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THE IMPACT OF BETTER GOVERNANCE ON FOREIGN PORTFOLIO INVESTMENT (FPI) IN AGRICULTURE

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Abstract

The FPI inflows are very critical for growth of agriculture sectors in developing economies. The objective of this research is to examine the association of different governance indicators with inflows of FPI in Pakistan's agricultural sector during 2005 to 2017 through applying OLS regression technique. The research findings depict that variables of governance index and GDP positively affect FPI, whereas, variable of inflation negatively influence FPI inflows in agriculture sector. Thus, it is essential to improve governance variables for strengthening trust level of foreign investors and increasing inflows of FPI in Pakistan's agricultural sector.

Key words**:** *Governance indicators, FPI, Inflation, GDP, Agriculture sector, Pakistan*

INTRODUCTION

The FPI involves the investment in stocks, bonds or money market instruments for shorter time period in foreign country. Because of its short term nature, it provides opportunity for investors to take advantage of favorable interest rate and exchange rate for buying and selling the security. It is an investment in the foreign secondary market and its purpose is to obtain higher return. This task is completed by passive or active investment strategies in financial markets. It improves liquidity position of host economy and also helps to increase the foreign reserves that result in stability of exchange rate. Firstly, the foreign portfolio investment (FPI) is affective for obtaining higher return and decreases risk through international diversification. Secondly, it performs a significant part in host country's economic growth. Thirdly, it encourages investment of new funds in the country due to which investment level would increase.

The FPI is one of the crucial capital inflows and in current economic conditions, it is extremely important as the market risk is very high due to instable political conditions, and the foreign investors are avoiding investment in Pakistan, therefore, foreign investors can be attracted to invest in Pakistan through FPI. Though, it is a shorter time period investment but it may be useful for Pakistan in attracting overseas investors. Unfortunately, the present conditions of Pakistan's markets are unstable. Economists suggest that stock exchange is an economy's indicator and stock market of Pakistan is in deep crisis.

Table 1. FPI inflows in Pakistan (in Million Dollars)

Year	Portfolio Investment
2001-02	-10.00
2002-03	22.00
2003-04	-28.00
2004-05	153.00
2005-06	351.00
2006-07	1,820.00
2007-08	19.30
2008-09	-510.30
2009-10	587.90
2010-11	344.5
2011-12	(46.9)
2012-13	119.5
2013-14	622.8
2014-15	917.3
2015-16	(319.7)
2016-17	(512.8)
2017-18	(240.7)

Source: Own calculation and design based on the data provided by [17]

Table 1 depicts that FPI has increased to $1,820 million in year 2006-07 from previous value of ($10) in year 2001-2002. Then it started decreasing and reached at ($46.9) in year 2011-12 and then again started increasing and reached at $917.3 in year 2014-15. Then again it started to decrease and reached at ($240.7) in year 2017-2018.

The Pakistan's agricultural sector is one of the most significant sectors because it offers millions of employment opportunities, has significant contribution in GDP, satisfies domestic food demand, contributes heavily in exports of commodities, increases foreign reserves and ultimately leads towards higher economic growth. The Pakistan has exceptionally attractive environment for foreign investors particularly in agricultural sector as Pakistani government has permitted 100% equity investment in this sector. But unfortunately, Pakistan's agricultural sector is also not able to attract foreign investment due to poor governance structure, corruption, security conditions and instable political conditions. Therefore, it is extremely important to identify the determinants of FPI in Pakistan's agricultural sector.

A country's economic growth is also affected by the process of governmental selection, replacement and monitoring of the government; ability of government to devise and apply procedures and policies; people's respect and status of institutes responsible for administering economic and social relations. The governance systems have six indicators which are used in evaluating a country's governance level [10]. These factors include Voice and Accountability (VA); Political Stability and Absence of Violence / Terror (PV); Government Effectiveness (GE); Regulatory Quality (RQ); Rule of Law (RL) and Control of Corruption (CC). Because of FPI importance in boosting Pakistan's growth, this study aimed at examining the impact governance indicators on FPI during 2005-2017 through applying OLS model. This study is very important because before there are very few studies which have investigated the determinants of FPI in Pakistan.

The remaining study has been organized as follows: the literature review has been discussed in section two, the research methodology has been presented in section 3, the theoretical model has been presented in section 4, results have been presented in section 5 and conclusion has been discussed at the last section.

Literature review

Researchers have investigated varies determinants of foreign portfolio investment (FPI). According to [9], there had been dramatic increase in level of global foreign Portfolio investment (FPI) in the world. He argued that foreign portfolio investment (FPI) was considered a comparatively safe and efficient mean of moving capital to those countries where the demand of capital is greater, on the other hand this opinion was questioned by sequence of financial crises of Mexico in 1994 and the Southeast Asia in 1997 to 1998. Therefore, several economists debated that these crises were strange and reflect outstanding circumstances. However, a closer look depicts that the foreign portfolio investment (FPI) plays an important role in economic growth of a country.

[2] examined both Asian countries and firm-level authority and representation policies which effected investment distribution decisions. Based on the country-level survey, the authors argued that the U.S. investor invested more in open market which had stronger investor rights, better accounting standards and had improved legal structures. The U.S. funds were discovered to be invested more in companies which adopted policies which resulted in better development of economic growth. [12] found that FDI and FPI inflows had a positive effect on performance of developing economies as many of the developing countries have established financial markets with the help of FDI and FPI. The authors observed the influence of foreign capital inflows on growth of Indian markets and economy. The authors depicted that FDI has positive effect on growth of economy, whereas, the FPI has negative effect growth of economy.

[1] investigated the FPI determinants in Asian developing countries .The regression analysis identified that the real exchange rate, inflation rate, split of host capital market and indicators

of economic movement in the global stock market capitalization were statistically important determinants of foreign portfolio investment (FPI). The results showed that the variable of inflation rate had negative relationship, whereas the other three variables had positive relationship. The variable of foreign trade, foreign direct investment (FDI) and current account had statistically insignificant relationship. [14] observed the factors which affect Foreign Portfolio Investment (FPI) in India, which crossed approximately 12 billion US$ at the end of year 2002. These investment flows had significant influence on performance of the other household markets. The authors found that FPI inflows were influenced by the return of stock market, ex-ante risk and inflation rate (both foreign and domestic). The impact of the ex-ante risk and stock market returns had turned out to be most important factors of FPI inflows. The author suggested that the stock market's stability and reducing ex-ante risk will attract further Foreign Portfolio Investments (FPI) inflows which might have positive impact on the national economy.

[8] examined that comparatively low yield in developing countries together with higher economic growth rate and higher rate of return encourage foreign investors to shift their resources and funds in developing countries. The authors suggested that increase in foreign portfolio investment causes increase in trade development, international economic linkages and increase of production resources in host country. The authors found that improvement of home capital markets and reductions in capital flow restrictions attracted foreign investors to make foreign portfolio investment (FPI) in host countries which resulted in economics growth. The authors also evaluated the costs and benefits of foreign portfolio investment (FPI) for the recipient countries and presented the empirical evidence about association of market development with FPI, level of capital market and market volatility. [7] determined association of FPI and Malaysian economic growth during 1991 to 2006 and determined association of GDP with foreign portfolio investment. The authors suggested that foreign portfolio investment (FPI) positively influenced economic growth in host country.

[16] determined relationship of remittances with growth of Pakistan's economy through sector analysis by using the time series data through multiple regression analysis. The variables which were analyzed include GDP at current price, public investment (PG), inflation rate (INF), worker remittances (WR), private investment (PI), per capita income, squared per capita income and changes in terms of trade. They found that there was positive relationship among workers remittances and economic growth. [5] discovered the relationship of social and political factors and FDI for Pakistan during 1971 to 2005 through OLS model. The findings showed that the human capital had positive and significant relationship, whereas political instability had negative and insignificant relationship with FDI in Pakistan.

[11] empirically investigated the association of FDI with growth of Pakistan's economy for 1981-2008. The variable which were included in the model were foreign direct investment, economic growth, and residual time effect. They observed a longer run and direct association between these variables. The authors recommended that foreign direct investment is a primary factor for economic growth in developing country. [15] empirically investigated the influence of overseas capital inflows on growth of Pakistan's economy for the period of 1985 to 2010. The results explained that FPI, FDI and remittances positively and significantly affected economic growth, whereas, foreign support significantly but negatively correlated with economic growth. They further suggested that FPI, FDI and remittances had major influence on the economic growth. They also observed that Pakistan should improve the domestic resources to improve foreign aid.

[18] investigated the association of political instability, terrorism, electricity load-shedding, inflation, market size, trade-openness, incentives provided to investors and exchange rate stability with FDI in Pakistan during 1980 to 2010 by using ARMA

regression model. The results have shown that terrorism and political-instability had negative association while electricity load-shedding had positive impact on FDI. The results have also shown that exchange rate, market size, investors' incentives and trade openness positively affect FDI while the inflation rate had a negative association with FDI inflows. [4] analyzed determinants of FDI in Pakistan's agricultural sector for 2000-2010 by applying OLS model and reported that GDP and trade openness positively affect FDI, whereas, government debt negatively affect FDI flows in Pakistan.

[20] explored impact of governance indicators on FDI in Pakistan during 1996-2010 by utilizing OLS regression model. The results have depicted that political-stability, accountability, governmental effectiveness, absence of terror, control of corruption, regulatory quality and index of governance have positive effect on FDI.

[13] investigated the association of exchange rate and FPI in Nigeria during 2007 to 2016 and concluded that exchange rate significantly and positively affect FPI inflows in Nigeria. [3] examined determinants of FPI in Jordan during 2000-2016 and found that variables of inflation, economic activity, diversification of risk, governance and credit worthiness of a country have impact on FPI inflows for Jordan. [19] explored the relation of board governance with overseas institutional investors for tourism companies in Taiwan and demonstrated that foreign ownership is higher in case the companies have higher director's ownership and smaller boards.

It can be seen from the above mentioned literature review that there is no study which explored the impact of governance indicators on FPI in Pakistan's agricultural sector. Therefore, this study is intended to fill this research gap by identifying the association of governance indicators with FPI inflows in Pakistan's agricultural sector for the period of 2005-2017.

MATERIALS AND METHODS

In this study, time series secondary data has been uses for the period of year 2005-2017. The data for the dependent and independent variables have been gathered from Economic Surveys, SBP reports and World Bank Database. The Ordinary Least Squares (OLS) technique has been employed to determine the relationship of dependent variable i.e. foreign portfolio investment (FPI) in Pakistan's agricultural sector and independent variables i.e. governance index and control variables of inflation and GDP. The governance index has been formulated as follows:

Governance Index (GI) = f (VA, PV, GE, RQ, CC, RL)

First of all, the association of FPI with GI has be determined, then to check the robustness of regression results, the relation of FPI with individual governance indicators has been examined.

The following regression model has been used in this study:

$$LnFPI = \beta 0 + \beta 1\ GI + \beta 2\ INF + \beta 3\ RGDP + Ut$$

Where:

FPI = foreign portfolio investment
GI = Index of Governance Indicators
INF = Inflation rate
GDP = Real GDP growth rate
VA = Voice and Accountability
PV = Political Stability and Absence of Violence / Terror
GE = Government Effectiveness
RQ = Regulatory Quality
CC = Control of Corruption
RL = Rule of law

E-View 9.0 has been used to measure the relationship of variables.

The theoretical model of this study is shown in Fig.1.

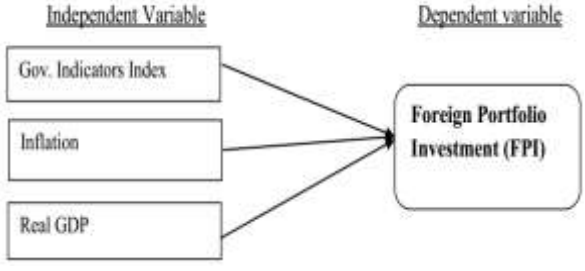

Fig.1. Possible Relationship of Governance Index and Foreign Portfolio Investment (FPI)
Source: Adapted from [6]

RESULTS AND DISCUSSIONS

Firstly, the ADF unit-root test has been employed in order to check stationarity of variables and results have been described in Table 2. The table 2 describes that all variables are stationary at level. So, based on results of Unit Root test, the suitable model is OLS which has been applied to estimate the relationship of governance factors with FPI in Pakistan's agricultural sector and the results have been described in Table 3 which depicts that value of Adjusted R-square is 0.68 which means that independent variables have explained around 68 percent of changes occurring in FPI for Pakistan's agricultural sector. The value of Durbin-Watson is 1.93 which means that there is no issue of autocorrelation among explanatory factors.

Table 2. ADF Stationarity Unit Root Test for Variables

Variables	T-ADF Statistics	Critical Values	Decision
LnFPI	-3.923915 (0.0011)	1% level = -3.356068 5% level = -2.595026 10% level = -2.233456	Stationary at level
VA	-4.306256 (0.0297)	1% level = -5.057910 5% level = -4.119910 10% level = -3.701103	Stationary at level
PV	-5.341167 (0.0133)	1% level = -1.057910 5% level = -2.119910 10% level = -4.701103	Stationary at level
GE	-2.678204 (0.0104)	1% level = -3.121990 5% level = -2.144920 10% level = -1.713751	Stationary at level
RQ	-4.750105 (0.0318)	1% level = -5.886426 5% level = -3.828975 10% level = -2.362984	Stationary at level
CC	-5.232348 (0.0615)	1% level = -2.057910 5% level = -1.119910 10% level = -1.701103	Stationary at Level
RL	-2.711510 (0.0246)	1% level = -5.057910 5% level = -4.119910 10% level = -1.701103	Stationary at level

Source: Own Calculation.

The panel I of table 3 indicates that the governance index has significant and positive impact on FPI in Pakistan's agricultural sector which means that if governance would increase by 1%, then FPI in agricultural sector will increase by 7.21%.

The variable of inflation is significantly and negatively affecting FPI which means that if inflation will be higher, then the FPI inflows will decrease in Pakistan's agricultural sector.

Moreover, the variable of GDP is significantly and positively influencing FPI which means that if GDP would be higher, then FPI inflows will increase in Pakistan's sector.

Table 3. OLS Regression Model

OLS Regression Model		
LNFPI	Coef.	Std. Err.
Panel I		
GI	7.213**	3.215
INF	-0.421**	0.130
RGDP	3.192***	2.356
C	3.718	2.627
Panel II		
VA	4.613*	2.412
PV	3.510*	1.519
GE	5.618***	2.164
RQ	0.136	2.155
CC	1.262***	1.187
RL	1.237***	2.233
INF	-1.304**	0.250
RGDP	2.355**	1.251
C	2.317	1.311

R-squared	0.741141	Mean dependent var	7.140533
Adjusted R-squared	0.681996	S.D. dependent var	0.982496
S.E. of regression	0.464986	Akaike info criterion	1.026809
Sum squared resid	1.065718	Durbin-Watson stat	1.93564
Log likelihood	-1.451067		
F-statistic	15.57444		
Prob(F-statistic)	0.000167		

***Significant at 1 Percent, ** Significant at 5 Percent, * Significant at 10 Percent.

Source: Own Calculation.

The robustness of regression results has been examined through association of individual governance variables with FPI inflows in agriculture and results have been reported in panel II of table which indicates that variable of voice and accountability (VA) significantly and positively affect FPI flows. It is estimated that if the voice and accountability improves by 1%, then FPI will increase by 4.61%. The results also describes that the variable of political stability (PV) significantly and positively influence FPI inflows. The estimated coefficient describes that if this variable is increased by 1%, then FPI will rise by 3.51%. The variable of government effectiveness (GE) also has significant and positive association with FPI flows that if there is 1% increase in GE there FPI will increase by 5.61% in Pakistan.

Furthermore, the variables of RL and CC also have positive and significant relation with FPI flows which that that there is increase of 1% in these variables, then FPI in agriculture will increase with 1.23% and 1.26 % respectively.

The variable of RQ has insignificant association with FPI in Pakistan's agriculture sector.

CONCLUSIONS

Foreign Portfolio Investment (FPI) performs a critical part in growth of developing economies and it also has a critical part in development of Pakistan's economy in general and agricultural sector in particular. A developing economy like Pakistan is extremely dependent on the foreign capital inflows as it has a critical role in growth of economy and agriculture. Thus, this research aimed at determining association of governance indicators with FPI flows in Pakistan's agricultural sector during 2005-2017. This research depicted that all the governance indicators excluding regulatory quality significantly and positively affect FPI flows in agriculture sector. The main contribution of this study is that it examined connection between governance variables and FPI in Pakistan's agricultural sector for first time. This study showed that governance variables have significant impact on FPI in agriculture. So, these variables need to be counted in formulating policies to attract higher FPI flows in agriculture sector.

It is being recommended that the controlling authorities should implement effectual processes for improving governance variables to reinforce trust of national and international investors and to enhance FPI flows in Pakistan's agricultural sector.

Following are the limitations of the study:

-Some other important variables can also be included in the model.

-The data for the extended time period can be included in the model.

-The burning issues of Pakistan like terrorism, political instability and energy crisis can also be included in the model.

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