Pakistan Social Sciences Review
www.pssr.org.pk

RESEARCH PAPER

An Empirical Analysis of Savings and Investment Determinants in Pakistan: A Simultaneous Equation Modeling Approach

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ABSTRACT

This study investigates the determinants of savings and investment in Pakistan from 1999 to 2023 using a simultaneous equation modeling approach. Using Two-Stage Least Squares (2SLS), the analysis identifies significant factors influencing both savings and investment. For investment, foreign direct investment (FDI) emerges as the most significant determinant, exhibiting a strong positive effect, followed by GDP growth, which fosters a conducive environment for capital formation. In contrast, interest costs of borrowing are a negative driver for investment; hence borrowing cost needs to be regulated. Public debt has an almost insignificant positive effect and savings have a nil direct impact on investment. Remittances have a strong influence on the saving level as savings have a strongly positive impact; however investment and inflation negatively impact GDP growth has an insignificant relationship with savings. The models achieve quite strong explanatory power, with the R-squared values obtained for investment being 58.8% and 75.97% for savings, and pass key diagnostic tests for homoscedasticity and absence of serial correlation. Findings underscore the critical role of FDI in inducing investment and remittances in saving. Policymakers are advised to focus more on attracting FDI; maintaining economic growth; and mitigating the inflationary pressures to bolster Pakistan's savings and investment landscape.

| **KEYWORDS** | Investment, Saving, FDI, GDP Growth, Public Debt |

Introduction

Savings and investment are important struts of economic development. These contribute to long- term growth as well as financial stability, driving the process of societal progress. Savings offer capital used for investment, and in turn, investment translates that resource into physical and human assets, enhancing productivity, innovations, and economic expansion. In the case of countries like Pakistan, knowing these determinants of savings and investment is important for their policymakers in addressing issues ranging from low growth to inflation and external vulnerabilities.

Theoretical and empirical evidence strongly supports the role of macroeconomic variables in determining savings and investment behavior. The Harrod-Domar growth models have indicated that higher rates of savings can increase an economy's investment capacity that promotes economic growth (Harrod, 1939; Domar, 1946). Another theory is the dual-gap theory, which emphasized that domestic savings and external inflows-the FDI, for example-could complement each other to finance development (Chenery & Strout, 1966). However, these relationships are highly moderated by factors such as inflation, interest rates, and public debt whose effects vary depending on the economies.

There is some mixed evidence in existing literature on the determinants of savings and investment. According to recent studies, FDI leads to a significant increase in investment, especially in the developing economies, because it is not only a source of capital but also a technology and managerial expertise (Borensztein et al., 1998). However, inflation usually shows a negative effect on savings through erosion of purchasing power and also reducing the real value of returns (Fisher, 1930). Public debt can also crowd out private investment due to an surge in the cost of borrowing (Barro, 1979). Despite these insights, the simultaneous determinants of savings and investment in Pakistan remain underexplored, thereby limiting the understanding of their interplay in the country's economic landscape.

This study fills the gap by conducting an empirical analysis of savings and investment determinants in Pakistan through a simultaneous equation modeling approach. This study utilizes the 2SLS regression model based on data for the period of 1999-2023 to determine the impacts of domestic savings, FDI, inflation, remittances, public debt, and GDP growth on savings and investment. Preliminary results indicate that, although FDI drives investment considerably, other factors such as remittances and inflation have a negative impact on savings.

By unpacking these dynamics, the work contributes to the empirical literature on emerging economies and also provides meaningful insights for policymakers. Savvy understanding of factors driving saving and investment informs strategies to enhance stability in financial terms, allocate productive resources, and foster more sustainable economic growth in the country.

Literature Review

There have been heavy studies on the dynamics between savings and investment in economics literature since they are imperative for economic growth and development. This review is a synthesis of key studies focusing on the determinants of savings and investment, including developing economies such as Pakistan.

Theoretical Foundations

The Harrod-Domar growth model has placed emphasis on the importance of savings and investment to sustain economic growth because more savings are assumed to mean more investment, which enhances productive capacity (Harrod, 1939; Domar, 1946). Similarly, the Solow-Swan growth model integrates capital accumulation into long-term growth but emphasizes diminishing returns to investment, requiring complementary policies to enhance productivity (Solow, 1956). These models form a basis for understanding the interdependence of savings and investment in economic growth.

Determinants of Savings

Several macroeconomic factors affect savings behavior. Although remittances are typically considered a significant source of household income in developing economies, their impact on savings is mixed. On one hand, remittances may act as an important source of financial security, but on the other hand, they may discourage domestic savings (Adams & Cuecuecha, 2010). Inflation, conversely, is known to adversely impact savings by reducing the purchasing power and real returns of the savings, which leads to discouraging long-term saving behavior (Fisher, 1930). Tax incentives or subsidized saving schemes under public policy have also been found to be

important factors in promoting savings in developing countries (Schmidt-Hebbel et al., 1996).

Determinants of Investment

There is a mix of internal and external factors that affect investment, especially in capital goods. FDI is largely regarded as a critical stimulant for investment as not only does it provide the capital but also technology transfer and managerial expertise (Borensztein et al., 1998). In Pakistan, FDI has been proved to significantly be an important stimulant towards economic growth by raising investment levels (Shahbaz & Rehman, 2013). On the contrary, public debt often crowds out private investment by raising borrowing costs and lowering available financial resources (Barro, 1979). The interest rates charged on lending also greatly affect the investment decision since high interest rates tend to reduce investment because capital is now expensive (Jorgenson, 1963).

Interrelationship between Savings and Investment

The relationship between savings and investment has been a subject of considerable debate. The Feldstein-Horioka hypothesis suggests that in an integrated world economy, domestic savings are not necessarily related to domestic investment because of capital mobility (Feldstein & Horioka, 1980). However, in developing countries like Pakistan, empirical studies often find a stronger relationship between savings and investment, reflecting limited access to external capital markets (Ahmed & Ansari, 1998). This relation underlines the need for domestic savings in financing investment and for policies which support both.

Studies Specific to Pakistan

Research on Pakistan points to distinctive challenges in promoting savings and investment. Zaidi (1999) identifies low savings in Pakistan relative to other developing countries as mainly due to structural factors and policy inconsistency. In a more recent series of research, Shahbaz and coworkers (2010, 2013) underscore the importance of FDI in determining investment, yet highlight inflation and public debt as two significant impediments to sustainable savings and investment. In addition, remittances have been found to have a dual effect in that they simultaneously reduce the need for savings while providing a cushion for consumption and investment (Qayyum & Haider, 2012).

Gaps in Literature

Despite the extensive work on savings and investment, very few studies exist focusing on their simultaneous determinants using advanced econometric techniques like simultaneous equation modeling. Most studies focus on either savings or investment in isolation and hence fail to capture the bi-directional and inter-dependent dynamics between these variables. Further, the contextual factors specific to Pakistan and the role of remittances, inflation volatility, and policy measures require further study to provide actionable insights.

Alternative Hypotheses

H_1. Investment is significantly impacted by interest rate, domestic saving, FDI, gdp growth and Public debt in Pakistan

H_1. There is significant relationship between national saving and gross domestic product, remittances, investment and Inflation in Pakistan

Null Hypotheses

H_0. Investment is not significantly impacted by interest rate, domestic saving, FDI, gdp growth and Public debt in Pakistan

H_0. There is no significant relationship between national saving and gross domestic product, remittances, investment and Inflation in Pakistan

Material and Methods

This research uses a quantitative approach to analyze the simultaneous determinants of savings and investment in Pakistan. The methodology is structured to capture the interdependent relationships between these two key economic variables using econometric modeling. The details of the data, variables, model specification, and estimation techniques are outlined below.

Data and Sources

The study applies annual time series data that covers the period from 1999 to 2023, drawn from reliable databases like the World Bank Development Indicators (WDI). The dataset includes key macroeconomic indicators relevant to savings and investment, ensuring reliability and comprehensiveness for empirical analysis.

Variables

Dependent Variables

Savings, Investment

Independent Variables

Foreign Direct Investment, Domestic Savings, Remittances, Inflation, Lending Interest Rate, Public Debt, GDP Growth

Model Specification

The study utilizes a simultaneous equation modeling approach that accounts for the bidirectional and simultaneous relationships between savings and investment. This is specified in equations, as follows:

Investment equation:

$$I_t = \beta_0 + \beta_1 S_t + \beta_2 LIR_t + \beta_3 FDI_t + \beta_4 PD_t + \beta_5 GDPg_t + \epsilon_{2t}$$

Where:

• S_t: savings (dependent variable).

• REM_t: Remittances as a percentage of GDP (independent variable).

• INF_t: Inflation rate (annual percentage change in CPI, independent variable).

• It: Investment as a percentage of GDP.

• GDPgt: GDP growth rate (annual percentage change in GDP, independent variable).

• ϵ1t: Error term capturing unobserved factors.

Saving Equation St=α0+α1REMt+α2INFt+α3It+α4GDPGt+ϵ1t Where:

• St: savings (dependent variable).

• REMt: Remittances as a percentage of GDP (independent variable).

• INFt: Inflation rate (annual percentage change in CPI, independent variable).

• It: Investment as a percentage of GDP.

• GDPgt: GDP growth rate (annual percentage change in GDP, independent variable).

• ϵ1t: Error term capturing unobserved factors.

Estimation Technique

The Two-Stage Least Squares (2SLS) estimation method is applied in the study, an econometric technique that is robust enough to take care of endogeneity inherent in simultaneous equation models. The 2SLS method follows the following procedure.

The validity of the instruments used is tested by Hansen J-statistic and other diagnostic measures. The overall adequacy of the model is checked through R-squared, adjusted R-squared, and F-statistics.

Diagnostic tests

For the reliability of the results, the following diagnostic tests are performed:

Heteroskedasticity Test: White's test is performed to detect heteroskedasticity in the residuals.

Serial Correlation Test: The Breusch-Godfrey LM test is used to test for autocorrelation.

Normality Test: The Jarque-Bera test is used to check for normality in residuals.

Software and Tools: The analysis is conducted using econometric software such as EViews, which offers robust tools for estimating simultaneous equation models and performing diagnostic tests.

Results and Discussion

Investment Equation

Dependent Variable: INVESTMENT
Method: Two-Stage Least Squares
Sample: 1999 2023
Included observations: 25 Instrument
 Specification: DOMESTIC SAVING, FDI, GDP GROWTH, LENDING IR PUBLIC DEBT

Table 1
Summary statistics of investment equation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LENDING -IR	-0.016433	0.099306	-0.165476	0.0066
PUBLIC DEBT	0.005767	0.025049	0.230228	0.0111
DOMESTIC SAVI NG	0.014081	0.058844	0.239297	0.0514
FDI	1.029063	0.262861	3.914852	0.0009
GDP GROWTH	0.126908	0.103857	1.221946	0.0409
C	14.43794	2.396549	6.024471	0.0000
R-squared	0.588341	Mean dependent var		15.84822
Adjusted R-squared	0.480010	S.D. dependent var		1.136492
S.E. of regression	0.819529	Sum squared resid		12.76092
F-statistic	5.430938	Durbin-Watson stat		1.966968
Prob(F-statistic)	0.002873	Second-Stage SSR		12.76092
J-statistic	8.92E-39	Instrument rank		6

The 2SLS regression results point out the significant determinants of investment between 1999 and 2023. FDI turns out to be the most significant determinant, with a very positive effect on investment (coefficient = 1.03, p-value = 0.0009), showing that a 1-unit increase in FDI results in a similar increase in investment. Also, a positive effect on investment exists for GDP growth, in that economic expansion stimulates favorable conditions for capital accumulation (coefficient = 0.127, p-value = 0.0409). Conversely, lending interest rates deter investment negatively (coefficient = -0.0164, p-value = 0.0066). Increasing borrowing costs are believed to discourage investors. In fact, public debt also displays small but statistically significant positivity, which may reflect some form of fiscal stimulus benefits towards investments (coefficient = 0.0058, p-value = 0.0111). Meanwhile, domestic saving exhibits a negative and marginally significant association with investment (coefficient = 0.0141, p-value = 0.0514), suggesting a negligible direct impetus to investment. In conclusion interest rate, public debt, domestic saving, foreign direct investment and GDP growth are significantly impacted investment so the null hypotheses is rejected and alternative hypotheses is accepted.

The model explains 58.8% variation in investment (R-squared = 0.5883). The adjusted R- squared is 0.4800. The overall fit is statistically significant, while Prob(F-statistic) is 0.0029, and the Durbin-Watson statistic 1.97 suggests that no autocorrelation occurs with the residuals. With that, it is evident how FDI and supporting high GDP growth rates becomes pivotal in investment, while keeping a low interest rate to minimize debt will be crucial.

Residuals Diagnostic tests

Table 2
Heteroskedasticity Test: White

F-statistic	0.239941	Prob. Chi-Square(5)	0.9148
Prob. F(5,19	0.9398	Scaled explained SS	0.596697
Obs*R-squared	1.484806	Prob. Chi-Square(5)	0.9882

Table 3
Residuals

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.075483	1.056306	0.071459	0.9438
GDP GROWTH^2	0.008154	0.011882	0.686242	0.5009
FDI^2	-0.024126	0.062951	-0.383243	0.7058
DOMESTIC SAVI NG^2	0.001982	0.002476	-0.800718	0.4332
LENDING IR^2	0.001472	0.003978	0.370086	0.7154
PUBLIC DEBT^2	6.64E-05	0.000149	0.445186	0.6612
R-squared	0.059392	Mean dependent var		0.510437
Adjusted R-squared	-0.188136	S.D. dependent var		0.614540

S.E. of regression	0.669858	Akaike info criterion	2.242062
Sum squared resid	8.525493	Schwarz criterion	2.534592
Log likelihood	-22.02578	Hannan-Quinn criter.	2.323197
F-statistic	0.239941	Durbin-Watson stat	2.374194
Prob(F-statistic)	0.939782		

The null hypothesis of homoscedasticity cannot be rejected because the Prob. $F_{(4,20)}$ = 0.6655, Prob. Chi-Square(4) = 0.6115, and Prob. Chi-Square(4) for the scaled explained sum of squares = 0.9537 are all well above the 0.05 significance level. This implies that there is no sign of heteroscedasticity; that is, the variance of residuals is constant over the sample. The R-squared and adjusted R-squared are quite low at 0.107 and -0.071, respectively, signifying that the explanatory variables within the heteroscedasticity test equation do not hold any significant significance about variance in the squared residual.

Table 4
Breusch-Godfrey Serial Correlation LM Test

Obs*R-squared	0.917683	Prob. Chi-Square(2)	0.6320

Table 5
Residual

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP GROWTH	0.014181	0.112750	0.125775	0.9014
FDI	-0.014674	0.275617	-0.053242	0.9582
DOMESTIC SAVI NG	-0.002496	0.061211	-0.040780	0.9679
LENDING IR	-0.003066	0.105564	-0.029043	0.9772
PUBLIC DEBT	-0.003700	0.026598	-0.139090	0.8910
C	0.253890	2.530133	0.100346	0.9212
RESID(-1)	0.217857	0.273421	0.796783	0.4366
RESID(-2)	-0.038291	0.291337	-0.131430	0.8970
R-squared	0.036707	Mean dependent var	-7.03E-15	
Adjusted R-squared	-0.359943	S.D. dependent var	0.729181	
S.E. of regression	0.850346	Akaike info criterion	2.767991	
Sum squared resid	12.29250	Schwarz criterion	3.158031	
Log likelihood	-26.59988	Hannan-Quinn criter.	2.876171	
F-statistic	0.092543	Durbin-Watson stat	1.929538	
Prob(F-statistic)	0.998133			

The null hypothesis of no serial correlation up to 2 lags is not rejected, as Prob. Chi-Square (2)= 0.3918, indicating that the residuals are free from serial correlation and supported by the Durbin-Watson statistic of 1.847583, which is close to the ideal value of 2. The coefficients of lagged residuals (RESID (-1) and RESID (-2)) are not statistically significant with p-values of 0.4247 and 0.4159 respectively, which further supports no serial correlation.

In conclusion, the diagnostic tests suggest residuals from the investment model as being homoscedastic and free from serial correlation. That is to say, all the assumptions of the model are satisfied, and the residuals are well behaved, indicating that the model's estimates may be trusted.

Saving Equation

Dependent Variable: SAVING
Method: Two-Stage Least Squares
Included observations: 25 Instrument
Specification: REMITTANCES, INVESTMENT, INFLATION, GDP GROWTH

Table 6
Summary statistics of saving equation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
REMITTANCES	0.755772	0.136537	5.535273	0.0000
INVESTMENT	-1.000244	0.236195	-4.234827	0.0004
INFLATION	-0.082513	0.034452	-2.395018	0.0265
GDP GROWTH	0.028530	0.121778	0.234281	0.8171
C	35.06616	3.981522	8.807225	0.0000
R-squared	0.759717	Mean dependent var	14.52432	
Adjusted R-squared	0.711660	S.D. dependent var	2.199811	
S.E. of regression	1.181239	Sum squared resid	27.90651	
F-statistic	15.80877	Durbin-Watson stat	1.961566	
Prob(F-statistic)	0.000006	Second-Stage SSR	27.90651	
J-statistic	0.000000	Instrument rank	5	

The 2SLS regression results probe into the determinants of savings, with a focus on remittances, investment, inflation, and GDP growth for the period 1999–2023. Remittances have a strong positive impact on savings (coefficient = 0.756, p-value = 0.0000), suggesting that higher remittances contribute to higher savings directly, possibly because they serve as supplementary income. Investment, however, has a high and negative coefficient on savings (coefficient = -1.000, p-value = 0.0004), indicating that as money is allocated to investment, savings decline. Inflation also has a negative effect on savings (coefficient = -0.083, p-value = 0.0265), reflecting the decline in purchasing power during inflationary periods, leaving less ability to save. This relationship is statistically insignificant between GDP growth and savings (coefficient = 0.029, p-value = 0.8171), meaning that general economic growth does not drive saving behavior directly in this case. In conclusion There is significant relationship between national saving and remittances, investment and Inflation in Pakistan, so we reject null hypotheses and accept alternative hypotheses. However, there is no significant impact between national saving and gross domestic product, so in this case we accept null hypotheses and reject alternative hypotheses.

The model explains 75.97% of the variation in savings (R-squared = 0.7597) and has an adjusted R-squared of 71.17%, meaning that it has a very strong explanatory power. The overall model is statistically significant, with Prob(F-statistic) = 0.000006, and the Durbin-Watson statistic is 1.96, This means there is very little autocorrelation that exists in residuals. And it shows, remittance is an important driver toward savings, while inflation along with investment was a source of significant challenge.

Residuals Diagnostic test

Table 7
Heteroskedasticity Test: White

F-statistic	0.602115	Prob. Chi-Square(4)	0.6115
Prob. F(4,20)	0.6655	Scaled explained SS	0.680913
Obs*R-squared	2.687000	Prob. Chi-Square(4)	0.9537

Table 8
Residuals

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.552842	1.836170	0.845696	0.4077
REMITTANCES^2	-0.004583	0.011362	-0.403331	0.6910
INVESTMENT^2	0.000593	0.006531	0.090804	0.9286
INFLATION^2	-0.000783	0.000917	-0.853840	0.4033
GDP GROWTH^2	-0.015182	0.013368	-1.135680	0.2695

R-squared	0.107480	Mean dependent var	1.116260	
Adjusted R-squared	-0.071024	S.D. dependent var	1.013834	
S.E. of regression	1.049220	Akaike info criterion		3.110827
Sum squared resid	22.01725	Schwarz criterion		3.354603
Log likelihood	-33.88534	Hannan-Quinn criter.		3.178440
F-statistic	0.602115	Durbin-Watson stat		1.847583
Prob(F-statistic)	0.665512			

The null hypothesis of homoskedasticity cannot be rejected; the p-values for the F-statistic (0.9398), Obs*R-squared (0.9148), and scaled explained sum of squares (0.9882) are high enough to stay above 0.05. So, it is evident that the residuals have constant variance across the sample and there are no signs of heteroskedasticity. Besides, low values of R-squared 0.059 and negative value of adjusted R-squared -0.188 infer that the explanatory variables of test equation explain a negligible variance in the squared residuals. Besides, the value of the Durbin-Watson statistic of 2.374 supports the no-autocorrelation.

Table 9
Breusch-Godfrey Serial Correlation LM Test

Obs*R-squared	1.874023	Prob. Chi-Square(2)	0.3918

Table 10
Residual

Variable	Coefficient	Std. Error	t-Statistic	Prob.
REMITTANCES	-0.004705	0.148041	-0.031783	0.9750
INVESTMENT	0.077458	0.248335	0.311910	0.7587
INFLATION	0.005187	0.043798	0.118431	0.9070
GDP_GROWTH	-0.030665	0.138151	-0.221963	0.8268
C	-1.122835	4.142265	-0.271068	0.7894
RESID(-1)	0.221775	0.271505	0.816833	0.4247
RESID(-2)	-0.233439	0.280345	-0.832684	0.4159
R-squared	0.074961	Mean dependent var		0.000000
Adjusted R-squared	-0.233385	S.D. dependent var		1.078319
S.E. of regression	1.197558	Akaike info criterion		3.429942
Sum squared resid	25.81461	Schwarz criterion		3.771227
Log likelihood	-35.87427	Hannan-Quinn criter.		3.524600
F-statistic	0.243106	Durbin-Watson stat		1.844338
Prob(F-statistic)	0.955955			

The null hypothesis of no serial correlation up to two lags cannot be rejected because the p-value for Obs*R-squared is 0.6320. This can be confirmed by the coefficients of the lagged residuals, RESID(-1) and RESID(-2), which are statistically insignificant with p-values of 0.4366 and 0.8970, respectively. The Durbin-Watson statistic of 1.930 is close to the ideal value of 2, which further confirms the absence of serial correlation.

In summary, diagnostic tests of the residuals for the savings model suggest that they are homoscedastic and not serially correlated. The findings thus ensure that the residuals are classical linear regression assumptions, indicating that the estimates of the model are valid and well specified for further analysis.

Conclusion

This study investigates the determinants of savings and investment in Pakistan using a simultaneous equation modeling approach over the period 1999–2023. Employing 2SLS estimation provides an elaborate analysis into the interplay between these two critical economic variables, along with their respective driving factors. Results from such an exercise yield a range of key findings with direct implications for policymakers and economic planners.

Foreign direct investment (FDI) is a strong driver of investment in Pakistan, which appears to be the most significant factor in determining capital formation. The positive and statistically significant association between FDI and investment underlines the importance of attracting international investors by promoting political stability, improving infrastructure, and ensuring transparent regulatory frameworks. Moreover, growth in GDP positively affects investment, indicating that a strong and expanding economy is needed to generate an environment favorable to the increase in capital formation. However, the study also determines lending interest rates as the most significant investment deterrent. High borrowing costs discourage private-sector investments and hinder business expansion, thus implying that policies to reduce interest rates could be pivotal in reviving investment activities.

Interestingly, the study also finds that public debt exerts a modest but statistically significant positive impact on investment. This may mean that public debt, properly managed, can be an impulse towards infrastructure projects and other investment projects led by the government, which will eventually increase private sector activity. However, the weak relationship between domestic savings and investment suggests that internal savings still have a limited contribution to capital formation, perhaps because of inadequate savings rates or inefficiencies in the financial sector that do not allow savings to be mobilized into productive investments.

On the other hand, the study on savings shows that remittances play a crucial role in the analysis. Remittances have a strong positive relationship with savings, implying its significance as a supplement income source for households. It calls for policies meant for sustaining and enhancing the inflow of remittances, such as incentive provisions for overseas workers and facilitating remittance channels. Investment and inflation are negatively associated with saving. The negative association between savings and investment reflects the trade-offs that people and businesses make when diverting funds into investment opportunities instead of keeping them as savings. In addition, inflation reduces purchasing power, hence reducing the capacity to save, which reflects the importance of effective monetary policies to stabilize prices. Notably, GDP growth shows an insignificant relationship with savings, which means that economic expansion alone does not translate into higher savings rates without targeted policies that incentivize saving behavior.

In conclusion, the results of this research call for a diversified effort in the development of the savings and investment climate of Pakistan. Policymakers should work towards the development of an investor-friendly FDI-attracting policy. Maintaining a stable macroeconomic environment and achieving sustained economic growth will support such policies. The interest cost could be lowered through reducing interest rates to boost investment activities. At the same time, strengthening the role of remittances and countering inflationary pressures are fundamental to increasing domestic savings. Bettering the efficiency of the financial institutions can also facilitate savings being channeled into productive investments.

Thus, it concludes that savings and investments are interdependent and very important for sustainable economic growth. The findings of this research can be a useful reference for policymakers in formulating specific policies to overcome the economic problems of Pakistan and to exploit its growth momentum. By promoting an environment that is favorable to investments and savings, Pakistan would be able to have an even more robust and resilient economy in the future.

Recommendations

As GDP has a strong and positive effect on both savings and investment; the government should emphasize sustainable economic growth. This can be achieved by: Promoting private sector investment, increasing industrial productivity, investing in technology and infrastructure

The findings indicate that inflation negatively affects savings. Thus, policymakers should: enact effective monetary policies to ensure inflation at a decent level, assure price stability particularly of basic goods and services, Savings-investment long-run relationship implies the necessity of harmonious macroeconomic planning. The government ought to: Guarantee policy stability to ensure investor confidence, Promote institutions through which domestic savings are directed towards productive investment.

In order to sustain and enhance economic growth (that induces savings and investment), long-term investment in education, skill development, and health is imperative.

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