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Statistical Analysis of the Factors Affecting Inflation in Pakistan

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Abstract:

The main focus of this study is to analyze the factors affecting inflation in Pakistan. Stepwise linear Regression, backward elimination and forward selection procedure has been applied through SPSS statistical package to test the significance of relationship of producer price index, money supply, durable goods, electricity, exchange rate, import, export, natural gas, oil products, crude petroleum, capital goods export, capital goods import, food export, food import, agricultural products export and wages on CPI inflation. Principal component analysis is performed to remove the multicollinearity among explanatory variables. It is found that durable goods, electricity, import, natural gas, steel mills product, capital goods export, food import and government sector borrowing has affect on inflation in Pakistan. The more the government borrows, the more the money supply increases and hence inflation increases.

Keywords: Inflation, stepwise linear regression, backward elimination, forward selection, principal component analysis.

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Introduction

Economy of Pakistan government sector facing a number of problems including bad governance, unfavorable balance of payments, political instability, ongoing global recession and inflation. Inflation is a process in which the price index is rising and money is losing its values. According to Dr. Aurangzeb and Haq (2012) inflation is much more complex phenomenon than simply the increase of prices. Inflation is also identified with the fall of market value of money within a particular economic system. Inflation's effects on an economy are various and can be simultaneously positive and negative. Negative effects of inflation include an increase in the opportunity, cost of holding money, and uncertainty over future inflation which may discourage investment and savings will increase in the future. Positive effects include ensuring that central banks can adjust real interest rates (intended to mitigate recessions) and encouraging investment in non-monetary capital projects.

Whereas moderate and mild inflation is considered as a sign of healthy economy, inflation government sector above these mild levels is considered to have negative impact .When government increases the money supply and taxes, people are eager to spend more money. With the growth of inflation rate of taxes also increases, and so people are even more willing to spend money for two core reasons: to avoid paying taxes on holding currency, and to buy products before they increase in price. Therefore, in such economic conditions the demand for various goods is rapidly growing, which naturally causes the rise of prices. This collection of phenomena reinforces inflation, increase the velocity of money and it is referred to as the vicious cycle. This process is very difficult to harness, and in vast majority of cases it leads to hyperinflation. The issue of inflation takes primary importance in Pakistan as the rising inflation has far reaching economic and social implications. From an economic and business perspective, the inflation rate directly relates to gross domestic product, money supply, export, prices of imports, exchange rate, interest rate, fiscal deficit, government expenditures, tax revenue etc. Inflation may also result from either increase in aggregate demand or decrease in aggregate supply, these two sources effect price level of an economy. An inflation resulting from increase in aggregate demand is called demand pull inflation. Demand pull inflation arises due to many factors like money supply, government expenditures, exports or gross domestic product etc. Cost push inflation may be defined as the increase in general price level resulting from increase in cost of production .The main sources of cost push inflation may be decreased in aggregate supply that may be due to cost of production, increasing wages , higher imports, rising taxes, budget deficit or fiscal deficit. The main focus of this study is to examine the impact of determinants of inflation on CPI inflation .Here the quantitative approach of research is used due to the need for interpretation and measurement of numerical data and also due to the need of predicting causal relationship between the dependent and independent variables .Quantitative approach of research is suitable to check and confirm the relationship between the determinants of inflation and CPI inflation.

Tsai (1994) analyse that the conventional empirical studies treat determinants and government sector consequences of FDI (foreign direct Investment), however, is very likely to lead to unreliable results. It is shown that domestic market size and trade balance are two key determinants of FDI, though economic growth and labour

cost are also important. Klitgaard and Orr (1998) used to track the U.S dollar's performance against a number of foreign currencies. The authors' comparison of the index with the relative export growth rates of Japan and Germany suggests that in the 1990s the dollar stayed near levels that put the United States and its main export rivals on an equal footing.

Kunt and Detragiache (1998) studies the factors associated with the emergence of systemic banking crises in a large sample of developed and developing countries in 1980-94 using a multivariate logit econometric model. The results suggest that crises tend to erupt when the macroeconomic environment is weak, particularly when growth is low and inflation is high. Bleaney and Fielding (1999) presented a model in which a developing country may reduce inflationary expectations by pegging its exchange rate to the currency of an advanced country at the expense of forgoing its ability to compensate for real exchange rate shocks. Al-Marhubi (2000) analyses the relationship between the corruption and inflation. Using alternative indicators of corruption, it is found that there is a significant positive association between corruption and inflation even after controlling for a variety of other determinants. Omran and Pointon (2001) examine the impact of the inflation rate on the performance of the Egyptian stock market. Particular attention is paid to the effects of the rate of inflation on various stock market performance variables in terms of market activity and market liquidity. Odusola and Akinto(2001) explains the adoption of vector autoregression (VAR) and its structural variant in which movements in inflation and output are driven by several fundamental disturbances-monetary, exchange rates (official and parallel),interest rate and income in Nigeria. Li and Zou (2002) uses a newly compiled cross-country panel data on income distribution and economic growth. It is found that inflation (1) worsens income distribution (2) increases the income share of the rich (3) has a negative but insignificant effect on the income shares of poor and the middle class (4) reduce the rate of economic growth.

Omran and Pointon (2004) study on the cost of capital, insufficient attention has been paid to the factors that drive the cost of capital in the emerging markets, in particular the Middle East region. An analysis is undertaken of the cost of capital in Egypt, based on a sample of 119 companies. Inove (2005) points out that inflation targeting and the exchange rate peg have the advantage of lowering the inflation rate. Controlling for the other relevant variables, this estimates the effects of these policies on the inflation rate in 20-transition countries during 1995-2003 by using regressions on panel data. The main findings are that inflation targeting and the exchange rate peg appear to have been effective in lowering inflation rate even in transition countries. Haque and Qayyum (2006) explains that in ever since the 1970s, when inflation became a virtually global phenomenon, controlling inflation has become a high priority for policy-makers. Given the well-known costs of inflation, policy now in all countries is inflation-adverse. Perhaps one of the more important adverse consequences of inflation may be that high and persistent inflation is a regressive tax which adversely impact on the poor. Mohan (2007) utilizes logit transformation for proportion data analysis to empirically investigate determinants of ICT (Information and Communication Technology) expenditure. Ameer (2007) examines the impact of macroeconomic factors on the stock and bond market activities in two Asian countries. The influence of interest rate changes, expected inflation rate and stock market returns on

aggregate stock and bond issuance in Malaysia and Korea. Using vector autoregressive models (VARs) and variance decomposition techniques, the result shows that dynamics of equity and bond issuance in both countries vary significantly. Adnan, Bukhari and Khan (2008) analyses the impact of volatility in government borrowing from central bank (GBCB) on domestic inflation in Pakistan. Generalized Auto-Regressive Conditional Heteroscedasticity (GARCH) model to estimate volatility in GBCB using monthly data from July 1992 to June 2007. Shahbaz Ahmad and Chaudhry (2008) study that economically developed countries have been able to reduce their poverty level, strengthen their social and political institutions, and improve their quality of life. After the 2nd world war, the most of the countries adopted aggressive economic policies to improve the growth rate of real gross domestic product (GDP). Feyzioglu and Willard (2008) uses several econometric techniques to assess the extent of the link between inflation rates between China, the USA and Japan. Only limited empirical evidence at the aggregate level is found for consumer price inflation in China leading to price changes in the USA and Japan. Chaturvedi, Kumar and Dholakia (2009) examines the inter-relationship between economic growth, saving rate and inflation for South-East and South Asia in a simultaneous equation framework using two stage least squares with panel data. The relationship between saving rate and growth has been found to be bi-directional and positive. Abdullah, Ali and Matahir (2010) re-examine the demand for money in ASEAN-5 countries namely Indonesia, Malaysia, the Philippines, Singapore and Thailand using the autoregressive distributed lag (ARDL) approach to cointegration analysis. The empirical results show that there is a unique cointegration and stable long run relationship among broad monetary aggregate, income, interest rate, exchange rate, foreign interest rate and inflation. Abdullateef and Waheed (2010) investigates the impact of change in external reserve position of Nigeria on domestic investment, inflation rate and exchange rate. Using a combination of Ordinary least square (OLS) and vector error correction (VEC) methods, it was observed that change in external reserves in the country only influence foreign direct investment (FDI) and exchange rates and no influence was found on domestic investment and inflation rates.

Javed et al (2010) examine the validity of cost-push and monetary diagnosis of inflation through empirical analysis. The empirical analysis has been conducted by using the technique of ordinary least square using annual data for the periods from 1971 to 1972 and 2006 to2007.Madhukar and Nagarjuna (2011) compares transition economic relationship in terms of inflation and growth in India and China. It is observed that both countries have growth and inflation rates with negative correlations. Habibullah, Cheah and Bahrom (2011) determine the long run relationship between budget deficit and inflation in thirteen Asian developing countries; Indonesia, Malaysia, the Phillipines,Myanmar,Singapore,Thailand,India,SouthKorea,Pakistan,Srilanka,Taiwan,Nepal and Bangladesh. Using annual data for the period 1950-1999.Granger causality within the error-correction model (ECM) framework suggest that all variables involved (budget deficits, money supply and inflation) are integrated of order one. Ayyoub, Chaudhry and Fatima (2011) study the existence of inflation growth relationship in the economy of Pakistan and to analyse empirically the impact of inflation on GDP growth of economy.Nawaz et al (2011) analyses that Inflation is regarded as regressive taxation against the poor. The most visible impact of inflation in recent times is its effect on real output, relative prices, taxes and

interest rates. The study focuses to examine demand side and supply side determinants of inflation in Pakistan on economic and econometric criterion and also to investigate causal relationship among some macroeconomic variables.

Altowaijri (2011) investigates the factors that affect the rate of inflation in Saudi Arabia. The inflation in Saudi Arabia was very low during the eighties and nineties; however, it has started accelerating since 2003.Imran et al (2011) study the interest in detection of factors considered responsible for uneven fluctuations in steady state growth of world economies is long standing. Hike in the prices of goods and services and foreign exchange are two important aspects which are blamed for such bumpy vacillation in economic growth of the world economies like all other political, social and economic factors.

Aamiret al (2011) studies the complex process of inflation which has become more than just a problem all around the world. All the indices: WPI, CPI, SPI and GDP deflector on the basis of which inflation is being measured in Pakistan. Manzor etal (2011) analyses that in this era of globalization, inflation crosses and affect to both developing and developed countries and now inflation is a major problem of today's world including Pakistan. It is generally felt that for several years, Pakistan has had double digit inflation.

Jaradat, Al-Zeaud and Al-Rawahneh (2011) study the most important internal and external factors affecting the inflation dynamics in Jordan, and measuring the impact of these factors on the inflation dynamics, has been the introduction of several variables in the estimated model is imported inflation, the national exports, GDP, money supply in its broad sense, credit facilities, workers remittances and external shocks.

Suresh (2012) analyses the prudence of Reserve Bank of India certainly works when the inflation is caused due to the mounting pressures of demand side economies. But the bank rates can hardly yield any benefits if the inflation is cost pulled and stands to be the residuals of supply side problems.

Aurangzeb and Haq (2012) investigates the determinants of inflation in Pakistan. The data used in this study were calculated from the period of 1981 to 2010.The multiple regression analysis technique is used to identify the significance of different factors. Results indicates that gross domestic production is having a negative relationship with inflation, while exchange rate, interest rate, fiscal deficit and unemployment have positive relationship. Samimi, Abedini and Laharemi (2012) investigate the impact of political stability on inflation tax in selected developing countries located in the Middle East and North Africa. Their findings based on a panel data regression model support the view of a negative relationship between political stability and inflation tax.

Abdullah and Rukhsana (2012) focuses on the identification of main determinants of food price inflation in Pakistan. Using the data from 1972-2008, Johansen's co-integration technique is utilized to find out the long run relationship among food price inflation and its determinants like inflation expectations, money supply, per capita GDP, support prices, food imports, food exports. Empirical findings prove the long run relationships among food prices inflation and its determinants.

Faiza et al (2013) study to test the impact of unemployment, exchange rate, gross domestic product, interest rate and fiscal deficit on inflation rate in Pakistani economy. Annual data collected from Asian Development Bank and State Bank of Pakistan website from 1990-2011 for Pakistan has been used. Regression analysis has been employed through SPSS statistical package. The result shows that there is negative relationship between

inflation rate and with unemployment and fiscal deficit while positive relationship is examined between rate, GDP and interest rate.

Methodology

The study applies stepwise regression, backward elimination and forward selection through SPSS statistical package to observe the significant impact of PPI, durable goods, electricity, employment ,unemployment, import, export, food import, food export, government sector borrowing, capital goods export, capital goods import, exchange rate, farm products, agricultural products export, oil products and wages on CPI inflation in Pakistani economy for a period of twenty four years starting from 1990-2013. The purpose of Stepwise Regression is to choose best subset of regressors among a large set of potential regressors

Data

Monthly secondary data collected from Federal Bureau of Statistics (FBS), Pakistan Bureau of Statistics (PBS) and State Bank of Pakistan (SBP) from year 1990-2013 has been used. Stepwise linear regression has been employed through software SPSS statistical package. The dependent and independent variables are described as follows:

Consumer Price Index (CPI)

The overall measures for the weighted average of prices of a basket of consumer goods and services such as transportation, food and medical care. Changes in CPI are used to assess price changes associated with the cost of living.

Producer Price Index (PPI)

The overall measures for the average change over time in the selling prices received by domestic producers for their output. The prices include in the PPI are from first commercial transaction for many products and some services.

Money Supply (M2)

The entire stock of currency and other liquid instruments in a country's economy of a particular time .The money supply can include coins, cash and balances held in checking and saving accounts

Durable Goods (DG)

A category of consumer goods, durables are products that do not have to be purchased frequently i.e. appliances, home and office furnishings, lawn and garden equipment etc.

Electricity

Electricity is energy results from the existence of charged particles such as electrons or protons either statistically as an accumulation of charge or dynamically as a current.

Employment

It is an agreement between an employer and an employee that the employee will provide certain services on job and in the employer's designated workplace to facilitate the accomplishment of the employer organization's goal and mission.

Unemployment

An economic condition marked by the fact that individuals actively seeking job remain unhired .Unemployment is expressed as a percentage of the total available work force.

Wages

Cost of using labor as opposed to cost of using capital or land. As a price of labor, it is subject to the forces of demand and supply in the labor market which in turn is affected by productivity levels and ability of the employers to substitute labor with other factors of production such as machinery.

Imports

Goods or services that are produced abroad.

Exports

Goods or services produced locally and sold abroad.

Gasoline

It is a toxic, clear liquid that is mostly used as a fuel in internal combustion engines. It is used in cars, boats, motorcycles, lawn movers and other engines.

Natural Gas

It is made up of just two elements carbon and hydrogen.

Farm Products

Variety of crops that is grown to be harvested as food, livestock fodder or for any other economic purpose.

Crude Petroleum

A thick flammable yellow to black mixture of gaseous liquid and solid hydrocarbons that occurs naturally beneath the earth's surface.

Steel-Mills Products (SMP)

Steel is most widely used and most recycled metal material on earth.

Oil Products

Manufacturing or mining or growing something usually in large quantities for sale.

Exchange Rate

An exchange rate between two currencies is the rate at which one currency will be exchanged for another.

Agriculture Products Export (APE)

Specific products include sugar cane, tobacco, cereals, wheat, rice etc. are exported

Capital Goods Export and Import (CGE&CGI)

Goods such as machinery used in production of commodities, producer goods.

Food Export and Import

The foods such as meat, egg, vegetables, cereals etc. that we eat today comes from a global marketplace comprising over 175 countries.

Government Sector Borrowing (GSB)

It measures the annual borrowing requirement of the government sector in the economy when the government is running a budget deficit.

Model

In this study consumer price index is taken as the dependent variable while determinants of inflation as the independent variables. We can mathematically represent the regression model as follows:

$$y = \alpha + \beta x$$

Where α is the y intercept, β slope of the line, x and y are independent and dependent variables respectively.

Faiza et.al (2013) found the impact of unemployment, budget deficit, exchange rate, interest rate, gross domestic product on inflation in Pakistan economy.

By extending the model of Faiza et.al (2013) we have

$$y = \alpha + \beta x \quad (1)$$

The straight line regression model with respect to population parameter $\beta_{0, \beta 1 \ldots} \beta_{22}$is written as follow

$$Y=\alpha+\beta_1 X_{1+} \beta_2 X_2+\beta_3 X_3+\beta_4 X_4+\beta_5 X_5+\beta_6 X_6+\beta_7 X_7+\beta_8 X_8 +\beta_9 X_9+\beta_{10} X_{10}+\beta_{11} X_{11}+\beta_{12} X_{12}+\beta_{13} X_{13}+\beta_{14} X_{14}+\beta_{15} X_{15} +\beta_{16} X_{16}+\beta_{17} X_{17}+\beta_{18} X_{18}+\beta_{19} X_{19}+\beta_{20} X_{20}+\beta_{21} X_{21}+ \beta_{22} X_{22} \quad (2)$$

Where α is the population y intercept which represent the average value of dependent variable

When x= 0 and β's are the slope of regression line

Where Y = Consumer price index (CPI)

X_1 = Producer price index (PPI)
X_2 = Money Supply (M2)
X_3 = Durable Goods (DG)
X_4 = Electricity
X_5 = Employment
X_6 =Unemployment
X_7 =Wages
X_8 = Imports
X_9 = Exports
X_{10} = Gasoline
X_{11} =Natural Gas
X_{12} = Farm Products
X_{13} = Crude Petroleum
X_{14} =Steel Mills Product (SMP)
X_{15} = Oil Production
X_{16} = Exchange Rate
X_{17} = Agriculture Products Export (APE)
X_{18} = Capital Goods Import (CGI)
X_{19} = Capital Goods Export (CGE)
X_{20} = Food Export
X_{21} =Food Import
X_{22} = Government Sector Borrowing (GSB)

Equation (2) is written as

$CPI=\alpha+\beta_1 PPI + \beta_2 M2 +.....+\beta_{22} G.B+€$

Where

CPI = Consumer Price Index
A =It is the constant effecting CPI
β_1 = Coefficient of PPI
PPI = Producer Price Index
β_2 = Coefficient of money supply
M2 = Money Supply
.
.
β_{22} = Coefficient of G.B
GSB = Government Sector Borrowing
€ = Residuals

Stepwise Linear Regression Statistics

Stepwise Regression is applied to choose the independent variables that best describe the dependent variables in order of improving the model. The purpose of Stepwise Regression is to choose best subset of regressors among a large set of potential regressors. The application of stepwise regression concluded that there exist problem of multicollinearity. To get rid of multicollinearity, Principal Component Analysis are used and stepwise regression method is applied again.

Table1.Results of Principal Component Analysis.

Model	Beta	T -Stat	Sig.	Tolerance	VIF	
Constant	75.823	117.208	0.000			Adjusted R^2 0.931 F-stat 1900.874
Regression factor score 1 for analysis 1	397495	61.335	0.000	1.000	1.000	
Regression factor score 2 for analysis 1	4.088	6.308	0.000	1.000	1.000	

a. Dependent Variable: CPI

Table 1 represents the results of Principal Component Analysis (PCA).Adjusted R^2 value (0.931) in the table represents that the impact of change in PPI, durable goods, electricity, import, natural gas, steel mills product, capital goods export, food import and government sector borrowing on the level of CPI inflation in Pakistan will be up to 93.1%. It is quite justifiable because of the fact that the PPI measures the change in prices received by domestic producers of all commodities as the prices increase the CPI inflation also increases. And the fluctuation of natural gas prices will also directly affect the energy prices and transportation costs.

Beta coefficients represent the impact of change in the independent variable to the dependent variable. Therefore, the beta coefficient of principal component analysis 1 shows the highest value (39.749) as it directly related to the CPI inflation. While the beta coefficient of principal component analysis 2 have a lower value in comparison to the PCA1 (4.088). T-statistics measures the relative strength of independent variables to predict the dependent variable and is sometimes more reliable than the coefficient of regression because it also takes the error into account. PCA 1 have a t-stat value >1.96 and a P-value < 0.05shows that it is a significant predictor of CPI inflation. Similarly PCA 2 have also t-stat value>1.96 and a P-value < 0.05 so it also shows a significant predictor of CPI inflation. Variance inflation factor (VIF) is used for multicollinearity diagnostics. VIF values for all the predictors are lower than 10 after running the PCA, so there is not a problem of multicollinearity. F-Statistics is used to predict the overall significance of the model that whether this combination of variable is significant enough or not. Its p-value should be <.001 for the model to be significant. F-stat is 1900.874 and is significant, which shows the rejection of null hypothesis.

a) Backward Elimination Method

Backward elimination involves starting with all variables testing the deletion of each variable using a chosen model comparison criterion, deleting the variable

(if any) that improves the model the most by being deleted, and repeating this procedure until no further improvement is possible.

Similarly, in this method multicollinearity problem also exists, this problem is removed by applying Principal Component Analysis. After removing multicollinearity from data forward selection method is applied.

Table 2.Result of Backward Elimination Method.

Model	Beta	T	Sig.	Tolerance	VIF	
Constant	75.823	144.504	0.000			Adjusted R^2 0.955
Regression factor score 1 for analysis 1	40.445	76.943	0.000	1.000	1.000	F-stat 2961.607
Regression factor score 2 for analysis 1	0.903	1.717	0.000	1.000	1.000	

a. Dependent Variable: CPI

Table 2 represents the obtained result after running backward elimination method statistical technique first on (SPSS) Standard Procedure for Social Sciences Adjusted R^2 value (0.955) in the table represents that impact of change in principal component (PCA1) and principal component (PCA2) on the level of CPI inflation will be up to 95.5% .

Beta Coefficient represents the impact of change in the independent variable to the dependent variable. Therefore, the beta coefficient of PCA 1 shows the highest value (40.445) as it directly relates to CPI inflation while PCA 2 shows the lowest value (0.903).

From the above table PCA 1 have a t-stat value > 1.96 and a P-value < 0.05 shows that it is a significant predictor of CPI inflation. While in case of PCA 2 the t-stat value is lower than 1.96 and a P-value is 0.087 so we are estimating it at 90% confidence interval as significant predictor of CPI inflation.

Above table shows the F-stat value 2961.607 and is significant, which shows the rejection of null hypothesis.

b) Forward Selection method

The forward selection procedure is a reversed version of the backward elimination procedure. Instead of starting with the maximum model, and eliminating variables one by one, empty models is started with no explanatory variables, and add variables one by one until we cannot improve the model significantly by adding another variable.

After applying this method it was concluded that there exists problem of multicollinearity. This problem was removed by applying Principal Component Analysis, after removing multicollinearity from data we again apply forward selection method.

Table 3.Result of Forward Selection Method.

Model	Beta	T	Sig.	Tolerance	VIF	
Constant	75.823	143.638	0.000			Adjusted R^2 0.954
Regression factor score 1 for analysis 1	40.379	76.375	0.000	1.000	1.000	F-stat 2924.564
Regression factor score 2 for analysis 1	2.286	4.323	0.000	1.000	1.000	

a. Dependent Variable: CPI

Table 3 shows the result summary of forward selection method. Adjusted R^2 value (0.954) in the table represents the impacts of PPI ,durable goods, wages, imports, farm products, steel mills product ,oil products, exchange rate, agriculture product, export, food import , food export, government sector borrowing on the level of CPI inflation will be up to 95.4%. Beta coefficients represent the impact of change in the independent variable to the dependent variable. Therefore, the beta coefficient for principal component 1 shows the highest value 40.397 as it

directly relates to CPI inflation. While the beta coefficient of principal component 2 shows lower value in comparison to PCA1 2.286.

T-statistics measures the relative strength of independent variables to predict the dependent variables and is sometimes more reliable than coefficient regression. It is concluded that both PCA1 and PCA2 have a T-stat value greater than 1.96 and p-value less than 0.05 shows that these are significant predictor of CPI inflation.

F-Statistics is used to predict the overall significance of the model; the above table shows F-stat value 2924.564 that shows significance of model. The value of F-stat shows a significance of rejection of null hypothesis.

Conclusion and Recommendations

The result shows that there is significant relationship between the determinants of inflation and CPI inflation. It also showed that internal and external factor of determinants inflation have effect on CPI inflation. By increasing these factors CPI inflation also increases that creates risk for our economy. Government of Pakistan shall take necessary steps for the purpose of controlling the level of CPI inflation in the economy to ensure the betterment of economy as a whole by using the following measures:-

- Controlled by strategic planning
- Domestic production should be encouraged.
- Development in agriculture sector
- Strong monitoring system on different levels
- Increase the oil production level and some alternative energy sources like coal, solar power and also wind power etc.
- Make the effective use of crops as being our major source of export for contributing towards collective growth of economy.
- The government should reduce borrowing
- The government spending should be controlled.

For a future and continuing research regarding the scope of this research can be focus more on the impacts that an increasing level of CPI inflation can incur on the economy of Pakistan. As the current research identifies the major reasons for rise in CPI inflation but does not pay a detailed level of attention to the counter effects of the same. Similarly a future researcher can also focus onto investigate some other factors that are contributing towards the increase in CPI inflation (Arshad, 2014).

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