

Macroeconomic Pressures and Household Financial Well-Being: An Empirical Analysis of Interest Rates and Inflation in Pakistan

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Abstract

Increasing rate of inflation has been one of the most essential problems, especially after period of Covid-19 and Russia Ukraine War, which also tends to increase in the rate of interest rate. Therefore, researcher has particularly analysed the impact of inflation and interest rate on personal finances. Primary quantitative research method has been used using survey questionnaire, and information has been collected from 100 households using convenience sampling. For data analysis, statistical tools (i.e. descriptive, reliability, and inferential statistics) were used via using SPSS software. It shows that both male and female from different age group has been participated in the current research. Hence, findings revealed that inflation rate has a negative influence on personal finance, while interest rate has a positive influence on personal finance. Findings in the current research have been primarily focused on primary quantitative research that can be used in secondary studies in future for in-depth analysis. Additionally, consideration of control variables (i.e., income, accessibility to banking institutions, and facilities provided for personal finances) can also be used to avoid biased results.

Keywords: Lending, interest rate, inflation rate, Covid-19, borrower, lenders, cost of living, Islamic Republic of Pakistan

Introduction

Interest rate is referred to the amount that charged from the borrowers for the money provided to the borrowers. While inflation rate is referred to the rise in prices in a specific time period. It is one of the key policy macroeconomics variables. It is also involved in the participant's and economic agents' consideration since changes in interest rates cause a substantial impact on economic agents' decision-making.¹ Moreover, several macroeconomic factors are related to interest rate. One of the macroeconomics variables which is associated with interest rates is the inflation rate. The empirical and theoretical approaches have provided that there is a bidirectional causality between inflation and interest rate. In addition, the study² states that interest and inflation rates are inclined to move in a similar direction as interest rates are the main approach that the federal bank, the central bank of the U.S., utilizes to manage inflation. The act of federal banks guides the Fed (Federal Excise Duty) to encourage stable prices and maximum employment. Actual interest rates and personal savings are related concerning personal finances. There is a general belief that saving will increase as real interest rates rise.

Some current events, including the Russian-Ukraine war, Brexit and COVID-19 pandemic have tended to disruptions in supply chains and shortages across the world. Shortage of supply and increase in demand when pandemic restrictions lift in 2021, impacts prices to increase that is associated with the energy crisis worldwide, have caused the vertical rise in the inflation rate.³ Interest rate creates an impact on the cost of borrowing capital over the period and when the interest rates declined, it makes the borrowing cost inexpensive which enable individuals to invest and spend easily. In contraction to that when the interest rates rise, it makes the borrowing cost

more expensive due to that individual control on spending and saving more finances.⁴ As there is a considerable association between inflation rate and interest rate and their influence on personal finance, however, there are limited studies that provide evidence regarding this relationship. Therefore, the following will fill this literature gap by examining the effect of interest rate and inflation rate on personal finances.

Literature review

The amount that creditors charge the debtor over and above the principal amount is referred to as interest. A person who deposits money in a bank or financial institution also receives additional returns using the idea of the time worth of money, which is known as interest. The inflation rate is referred to the rise in prices in a specific period. The inflation rate is generally a comprehensive measure like the overall rise in prices or the rise in living costs in a nation.⁵ Moreover, personal finance denotes to concepts of managing and controlling money investments and savings. It incorporates banking, mortgages, budgeting, estate, tax and retirement planning.⁶

The study⁷ states that the purpose of a higher interest rate is to prevent borrowing and promote saving, which both substantially limits demand and consumption. Spending less money generally can slow the rate of inflation. Moreover, high-street financial institutions' savings rates do not usually rise in line with increases in the standard rate. Due to that long-term saving accounts are not considered a suitable option. It is clear that the hypothesis proposed by J.M. Keynes which is the Absolute Income Hypothesis from 1936 was the initial major contribution. Keynesian economics asserts that the present disposable individual real income is the most significant determinant of the existing savings and investments, and adjustments in disposable individual real income would alter the utilization and consumption of resources. According to this theory, Keynes has declared that the present consumption is a form of continuous income.⁸

The study⁹ evaluate the microeconomics variable effect on private saving while taking the evidence from BRICS-T Economies. The findings of the study state that the real interest rate has a detrimental impact on private savings except for India. It is noteworthy how the actual interest rate and private savings are linked with each other. There is a widespread perception that rising real interest rates will encourage saving. Furthermore, the replacement and income implications of the interest rate ultimately determine this position. If the real interest rates rise or fall, then it enables the savings to increase or decrease or its current spending cost will increase or decrease. which has the impact of boosting or reducing savings. When the real interest rate rises, individuals including both lenders and borrowers are likely to act less with the intention of lending and instead save more money.

When actual interest rates are elevated throughout the economy, it indicates that many individuals and corporations are borrowing money.¹⁰ The distribution of capital has changed through time from the prospective to the present, indicating a broad trend from preserving to spending. Higher interest rates make borrowing expensive that incentivizes individuals to save more, which begins to tip the supply balance back toward the foreseeable and lowers interest rates over the long run. Moreover, in the short period, making it expensive to acquire the capital indicates that companies and individuals are going to be disbursed less on higher purchases, such as purchasing new houses or new equipment.¹¹

It is anticipated that the interest rates offered by banks and financial institutions will stay below the inflation rate. Money in a bank account will lose real worth with time if the inflation rate increases over the base interest rate and the amount of interest paid is improbable to retain with inflation. According to conventional reasoning, decreasing the policy interest rate would encourage consumption and spending while actively discouraging

saving money, but low-interest rates might also encourage individuals to increase their savings to make up for the poor rate of return.¹²

The existing studies including^{13,14} state that individual understating regarding the monetary policy, FED, inflation rate and interest rate is relatively heterogeneous and limited and neither corporations and nor households' prospects respond much to announcements of monetary policy and in the economics of low inflation. The study¹⁵ states that, even when the country has a stable inflation rate, the households were required to pay greater interest rates. And during the time when the nation has high inflation households were required to recompense for the interest and decline the consumption because of the constraints of borrowing.

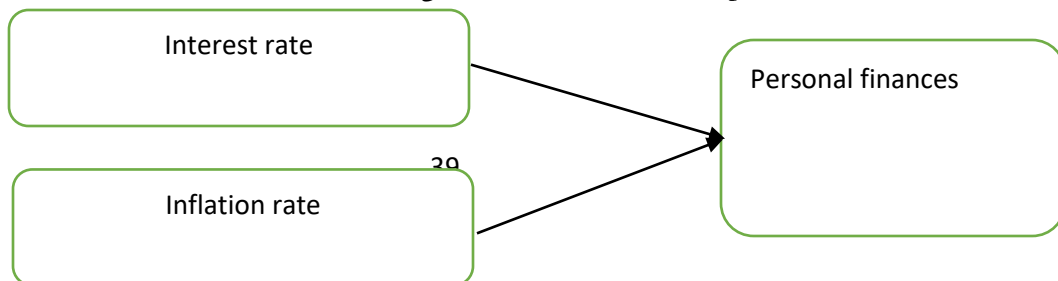
The study¹⁶, evaluates the interest rates concerning customer loyalty and customer orientation. The study states that the banking marketplace develops that interest rates can have a substantial influence on the strength of the connection between customer loyalty and customer orientation. Apart from the statistical implication, the results specifically demonstrated that variations in the interest rate of loans intensely deteriorated the association between customer loyalty and customer orientation. Moreover, it can also be said that the impact of client orientation on clients of loyalty declines with the increase in awareness regarding the loan interest rate. In addition, the link between customer orientation and loyalty declined with the rise in central bank base rate awareness. Correspondingly, the attentiveness that loan rates were declining supported the association.

H1a: interest rate has a significant effect on the personal finances

H0a: interest rate does not have a significant effect on the personal finances

H1b: inflation rate has a significant effect on the personal finances

H0b: inflation rate does not have a significant effect on the personal finances



Methodology

The main emphasis of the current research is to evaluate the effect of interest rates and inflation rates on personal finances. There are three methods that are widely used to carry out the studies and those are qualitative research, quantitative research and mixed (qualitative and quantitative) research. The research design chosen for the following research article is quantitative research design which infers the usage of numerical information and data to examine the association between the research variables. The primary purpose of using the quantitative research design is that it assists in the testing of a hypothesis.

Primary data collection method and secondary data collection method are the two types of methods, primary data collect first-hand information and secondary data is collected from existing websites and existing literature. The data collection method chosen for the following study was the primary data collection method. The reason behind selecting the primary data was less time-consuming and convenient. The data was collected from 100 individuals (i.e. lenders) through the survey questionnaire which was based on the 5-point Likert scale. The sample of individuals was based on the non-probability sampling technique where the survey was distributed among individuals. This sampling technique assists to evade an unconscious bias. The test included in the data analysis are demographics, descriptive statistics, reliability testing, correlation, and regression analysis and these were tested through the SPSS statistical software.

Results

Table 1 - Demographic Analysis

Gender		Valid	Cumulative
	Frequency	Percent	Percent
Male	54	54.0	54.0

Zealous & Energetic Scholarly Texts (ZEST), Volume I, Issue 2

Female	46	46.0	46.0	100.0
Total	100	100.0	100.0	
Age				
18-25	36	36.0	36.0	36.0
26-30	29	29.0	29.0	65.0
31-40	16	16.0	16.0	81.0
41-50	13	13.0	13.0	94.0
50 Above	6	6.0	6.0	100.0
Total	100	100.0	100.0	

Table 1, shows demographics characteristics (i.e. Gender, age) of the participants involved in this specified research. Referring to the age, it can be observed that almost half of the participants (i.e. 54%) participants are involved in this specified research, and remaining 46% are found to be female. Thus, it implies that both male and female have been given an equal chance in this research. Further in demographic characteristics, age of the participants is also considered in gathering information. It can be seen that majority (i.e. 65%) of the participants are young, as 36% fall in the age of 18 to 25, and 29% are in age of 26 to 30. Additionally, 16% have also reported their age in between 31 to 40, while 13% reported in between 41 to 50 years old, and only 6% have been reported their age above 50.

Table 2 - Descriptive Statistics Analysis

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Interest Rate	100	1.000	5.000	3.197	1.011
Inflation Rate	100	1.000	5.000	3.500	0.959
Personal Finances	100	1.000	5.000	2.740	0.890

Valid N (listwise) 100

Table 2 shows descriptive statistics of the variables involved in this specified research, based on 5-point Likert scale. Notably, it can be seen that majority of the participants regarding impact of interest rate, reported neutral response as mean value is found to be 3.19, but it inclined towards Strongly Agree as standard deviation value is recorded as 1.01. Additionally, the mean value of inflation rate has been recorded as 3.5 which shows a neutral response, and inclined towards Strongly Agree. Lastly, personal finances are also inclined toward neutral, and expected to deviate toward Strongly Agree. Thus, it suggested that average participants have been reported a Neutral response, and expected to deviate toward Strongly Agree.

Table 3 - Reliability Testing

Reliability Statistics	
Cronbach's Alpha	N of Items
.773	9

Before analysing the association between variables involved in research, reliability test has been conducted to analyse the validity of datasets. Based on results, it can be seen that each item involved in the survey questionnaire is valid, as Cronbach's value is found to be $0.77 > 0.70$. Thus, it suggested that dataset is true, and can be used for further statistical investigations.

Table 4 - Correlation Analysis

Correlations			
	[1]	[2]	[3]
[1] Interest Rate	I	.618**	.372**
		0.000	0.000

[2] Inflation Rate	.618**	I	.217*
	0.000		0.030
[3] Personal Finances	.372**	.217*	I
	0.000	0.030	

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Correlation analysis was used to statistically analyse the association between variables, involved in research. Imperatively personal finance has a positive and moderate association with interest rate, as coefficient value is computed to be 0.372. On contrary, personal finances has a positive, but weak association with inflation rate, as coefficient value is 0.217. Hence, both relationship is found to be significant as sig value is found to be less than 0.05. Further, above table also shows positive and moderate association between inflation and interest rate, as coefficient value is found to be 0.618. Thus, it implies that collinearity does not exist among variables, and linear regression can be used for further statistical analysis.

Table 5 - Regression Analysis

Coefficients					
	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	1.724***	0.332		5.200	0.000
Interest Rate	0.339***	0.105	0.385	3.210	0.002
Inflation Rate	-0.019*	0.111	-0.021	-0.172	0.086
R Square	0.739				
Adjusted Square	R	0.721			
Sig.	0.001				

Multiple linear regression model has also been used to analyse the statistical influence of inflation and interest rate on personal finance of lenders. Notably, interest rate has a positive and significant influence on personal finances of lenders, as coefficient value is found to be 0.339, and sig value is $0.002 < 0.01$. Thus, it implies that increase in interest rate tends to increase in the savings, budgeting, and retirement planning. On contrary, inflation rate has a negative and significant influence on personal finances, as coefficient value is identified as -0.019, and sig value is $0.0086 < 0.1$. It depicts that increase in inflation rate has a negative influence on personal finances (i.e. savings, budgeting, and retirement planning) of lenders.

Discussion

The main intent of the researcher was to empirically analyse the impact of interest rate and inflation rate on personal finances, specifically on lenders. Findings show a positive association between interest rate and personal finances, as higher interest rate tends to increase in the saving and retirement planning. Similarly, findings in the previous studies also confirms this relationship, as higher interest rate promote saving which also limits the current demand, and resulted decrease in the inflation rate.^{17, 18, 19} This is the reason interest rate is used to enhance saving and control rate of inflation.^{20, 21} Thus, based on aforementioned studies and findings in the current research alternative hypothesis is accepted and null hypothesis is rejected.

Further while referring to inflation rate, there is a negative influence on personal finances, as it reduced standard of living, consumption, and rate of saving. Findings in previous theoretical researches also confirms this relationship. Likely^{22, 23} in their study indicated that higher rate of inflation tends to decrease in cost of living, and negative influence on savings. Thus, based on aforementioned studies and findings in the current research

alternative hypothesis is found to be true, and null hypothesis is rejected. Further, findings in the current research can also be summarise with the help of hypothesis assessment, as shown below:

Table 6 - Hypothesis Assessment

Hypothesis	Statement	Accepted	Rejected
HIa:	Interest rate has a significant effect on the personal finances	Accepted	
H0a:	Interest rate does not have a significant effect on the personal finances		Rejected
HIb:	Inflation rate has a significant effect on the personal finances	Accepted	
H0b:	Inflation rate does not have a significant effect on the personal finances		Rejected

Conclusion

The outbreak of Covid-19, Brexit, and Russia-Ukraine War have been significantly increased the rate of inflation, interest rate, and economic uncertainties. Therefore, the main intent of the current research was to analyse and understand the impact of inflation and interest rate on personal finance, specifically on lenders. In order to analyse these influence, primary quantitative method was used, and information were derived from 100 households using survey questionnaire, based on Likert Scale. For data analysis, statistical tools (i.e. descriptive, reliability, and inferential statistics) were used via using SPSS software. However, findings show that inflation has a negative and significant influence on personal finance, as it increases cost of living. On contrary, interest rate has a negative and significant influence on personal finance, as promote saving.

Hence, findings in the current research has significantly helped in filling the gap in previous studies relevant to research phenomenon, but it is also limited to the primary quantitative research. Hence, both primary and secondary

quantitative aspects can be used for further in-depth analysis. Additionally, consideration of control variables (i.e. income, accessibility to banking institutions, and facilities provided for personal finances) can also be used to avoid biasness in research outcomes.

Demographics

Gender

0 = Male

1 = Female

Age

0 = 18-25

1 = 26-30

2 = 31-40

3 = 41-50

4 = 50 Above

Survey Questionnaire

Inflation rate

Inflation has significantly declined in your purchasing power and standard of living.

Increasing rate of inflation has also eroded saving over time.

Higher rate of inflation also leads to increase the interest rate which negatively influence on investment.

Interest Rate

Interest rate leads to increase in cost of borrowing which positively influence on saving?

At what extent, do you agree that lower interest rate is not favorable for saving.

Lower interest rate tends to lower credit risk, and positively influence on personal finance.

Personal Finances

Personal finance is positively associated with interest rate.

Higher inflation tends to decrease in personal finances.

Higher rate of inflation allows the borrower to pay lender back less worth money than it actually borrow.

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