DOI: 10.52131/joe.2019.0101.0007

*i*RASD Jounral of Economics

Volume 1, Number 2, 2019, Pages 82 - 88

Journal Homepage:
https://journals.internationalrasd.org/index.php/joe

Factors Inducing the Investment and Saving Behaviour in Pakistan

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ARTICLE INFO

Article History:
Received: August 03, 2019
Revised: October 27, 2019
Accepted: Novermber 24, 2019
Available Online: December 31, 2019

Keywords:
Investment
Saving
Gross Domestic Product
Interest Rate
Economy

JEL Classification Codes:
E21, E22, E43, F41, F43

Funding:
This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

ABSTRACT

This study endeavour's to identify in detail the behaviour of investment and saving in Pakistan's economy. Both investment and saving have a dynamic role in economic growth and development. Gross domestic product, remittances, income, dependency rate, taxes, labor participation rate, national saving, and national investment are included as independent variables for this study; data were obtained from the Pakistan Bureau of Statistics and World Bank for the years (1980-2016). The results show that the relationship between Investment and Interest rate is negative, while the relationship between saving and interest rate is positive. There is a dire need to review the monetary policy issued by the State Bank of Pakistan.

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Citation: Ashraf, M. F., Latif, M. M., & Kanwal, H. (2019). Factors Inducing the Investment and Saving Behaviour in Pakistan. *IRASD Journal of Economics*, *1*(2), 82–88.
https://doi.org/10.52131/joe.2019.0101.0007

1. INTRODUCTION

Saving has been outlined as equal in the amount being for communities merely unique aspects of a similar factor. Several writers have given special definitions to those not equal (Collom & Lasker, 2016). Others have written at the assumption that they may be unequal without prefacing their discussion with any definitions. Saving in most cases converted briefly to money even though sure varieties of saving, similar to pension price range, personal retirement accounts (IRAs), and foster lengthy-time period financial savings (Hurd, 1990). Everyone concurs in meanings via saving the excess of the source of revenue over what's spent on consumption. Saving is an important factor in economic growth. Saving and investment are unique aspects of a similar coin (Firth & Yamey, 2013).

Nobel Prize winner of 1985 "Franco Modigliani" contribution was "his analysis of household savers." He endeavors to improve Keynes's consumption function by introducing the "Life Cycle" consumption function. He explained that most people want their consumption level stable. Modigliani claimed that people in high-income years tend to save more for their incoming years (Merton, 1987).

National savings rate as an economic point of view directly relates to the extent of nationwide consumption, level of investments, capital account, current account, rates of interest, exchange rate, and ultimately long-term growth rate. From a social point of view, everyone values to endure their current requirements of living after retirement or in the

attainment of old age, then again this might progressively know not workable by giving the current levels of financial savings (Ehrlich & Yin, 2005). Pakistan's economic system has been characterized by low saving and investment duties during the last two decades. We often attribute a low rate of domestic investment to the low rate of domestic saving. Hence the deviation in economic productivity between Pakistan and Southeast Asia countries might relate to differences in the price of saving. Therefore it is critically important to determine the attitude of the nation in terms of investment and saving.

"Use of Money in the hope of making more money is known as an investment" (Talpur & Hussain Soomro, 2019). The purchase of a physical good in the hope for an increase in value. Investment always has a significant role in macroeconomic theory and the economic development of a country (Studart, 1995). Investment plays a significant fragment in economic productivity, and it endorses production techniques.

In early 1950, to determine how investment returns can be optimized, Markowitz developed portfolio theory. In his theory, Markowitz describes "how to measure the risk of various securities and how to combine them in a portfolio to get the maximum return for the given risk" (Rubinstein, 2002).Investment is often done in two ways by the government and private sectors. Private investment has a much stronger effect on economic growth than government investment; it boosts growth because it does most efficiently, and it has less association with corrupt practices. Therefore the development of the private sector must boost up to reduce poverty and economic growth in underdeveloped countries.

Capital formation matters in the economic development of countries that accumulate a continuously higher level of investment to achieve a higher level of economic development (Ghali, 1998). National Savings and private savings are both necessary for a higher level of investment, which is a vital dynamic of Economic development. Pakistan's saving is also shrinking throughout the last decade as compared to other developing countries. Pakistan has presented an extraordinary picture of achieving high economic development in recent years (Yasin, 2008).

Pakistan's efficiency was very drastic by attaining a growth rate of 6 percent annually. We have observed although low savings rates in Pakistan, we pay minor consideration in locating the key determinant of low financial savings in Pakistan at the district level (Muhammad, Hye, & Lau, 2018). We can study saving and investment association to find out the presence of mobility as (Feldstein, 1980) analyzed that the level of higher domestic saving in a country associated with the higher domestic investment was because of immobility of capital. Saving and investment have not much strong relationship in developing countries with perfect mobility of capital.

Investment and saving relationship is important because of two sound reasons for the economic development of a country primarily positive correlation between development and saving. Capital accumulation is necessary for saving, and investment and then the interaction between investments and saving is racial for assessing the validity of the view that a top saving rate is necessary for higher investment in the economy (Taylor, 1996). A decade previously, research on the impact of saving and investment generated usual worry about a couple of rising scarcity of saving and investment inside the world economic system, with its associated pressures for an exact growing rate of interest.

The World Bank and the Organization for Economic Co-operation and Development (OECD) Institutions issued reports on the imminent disaster (Murphy, 1984). Today the attention of the presidency policymakers has to believe in an accumulation of world-saving (Bernanke, Boivin, & Eliasz, 2005). Such a drastic change has come from a particularly unexpected US perspective where public discourse has been affected by the continued decline of personal savings and the re-emergence of large budget deficits. Certainly, the United States is not using large-scale savings. The absence of saving within the United States in conjunction with robust home investment alternatives has created a present account deficit of unheard-of size-$800 billion in 2005 and rising. The United States has emerged as the arena's biggest debtor nation by using a big margin. The principal objective of this study is to find out the effect of saving and investment on the economic development of Pakistan.

2. LITERATURE REVIEW

Ismail, Khairuddin, Alias, Loon-Koe, and Othman (2018) analyzed saving behavior in Malaysia. The main objective of this study was to find out saving behavior by using factors of religious belief, knowledge, and service quality. In this study, a mixed-method was used for data collection. Author's used mainly quantitative approach by using a qualitative survey, and in this study, interviews were also conducted by them to cross-check the quantitative findings. SPSS was used for analyzing the data in this research. The results of this study showed that all factors used in this study have a significant impact on saving behavior in the private sector of Malaysia.

Abbas (2019) revealed in his essays on investment behavior in Pakistan that a structural change process is necessary for Pakistan in terms of investment patterns. He used ARDL and proved that political stability is important for investment in the long run. Siddiqi (2020) worked in investment behavior and found that current account deficits and savings. The real interest rate has a positive relationship with each other in the long and short run. Khan, Khan, Rehan, and Abasimi (2018) worked for the gross domestic saving of 18 Asian countries. They found that Tax has an insignificant role for saving while age dependency, GDP, and broad money has a significant relationship with the savings.

Brown and Taylor (2016) identify individual influences on saving behavior in the United Kingdom. The author focused on saving behavior of children aged 11-15. They analysed the saving behavior by surveying British households. The results of their study showed that children saving behavior indirectly prepositional to earning, which they do by part-time while in children pocket money and saving is an inverse relationship. The financial behavior of children at an early age has a long effect on their future life.

Chaudhry, Faridi, Abbas, and Bashir (2015) has analysed saving behavior in the short-run and long-run in Pakistan. Time-series data (1972 to 2008) of Pakistan has been used to explore the national savings of Pakistan in both the short-run and long run.

This investigation applies the time organization econometrics for the short-run and since relatively a while ago run connections. Economic improvement speculations expect that the causality runs from economical to human and corporeal money to development. Then again, many utilization hypotheses expected that the causality runs from development to economic revealed (Modigliani, 1970). The existence cycle theory suggests that there is a certain association between salaries and efficiency. Vitagliano and Modigliani (1993) resisted a positive connection among salary and putting something aside for developing nations. He noticed that for developing nations, the economical percentage would increase in salary, while in developed nations, there was no remarkable, efficient connection among livelihoods and economical. Over the long attraction, the investigation presumes that the Consumer Price Index, Exports as the level of Gross domestic product, Workers settlements as the level of GDP, Public development as GDP level, Government Spending as the level of GDP, and pace of premium end up being enormous factors in deciding the National reserve funds.

Shahbaz, Jalil, and Islam (2010) explored the financial savings–funding courting in financial liberalization and flexible trade charge regime in Pakistan. Empirical findings point out that in the case of Pakistan, there's an inclined correlation between financial savings and investment. To find out about signifies that within the presence of inadequate capital mobility throughout the nation, home investors have finance investment tasks from the world market. Weak institutional arrangements cannot forestall capital mobility out of doors the limits in susceptible monetary financial savings–funding correlation. Empirical results of the research about indicating low capital mobility at a nationwide stage then again prime the world over. The savings retention ratio is fairly low, indicating the proof of high capital immobility in the neighborhood.

Majeed and Khan (2008) studied the relationship between private, public investment and determinants of personal Investment in Pakistan. This study analysed the standards that play an important function in determining personal Investment in Pakistan. The theoretical literature on non-public funding is slightly rich and divers for a long time in each developed

and growing international country. Besides, the use of research differentiated public and private funding, arguing that the varieties of capital had original purposes and productiveness, e.g., empirical results consistent with the time-critical data for Pakistan from 1970 to 2006. The use of OLS estimates the time-series data.

(Nasir, Khalid, & Mahmood, 2004) have analysed that saving and investment are two key macro variables with a micro foundation which can play an important service as in inflation balance and promotion of employment in particular in Pakistan. The principal function of his investigation to reveal what is the behavior of investment and saving in Pakistan data is get from the economics survey of state banks annual record the variable paying homage to time collection homes and econometrics research and used some variable as a percentage of GDP and their expansion price in Pakistan. The saving has a significant impact on investment. Pakistan has not achieved high economic development in the past three decades because of the low saving and investment rate. This was once a short-lived assessment of the conduct and determinants of investment and savings in Pakistan; however, there's a need to look additional into the micro-foundations of the subject. Moreover, in some variables, the causality has to verify earlier than making any rational resolution.

3. DATA AND METHODOLOGY

To elaborate determinants of investment and saving behavior in Pakistan, we have used quantitative data collected from the secondary source Pakistan Bureau of Statistics and the World Bank. We use the Ordinary Least Square (OLS) technique for regression of data and variables included savings, Interest rate, labor participation rate, GDP, dependency ratio, Tax, and Remittances.

I=f(Y, IR, PR, T, REM) (1)
S=f (Y, DR, REM, PR, IR) (2)

The econometric model for the variables is the following:

$$I = k + \beta 1\, Y + \beta 2\, IR + \beta 3\, PR + \beta 4\, REM + \beta 5\, T + \mu \quad (3)$$
$$S = k + \beta 1\, Y + \beta 2\, DR + \beta 3\, PR + \beta 4\, REM + \beta 5\, IR + \mu \quad (4)$$

Whereas, K is used as constant, β is slop of the variable, and μ is an error term

In model 1st, investment is the dependent variable, and Other Incomes, Remittances, Interest rate, Tax, and Participation rate are independent variables. In the model, 2nd saving is the dependent variable, income, Dependency ratio, Remittances, and Participation rate and used independent variables.

I=investment (dependent), S=saving (dependent), Y=income (independent), IR=Rate of interest (independent), DR= Dependency Ratio (independent), PR = Labor Participation Rate (independent), T= Tax (independent) and REM = Remittance. Augmented Dicky Fuller (ADF) is used in this study to check the stationary of data for all variables. We find that all variables are stationary at either 1 or 5 percent.

This study employs an Autoregressive distributed lag model approach for cointegration to determine the short and long-run correlation among variables. The ARDL technique is superior to other cointegration techniques. ARDL model is used to analyse the association between the variables that how much variables depend on each other in the Long run and short run. This method requires coefficient(s) of variables for a sample than making interpretations of the population. Investment is the dependent variable; we regressed Investment against Interest rate, Income, Labor Participation rate, Remittances, and Tax. We got the regression results in the table below.

4. RESULTS AND DISCUSSION

Table 1
Results of Model 1

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Interest_ Rate	20749.86	13189.64	1.573194	0.1282
Income	29594.51	18134.89	1.631910	0.1152
Labor- Participation-Rate	0.077239	0.005760	13.40998	0.0000
Remittances	48629.88	16259.48	2.990862	0.0062
Tax	0.183870	0.109858	1.673715	0.1067
C	-3090601	412379.7	7.494553	0.0000
R – Squared				0.9335

Normal Co-integration Equation for Investment Model

$$I = -3090601 + 29594.51\,Y - 20749.86\,IR + 0.077239\,PR + 48629.88\,REM + 0.183870\,T$$

This equation shows that one unit increase in income caused a $29594.51 million increase in investment because of the relationship in Income and Investment. Due to one percent increase in the interest rate affects $20749.86 Million decreases in investment due to the divergent relationship between them. A rationalization of the best way the interest rate influences the level of funding in the economic system. Typically upper-interest rates cut back investment because of higher charges increase the cost of borrowing and require investment to have the next value of return to be successful. Mujahid and Noman (2019) proved the relationship between investment and interest in this way. If one unit increases Labor Participation Rate than a $0.077 million investment increase if Remittance increases one unit, then a $48629 Million investment increase, and if tax increase one unit, then a $0.1838 Million increase in investment.

Table 2
Model 2 Resutls

Variables	Coefficient	Std. Error	t-Statistic	Prob.
Remittances	1.040563	0.466285	2.231604	0.0348
Labor Participation-Rate	6.3607	4.7307	1.342471	0.1915
Interest- Rate	0.542596	0.167787	3.233840	0.0034
Income	0.474906	0.255033	1.862133	0.0744
Dependency-Ratio	0.796495	0.538523	1.479035	0.1516
C	-67.64529	65.90365	1.026427	0.3145
R-squared	0.638114			
Durbin-Watson stat	1.839867			

Co-integration Equation for Saving

$$\boldsymbol{S = -67.64 + 0.47\,Y + 0.796\,DR + 6.36\,PR + 1.040\,REM + 0.5426\,IR + \mu}$$

The results of the saving function show that Income, dependency ratio, Labor participation rate, Remittances, and Interest rate all variables have directly proportional to saving. The saving effects in the same way because of the changing nature of variables. Suppose income increases one percent, then saving increases accordingly $0.47 Million. Income increases saving, and people try to save some money for future needs. The interest rate is positively related to saving. If one percent interest rate increases, it will bring $0.54 Million saving. A high-interest rate attracts more money for saving, and people prefer to save money more in banks because lower interest rates discourage savings. And the government tackles this issue according to the situation if the interest rate will be low, then people prefer to invest more.

If one unit increases Labor Participation Rate than $6.0367 million, the saving will increase. This happens because, according to capacity, the producer will produce more units by investing more are reducing the investment amount. Suppose Remittances increase one unit, then $1.04 Million saving increase. Remittances are good for lower-income countries. This helps a lot to families. Their income increases, and they spent and save more if the dependency ratio increases one unit, then a $0.7964 Million increase in saving for future issues like education, health, and marriage.

Saving and investment are important for an economy. Government has to work for spending, expenditure investment, and seek to save for future payment. The government does care exchequer money. But mismanagement of money and any excess can damage the economy more.

5. CONCLUSION & RECOMMENDATIONS

This study was conducted for the analysis of investment and saving behavior in Pakistan. The analysis presented in this study has enabled us. It identifies several factors affecting investment and saving behavior in Pakistan. In this study, we considered the Labor participation rate, Income, Investment, remittances, taxes, dependency rate, and interest rate to describe investment and saving behavior in Pakistan.

Pakistan needs to grow the saving rate by up to 25-30 percent. Investment increment is necessary for Pakistan through domestic saving and by decreasing the interest rate. Enchantment of Investment and saving can be achieved by the implementation of proper and effective policy.

We can examine the imperious impact of economic growth on savings, while investment is sensitive to the interest rate in Pakistan. The interest rate is decided through monetary policy by the Central Bank. There is a dire need to pay attention to reduce interest rates so that local investment in the country can be increased. Remittances are another source for saving in the country, and appropriate policy is necessary for the transfer of remittances, and it also contributes to Tax.

The regression results confirmed that investment and saving contributions have a positive effect on economic development in Pakistan. Hence authorities should positively concentrate on increasing GDP by utilization the maximum capacities of the economy.

Conflict of Interests/Disclosures
The authors declared no potential conflicts of interest w.r.t the research, authorship and/or publication of this article.

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