STD. DEV.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSAV</td>
<td>323701.70</td>
<td>1507060.00</td>
<td>6179.00</td>
<td>418670.40</td>
</tr>
<tr>
<td>PRSAV</td>
<td>11.75</td>
<td>14.26</td>
<td>8.75</td>
<td>1.56</td>
</tr>
<tr>
<td>PBSAV</td>
<td>9.08</td>
<td>13.23</td>
<td>1.00</td>
<td>3.01</td>
</tr>
<tr>
<td>CPI</td>
<td>62.00</td>
<td>158.90</td>
<td>11.50</td>
<td>43.56</td>
</tr>
<tr>
<td>DR</td>
<td>5.86</td>
<td>10.66</td>
<td>1.50</td>
<td>1.89</td>
</tr>
<tr>
<td>GD</td>
<td>105055.10</td>
<td>-11309.0</td>
<td>502011.0</td>
<td>105559.90</td>
</tr>
<tr>
<td>WREM</td>
<td>1979.57</td>
<td>5493.65</td>
<td>136.0</td>
<td>1270.29</td>
</tr>
<tr>
<td>OPENNESS</td>
<td>0.34</td>
<td>0.48</td>
<td>0.26</td>
<td>0.04</td>
</tr>
<tr>
<td>FDI</td>
<td>690.92</td>
<td>5152.80</td>
<td>6.30</td>
<td>1284.47</td>
</tr>
</tbody>
</table>

2nd column shows that Maximum values of National savings, Private savings, Public savings, Consumer price index, Interest rate, Government deficit, Workers remittances, Trade openness and Foreign direct investment that are 1507060.0, 14.26, 13.23, 158.90, 10.66, -11309.0, 5493.65, 0.48 and 5152.80 respectively. 4th column shows minimum values of National savings, Private savings, Public savings, Consumer price index, Interest rate, Government deficit, Workers remittances, Trade Openness and Foreign Direct investment that are 6179.0, 8.75, 1.00, 111.50, 1.50, 502011.0, 136.0, 0.26 and respectively.

B. Correlation Matrix

Correlation matrix explains the relationship between two or more variables. Correlation matrix measures the degree or strength of relationship between two variables. Correlation matrix also indicates problem of Multicollinearity. If correlation coefficient between two independent variables has value absolutely equal to 1, then there is severe problem of Multicollinearity.

Table 3 Correlation Matrix

<table>
<thead>
<tr>
<th>Variables</th>
<th>PBSAV</th>
<th>NASG</th>
<th>PRSAV</th>
<th>CPI</th>
<th>DR</th>
<th>GD</th>
<th>WREM</th>
<th>OPENNESS</th>
<th>FDI</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBSAV</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NASG</td>
<td>0.61</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRSAV</td>
<td>0.66</td>
<td>0.83</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPI</td>
<td>0.59</td>
<td>0.93</td>
<td>0.94</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DR</td>
<td>-0.06</td>
<td>-0.44</td>
<td>-0.21</td>
<td>0.40</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GD</td>
<td>-0.53</td>
<td>-0.91</td>
<td>-0.84</td>
<td>0.92</td>
<td>0.22</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WREM</td>
<td>0.64</td>
<td>0.75</td>
<td>0.64</td>
<td>0.63</td>
<td>0.13</td>
<td>0.64</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPENNESS</td>
<td>0.28</td>
<td>0.52</td>
<td>0.43</td>
<td>0.51</td>
<td>0.11</td>
<td>0.60</td>
<td>0.54</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>FDI</td>
<td>0.51</td>
<td>0.87</td>
<td>0.64</td>
<td>0.76</td>
<td>0.27</td>
<td>0.85</td>
<td>0.76</td>
<td>0.67</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Table 3 reports zero order correlation coefficient among variables. According to this matrix national saving is moderately related to public saving because its correlation
coefficient is 0.61. Private saving is also moderately related to public saving while it has strong relation with national saving. Consumer price index is moderately related with public saving and highly collinear with national savings and private savings. Interest rate is weekly correlated with public savings, national savings, private savings and consumer price index. Government deficit is moderately correlated with public savings, highly correlated with national savings, private savings and consumer price index but weekly correlated with interest rate. Workers’ remittances are moderately correlated with public savings, national savings, private savings, consumer price index, interest rate, and government deficit. Trade openness is weekly correlated with public savings, private savings and interest rate, while moderately correlate with national savings, consumers price index, government deficit and worker remittances. Foreign direct investment is highly collinear with national savings, Consumer price index, government deficit and workers’ remittances, while moderately correlated with public savings, private savings, and trade openness, but it is weekly correlated with interest rate.

C. Multivariate Analysis
The OLS estimates regarding globalization and saving behavior are reported in Table 4. Column 1 shows the Global variables which are provided in the form of Trade openness (OPEN), Workers Remittances (WREM) and Foreign Direct Investment (FDI) and control variables are taken as Consumer Price Index (CPI), Rate of Interest (DR) and Budget Deficit (GD). Columns 2, 3, and 4 provide the estimates of coefficient of National savings model, Private savings model and Public savings model respectively.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model (1)</th>
<th>Model (2)</th>
<th>Model (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>7.6871</td>
<td>7.9140</td>
<td>5.4735</td>
</tr>
<tr>
<td></td>
<td>(11.1163)*</td>
<td>(12.9607)*</td>
<td>(1.2438)</td>
</tr>
<tr>
<td>CPI</td>
<td>0.0481</td>
<td>0.0488</td>
<td>0.0593</td>
</tr>
<tr>
<td></td>
<td>(10.1070)*</td>
<td>(11.6189)*</td>
<td>(1.9581)**</td>
</tr>
<tr>
<td>DR</td>
<td>0.1683</td>
<td>0.1923</td>
<td>0.3859</td>
</tr>
<tr>
<td></td>
<td>(3.9986)*</td>
<td>(5.1753)*</td>
<td>(1.9408)**</td>
</tr>
<tr>
<td>GD</td>
<td>-3.78E-06</td>
<td>-3.91E-06</td>
<td>-1.37E-05</td>
</tr>
<tr>
<td></td>
<td>(1.6775)**</td>
<td>(1.9656)**</td>
<td>(0.9589)</td>
</tr>
<tr>
<td>WREM</td>
<td>0.0002</td>
<td>0.0002</td>
<td>0.0010</td>
</tr>
<tr>
<td></td>
<td>(3.7489)*</td>
<td>(2.9067)*</td>
<td>(2.1691)**</td>
</tr>
<tr>
<td>OPEN</td>
<td>0.3636</td>
<td>-0.3162</td>
<td>-9.3811</td>
</tr>
<tr>
<td></td>
<td>(0.1893)</td>
<td>(-0.1865)</td>
<td>(-0.7678)</td>
</tr>
<tr>
<td>FDI</td>
<td>-0.0003</td>
<td>-0.0002</td>
<td>0.0001</td>
</tr>
<tr>
<td></td>
<td>(-3.0469)*</td>
<td>(-2.7030)*</td>
<td>(0.2149)</td>
</tr>
<tr>
<td>R-Squared</td>
<td>0.95</td>
<td>0.96</td>
<td>0.53</td>
</tr>
<tr>
<td>Adjusted R- Squared</td>
<td>0.94</td>
<td>0.95</td>
<td>0.43</td>
</tr>
<tr>
<td>Durbin-Watson Stat</td>
<td>1.60</td>
<td>1.52</td>
<td>1.70</td>
</tr>
<tr>
<td>F- Statistics</td>
<td>108.22</td>
<td>135.68</td>
<td>5.36</td>
</tr>
<tr>
<td>Probability</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Note: t-statistics are given in parentheses, *denotes significance at 1 percent level, ** denotes significance at 5 percent level and *** denotes significance at 10 percent level.
Results of estimates show that all the models fulfill the OLS assumptions of Ordinary Least Square method. The value of coefficient of determination in all of the three models is about 95%, 96% and 53% respectively. It means that the explanatory power of all of the models is best. As far concerned over all significance of the model, the F statistics in all of three models is highly significant. Although the value of Durbin Watson d statistic is not exactly 2 but are almost in the range of d statistic. For further clarification of autocorrelation we have used LM test which shows that there is no serial correlation in all the models. In order to estimate Heteroscedasticity in the models, we have applied White test which also indicates that there is no Heteroscedasticity in these three models (See Table 5).

Table 5 Tests for Serial Correlation and Heteroscedasticity

<table>
<thead>
<tr>
<th>Tests</th>
<th>Model – I</th>
<th>Model – II</th>
<th>Model – III</th>
</tr>
</thead>
<tbody>
<tr>
<td>LM – Statistics</td>
<td>1.86</td>
<td>0.77</td>
<td>0.40</td>
</tr>
<tr>
<td>Probability</td>
<td>0.18</td>
<td>0.47</td>
<td>1.68</td>
</tr>
<tr>
<td>White test statistics</td>
<td>1.53</td>
<td>1.01</td>
<td>0.48</td>
</tr>
<tr>
<td>Probability</td>
<td>0.18</td>
<td>0.20</td>
<td>0.90</td>
</tr>
</tbody>
</table>

The estimates given in table 4 describe the saving behavior in Pakistan. The coefficient of Consumer Price Index is positive and highly significant almost in all the models. The 1 unit change of Consumer price index almost raises 0.05 percent of all types of savings. The coefficient is not only positive but also statistically significant. The reason may be that it raises the producer profit as well as income of the government in the form of profit tax. Our findings stay line with Kazmi (1993) and Chaudhry et al. (2010) studies.

Rate of Interest is another important factor that is influencing savings directly. It is observed in the present study that rate of interest has positive and statistically significant impact on saving behavior at 1 percent level. The coefficient of rate of interest are about 0.17 for national saving, 0.19 for private saving and 0.39 for public savings. It means 1 unit increase in rate of interest raises 0.17 percent of national savings, 0.19 percent in private savings and 0.39 percent of public savings. The reasons of positive impact of rate of interest may be that more savings are generated due to higher returns on savings. The results of our study are consistent with David and Mackinnon (1983), Hasnain et al. (2006), Kazmi (1993) and chaudhry et al. (2010) studies. The study also supports the classical theory of interest.

The coefficient of budget deficit is negative and marginally significant at 10 percent for all types of savings. In case of Private Savings, it rejects the theory of Ricardian Equivalence. The reason for this may be that the people are so innocent that they consider government deficit spending more productive and they would not be taxed in the future. It therefore encourages the consumers to spend more. That is why private savings decreases as well as budget deficit increases. But in case of public savings it is according to the theory that as well as deficit increases, government expenditures exceed than the government revenues because of which public savings decreases. Because the public savings has a large share in national savings so, national savings also decreases with decrease in public savings.
The coefficient of Workers’ Remittances is positive and significant impact on all types of savings. Saving raises by 0.02 percent with one unit increase in workers’ remittances almost in all types of savings. Similar results are observed in earlier studies like Nasir and Khalid (2004), Kenrick (2004) and Chadhry et al. (2010).

As far as the coefficient of Trade Openness is concerned, it has positive but insignificant impact in case of National Savings. The 1 unit change in openness raises 0.38 percent of national savings. The reason may be that openness plays an important role in the promotion of exports especially the trade of intermediate inputs. But openness negatively and insignificantly influences the private and public savings. Because our society is consumption oriented, an increase in trade openness gives more incentive to consumers to increase the expenditures on consumption of imported goods because of demonstration effect. In this way the private savings will decline. Moreover in case of our country, openness increases the imports rather than exports. And more of our imports include finished manufacturing products as compared to our exports which consist of semi finished or raw material. Because of this Government has to pay more imports payments than exports receipts and this situation has a negative impact on public savings. All the coefficients generally have signs that accord with economic theory except for Foreign Direct Investment. Our findings show significant and negative impact of Foreign Direct Investment on National Saving as well as Private Savings. But this finding is contradicted from the study by Agarwal (2000) which found a positive relation of saving and foreign direct investment. The reason for this is that in our country lack of fiscal incentive and political instability is a great hurdle in the way of foreign direct investment. Because of such like environment, foreign investors do not want to take initiative of investment in our country having negative impact on national as well as private savings. But the coefficient of Foreign Direct Investment is positively related to Public Savings as in accord to Agarwall (2000) study. But again the coefficient is insignificant and shows a negligible little effect because of the lack of supportive environment and fiscal incentives to Foreign Direct Investment in Pakistan.

VI. Conclusions and Policy Implications
This study examines the Globalization and saving behavior in Pakistan over the period of 1972-2010. Empirical results show relationship between Globalization and Savings behavior of Pakistan. We have found that our study supports the loanable fund theory but rejects the Ricardian equivalence theory presented by classical. These results also highlight the importance of globalization in order to enhance savings. Consumer price index and interest rate are positively and significantly related to national as well as private and public savings. While Government deficit has marginally significant and inverse relationship with savings. Three Global variables like workers’ remittances, Trade openness and foreign direct investment have used in this study. The study shows workers’ remittances have a direct and significant impact on all types of savings. It is because the globalization provides more opportunities to internal surplus labour to work overseas and this will enhance the savings of our country. The more savings provides internal resources to enhance the investment and output as well as employment. In this way not only the internal resources will be available but the dependence on foreign resources will reduce.
Trade openness has a direct and insignificant impact in case of national savings but inverse and insignificant impact on private as well as public savings. This is because of the nature and gap in exports receipts and imports payments in our country. Because mostly our exports consist of primary or semi finished goods for which lower prices are determined in international market while imports include the manufacturing and final products with high prices in international market. This situation creates a gap between exports receipts and imports payments having adverse terms of trade which has negative impact on savings. Moreover the consumption oriented society and demonstration effect increase the consumption of imported products. This thing also increases imports over exports. In view of the results obtained in this study, the following policies are recommended for raising the Savings of Pakistan to achieve the macroeconomic goals.

i). There is a lot of surplus labour in Pakistan which can be usefully devoted to work to boost up nation’s real income as well as savings. If such surplus labour outflows to Middle East or other developed countries for earning more remittances, it will have a positive impact on savings. But in this respect Government should established more vocational or training institutes to improve the capability and efficiency of workers. In this way they will work well, their demand will be high; wages will be high and will earn more remittances as well as a significant influence on Savings by the increase of remittances. That is why there is a need to make more affective policies for further job creation in abroad and transfer of remittances from developed to developing countries like Pakistan.

ii). The Government should reduce the non development expenditures in order to release just enough resources to utilize for development purposes. Because of increase in the Government’s development expenditures more resources are transferred toward the people in the form of increased incomes and it will enhance the savings as well.

iii). For raising the business and producers profits, stable price policy should be made by the Government. In this way producers will have incentive to work more heartedly and it will enhance the savings.

iv). Government should make policies supportive to increase in private savings by decrease in unproductive expenditures.

v). Interest rate affects savings positively and significantly. So, financial market should provide more incentives in form of high returns to people in order to enhance the savings.

vi). Another important point is that the Government should provide enabling environment and fiscal incentives for enhancing the foreign direct investment. This will increase the savings in the country. In order to get this purpose, industry and agricultural sectors of the country must be stable. As well as friendly business environment must be provided to domestic as well as foreign investors in Pakistan.

vii). The government should stress the policies of globally competitive industrialization. This will improve the means to establish diversification in exports and competitiveness. But there is a need to increase the manufacturing exports to improve the terms of trade. By improving the terms of trade savings will also mounted to grow the economy.
Budget Deficit is not significant in determining the saving in Pakistan, i.e. there is no Ricardian Equivalence.

References


Govt. of Pakistan, Hand book of statistics (2010 - 11), State Bank of Pakistan.


