

Effect of increasing Food Prices on Poverty in Pakistan

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Abstract---- The population of world has growing day by day according to World Bank out of 7.4 billion 1011 million people are living below poverty line which is 14.5 percent of world inhabitants. Poverty is the most concerning issue which is deeply rooted in society and adversely affected many people in Pakistan. The main objective of this study is to estimate the relationship between food prices and poverty for a developing country like Pakistan. The concept of absolute poverty is used in this study; poverty is used in head count ratio that is percentage of population living below 1.25US dollar per day. It is quantitative study and data is time series secondary data having 31 observations from 1984 to 2015. The result of this study shows that increasing food prices shows significant and negative effect on the poverty. In Pakistan people live in rural area more than people live in urban area. In villages people belong to agriculture sector that generate employment increase economic growth and reduces poverty. Some people who are producer of food get benefit from rising food prices and food consumers are adversely affected by this. Government has to increase its expenditure on pro poor and agriculture sector it increases productivity and decrease poverty. This study helps in suggesting not only logical but also practical policy recommendation and ways to decrease poverty in Pakistan. The need is to create employment opportunities that increase real income of those who are affected by increasing food prices so that they can fulfill their food necessities.

Index Terms---- economic growth, food inflation, inflation, Pakistan, poverty, regression, social safety net.

I. Introduction

At present a large portion of the world is facing the problem of poverty. As human race survive the problems like poverty, inequality, inflation, unemployment, and crime will be continuous. Poverty is become the plague of 21 century which is deeply rooted in society. These are the concerning issues for social scientist and policy formulators. The most basic form of poverty is when people in society are unable to afford basic necessities and not even able to fulfill food requirements. Researches explain poverty differently in literature like violation of fundamental rights and exploitation make people poor. There are three methods to measure poverty one is absolute poverty and other is relative poverty and last one is capability deprivation. Absolute poverty is when people not having enough money to buy basic necessities which is desirable for survival like food, shelter and clothing. One of the forms of absolute poverty is the proportion of the population eating less food than is required to sustain the human body which is approximately 2000-2500calories per day. It can also be measure in monetary term for example income and consumption pattern. Relative poverty is when people have enough money which is needed for survival but not that much in comparison with other who lives in society. And capability deprivation is deficiency in capability to live better life, they are willing to but unable to participate in politics and policy making that had strong influence on their lives. By United Nation poverty is the world greatest challenge for Sustainable Development Goals from 2016 to 2030 and the goal is ending poverty

and its all forms everywhere. According to World Bank the global poverty indicators is poverty head count ratio according to which percentage of population with an income was less than 1.25, and 2, US dollars per day and currently it is 1.90 and 3.10 dollars per day. Internationally World Bank and nationally government of state provide poverty line which changes time to time. The UNO declared 17 October as the International Day for Eradication of Poverty. The statistics given by World Bank in 2010 show 1.22 billion of the world living under the poverty line most of them belong to the developing countries including Pakistan. One of the main causes of poverty is inflation and increase in prices of food commodities. The contribution of food prices is major factor in overall changes of price trend. World Bank mention in 2010 report that food prices become double from 2000 at global level and major rise in prices occur in prices of wheat and rice that worsen the level of poverty. There are two major reasons for the increase in food prices. Firstly when demand of food increases than its supply and secondly when there is increase in prices of raw material like fertilizer and seeds so prices of food also increase. Due to increase in food prices people are unable to purchase food item and that lead to increase in poverty or as the food is basic necessity of life so a person's spending on food item, increase lending and less budget available for other item that increase poverty level.

Poverty in Pakistan

According to World Bank poverty gains during past decade have been impressive but difficult to sustain 52% in 1981, 43% in 1990 and 21% in 2010 people lived below

poverty line in developing countries. Pakistan saw a decline in poverty trends, Poverty Head Count Analysis given by World Bank in 2014 show statistics of 2008 is 21.04% population living below poverty line but poverty rate in 2002 was 35.9%.

II. Problem Statement

Social evils like poverty and inflation are the realities of Pakistan. Poverty and inflation deeply reside in root of Pakistan and weakens its economy.

III. Significance

This study is beneficial because it is important to know the causes of poverty in Pakistan. There are so many causes of poverty in Pakistan e.g. unemployment, inequality, gender discrimination and illiteracy etc. Pakistan is an agricultural country so what are the reasons behind increasing food prices is major concern of this study. But main focus of this study is to highlight how rising food prices influence the degree of poverty. This research is beneficial to researchers, policy makers and social scientists for the enhancement of the level of social welfare and poverty alleviation through its findings. Academic significance of this study would be that it may provide deep insight relationship between poverty and food inflation with a practical example of country.

IV. Literature Review

Azid *et al.* (2012) considered the case study of Pakistan in context of rising food prices and compares it with South Asian Region countries. Researchers investigate the link between rising food prices and poverty. Author concluded that relationship between food prices and poverty is insignificant. Ivanic and Martin (2008) found that when rising in staple food prices raise the real income of those who sell food. Due to rising food prices that also influence the food consumer badly. Impact of poverty depend upon these two effects and create balance between them. High food prices increase poverty in more frequent way as compare to reducing it. Chaudhary and Ahmad (1996) highlight that from several years Pakistan was facing double digit inflation in 1993-94 is 11.27%, in 1994-95 13.02% and in 1995-96 is 10.79%.. This study examines the impact of inflation on savings and economic growth. Author considered inflation as a hidden tax which is unseen. Study concluded that in Pakistan there are different sources of inflation that is not only monetary but also structural phenomenon such as constant growth, public dept and import prices these all significantly effects

inflation. Chani *et al.* (2011) explains relationship of economic growth, investment, inflation and trade openness on poverty. The result of this study shows that economic growth and investment have negatively effects poverty but inflation and trade openness have not significant effect on poverty. Reason for the insignificant effect of trade on poverty in Pakistan was not good trade policy. Ahmed Raza Cheema and Maqbool H. Sial (2012) have done research on link between poverty, inequality and growth by using pool regression analysis. Researchers take data from eight households belong to four provinces including rural and urban areas. And perform analysis on eight years in Pakistan from 1992-93 to 2007-08. Result demonstrates that in first equation growth and inequality shows significant relationship with positive sign. First equation explains inequality increases by increasing growth but trend of inequality increases more in urban area than in rural area. In second equation there is significant relationship between growth and poverty with negative sign which shows growth increases poverty decrease. Fan *et al.* (2004) examine the effects of government spending on growth of agricultural and rural poverty in Uganda. The government expenditure on agricultural research and extension by increasing knowledge of farmer regarding agricultural practices enhance agricultural productivity. Spending of government on agriculture research, extension and rural roads contribute in poverty reduction. Meth (2007) found that unemployment is the major cause of poverty in Africa. According to an estimate in South Africa million workers in households are jobless. Government considered that unemployment is a severe problem. The problem faced by unemployment worker for seeking job is they loss their hope whether they get job or not, there area where respondent live no job is available and they have not enough money to bear the cost transportation. In Africa poverty is accepted as political problem and government considered it as a problem but not taking steps to control it. Francis Musa Boakari (2004) conducts research on poverty and education on Brazil. According to researcher lack of education is the main cause of poverty.

Review of Food Prices in Pakistan

In Pakistan there are different food crops but wheat and rice is consider as major food crops because these are

cultivated in Pakistan as it is agricultural country. These two crops can be stored easily that's why these are called staple food. Increase in prices of important crops can contribute in increasing overall food prices. In Pakistan reason behind rise in food prices are domestic hoarding, increase in procurement prices of wheat, flood, drought, high income and smuggling of wheat. The focus on this study is specifically on Pakistan and through empirical analyses: study the impact of rising food prices, growth rate, government expenditure, income inequality, unemployment and literacy on poverty in Pakistan.

V. Methodology

a. Empirical Study

The concept of absolute poverty is used for empirical analysis of this study; poverty is used in head count ratio that is percentage of population living below 1.25 \$ per day.

b. Type of Study

Quantitative approach will be used for conducting this study, it is descriptive in nature as it investigate current phenomenon. In order to study the impact of rising food prices on poverty in Pakistan, data used for this study is secondary data which were collected from different sources e.g. Pakistan economic survey, World Bank, WDI, UNDP etc. For measuring the quantitative effect of rising food prices on poverty, the data is analyze statistically and represented in tabular form. Regression analysis and t test would be applied on data. This data is a time series secondary data and collection of data from these sources comprises of 31 observations from 1984 to 2015. Variables data of many years are missing so researcher interprets missing values through SPSS. These variables are measure through different units which are mentioned given below:

c. Dependent Variable

Poverty is dependent variable which is measured by head count ratio in 1.25 dollar. (POV)

d. Independent Variable

Consumer price index of Food (CPIF)

Gross Domestic Product growth rate of economy (GDPGR)

Government expenditures as % of GDP (GEXP)

Gini Coefficient of income inequality

Unemployment rate of people those are willing to work but unable to get job.

Literacy rate of people who are considered educated and can read and write.

VI. Results and Discussions

a. Estimation of Model

All the estimation in this study is done by using the software called E-Views. It's the most widely used software for advance econometric estimations. In this section equation is estimated through Ordinary Least Square Technique (OLS) and the result is interpreted. As a first step to estimation, unit root properties of time series data has been examined. For this purpose Augmented Dickey Fuller (ADF) test has been employed.

b. Unit Root test

This study followed the standard practices of testing the stationary of the variables by applying unit root test. The unit root test developed by Fuller (1976) and Dickey (1979) were employed to investigate whether the series contains a stochastic or non- stochastic trend. The tests for unit root test presented in table 1. After collecting data from different sources E-Views software use for processing data in regression equation. Regression analysis is used for data analysis. Relationship of both variables are confirmed through regression analysis. Significance level is 1%, 5% and 10% is used for statistical analysis.

Table 1: Unit Root Test

Variables	t-Statistics level	Prob.	Conclusion
Pov	-2.725318	0.081	I(0)
Cpifood	-3.723390	0.010	I(0)
Gdpgr	-3.860778	0.006	I(0)
Gini	-2.961856	0.050	I(0)
Govtexp	-5.958401	0.000	I(1)
Unemploy	-4.200159	0.002	I(0)
Litercy	-8.891223	0.000	I(0)
Govexp is taken as one period lag			

Source: Author's estimation using E-views

This study used Augmented Dickey Fuller test to confirm the stationary of variables. Significant level of variables are also mentioned which are stationary at 1% and 5% with t value. ADF test shows that CPI Food, GDP, government expenditure, unemployment and literacy rate significant at 1%. Gini coefficient is significant at 5%. And

poverty is significant at 10%. Conclusion explains all variables are significant at integrated of order zero I (0) and government expenditure is significant at integrated of order I (1) in stationary analysis. These two assure the stationary and integrated of order 2 I (2) is not required for analysis.

c. Equation:

$$\text{Poverty} = \alpha + b_1\text{CPIfood} + b_2\text{GDP} + b_3\text{GovExp} + b_4\text{Gini} + b_5\text{Unemploy} + b_6\text{LitR} + \mu$$

Table 2: Poverty in 1.25 dollars and Key Variables

Dependent Variable: Poverty				
Sample:1984-2015				
Explanatory Variables	Coefficients	Std. Error	t-Statistic	Prob.
Constant	228.325	45.117	5.06069	0.000
CPIFOOD	-0.82958	0.37010	-2.24149	0.034
GDP	-0.00281	0.87618	-0.00321	0.997
GOVTEXP	-2.04079	1.05371	-1.93677	0.064
GINI	0.95542	0.48331	1.97682	0.059
UNEMPLOYMENT	5.98336	1.91870	3.11844	0.004
LITERACY	-1.65718	0.32483	-5.10482	0.000
R-squared	0.80551	F-statistic	16.56744	Durbin-Watson stat 1.9094
Adjusted R-squared	0.75689	Prob(F-statistic)	0.000000	
***=Significant 1% **=Significant 5% *=Significant 10%				

Source: Authors estimation using E-Views

The first variable CPI of food is showing negative and statistically significant impact on poverty. The magnitude of coefficient was showing the 1% increase in consumer price index of food leads to 0.829 percent decrease in poverty. The value of t is 2.24. The variable significant value is 0.03 which is greater than 0.01 that's why it is significant at 5%.

The second variable is GDP growth rate showing negative and statistically insignificant effect on poverty. Coefficient shows that one percent increase in GDP growth rates brings 0.002 percent decrease in poverty. The significant value is 0.9 which is greater than 0.1 that's why it is insignificant.

The third variable is government expenditure shows negative and significant effect on poverty. The significant value of government expenditure is 0.06 and it is significant at 10%. The level of coefficient shows that one percent increase in government expenditure lead to decrease in poverty at 2.04 percent. The value of t is 1.93.

The forth variable is Gini coefficient shows positive and significant relationship with poverty. The significant value of gini coefficient is 0.05 which is significant at 5%. Coefficient shows that one percent increase in Gini

coefficient brings 0.95 percent increase in poverty. The t value is 1.97.

The fifth variable is unemployment shows positive and significant impact on poverty. The significant value of unemployment is 0.00 which is significant at 1%. The level of coefficient is express that one percent increase in unemployment leads to 5.98 percent increase in poverty. The t value is 3.11.

The last variable is literacy rate. The relationship between literacy rate and poverty is negative and significant. The significant value of literacy is 0.00 which is significant at 1%. The coefficient value explains that one percent increase in literacy rate leads to 1.65 decrease in poverty. The t value is 5.10.

In Table 2 R square is 0.805 which means 80.5% variation in poverty is due to CPI of Food, GDP Growth Rate and Total Government Expenditure, Gini Coefficient, unemployment and literacy rate.. And 19.5% variation is due to other factors for example corruption, trade and gender discrimination etc. Adjusted R square value is 0.75. Remaining change is by standard error term. . Significance of equation is shown by the value of f statistic is 16.5 which is greater than 1.725 with significant level is 0.000. This equation shows that model is good fit. Value of Durbin-Watson is 1.909. In regression estimation Durbin Watson is used to detect auto correlation. But in this equation value of Durbin Watson is 1.909 which is approximately equal to 2 which mean no serial co relation exit.

Government of Pakistan provides social safety nets to reduce poverty. These social safety nets consist of different programs for example Pakistan Poverty Alleviation Fund, Benazir Income Support program, Microfinance, Pakistan Bait ul Mal, People Works Program, Subsidy on wheat, sugar and fertilizer, and Zakat. Benazir Income Support Program is a cash transfer program given to married women who have very poor family members. Micro-finance provides cash in form of loan those who want to start their own business to make their living standard better. Pakistan Bait ul Mal is money given to disable, widow and orphan and people living below poverty line. People Works Program given cash for work in rural area there is need to water supply, electricity and roads. In People Rozgar Scheme educated people get employment. Zakat and Ushar is an amount of money only for Muslim's who are needy, deserving and poor.

Subsidies are for poor class of country due to rise in food prices government of Pakistan provide food products like sugar, wheat, rise on less prices. Pakistan has to face double digit inflation in many years from past three decades. Pakistan food inflation in 1980s its average was 7.9% and in 1990s was 10.1%. The high food inflation happens in 1988-89 that is 14.15%. The Pakistan has to face

double digit inflation from 1990 to 1997 and from 2006 to 2012. In 2008-09 food inflation was at its peak that was 23.13%. From 2005 to 2008 the wheat prices increase by 106 % and prices of other staple foods rose between 20% and 120%. A wheat price in Pakistan is increased due to hoarding and smuggling of wheat. In 2009 Pakistan increase procurement price of wheat that lead to increase in inflation. The flood of 2010 in Pakistan decreased the wheat production that raises the price. Government of Pakistan provide food support program which comes under pro poor budgetary expenditure. In 2008 government provide ration card system to distribute subsidized wheat. Government of Pakistan started Pakistan strategy support program in 2011; the program purpose is to enhance food security. Now a day's government provide food item subsidy through utility stores. Current poverty reduction policy which is prevailing in Pakistan is Benazir Income Support program.

VII. Policy Implications:

1. For controlling **food prices** it is proposed that government has to keep check on those people who did domestic hoarding, decrease procurement prices of wheat, did precautionary measure to cope up with natural disaster, ban excessive food exports and sell food at subsidize prices especially for those who are affected by increasing in food prices
2. Cash distribution is not a solution of poverty reduction in long term. This program makes poor people dependent instead of doing work. In Pakistan only 0.6% people pay income tax which is less than 1%. A government takes tax from poor in the form of regressive tax and distribute among poor. Government has to make cash transfer programs transparent and accountable so that most of the people get benefit from these programs that also reduces **income gap** with in country.
3. Make **education** affordable so that poor people can educate their children. Constitutional of Pakistan article no 25 stated that "the state shall provide free and compulsory education to all children of the age of five to sixteen years." There is need to implemented this article. Education provides opportunities to poor peoples to start business and do better job. And the gap between skilled and unskilled can be diminishing by educating more and more people that also leads to decrease income inequality and poverty.
4. Pakistan having youth boom so large no youth are unemployed. Recently government of Pakistan

increases the minimum wage level from 14000 to 15000. Due to increase in minimum wage level, unemployment also increases. Increase in willingness of people to do work but they do not get job. Because employers have to pay more money to employees so they start downsizing. Increase in minimum wages increase unemployment, inflation and poverty. Government increases **expenditures** on development projects that generate **employment** opportunities and also provide vocational trainings and skills to meet food requirements all these measurements leads to increase **economic growth**.

5. Those people who want to start their own business it is suggested that government provide them interest free loan to promote small and medium enterprises.

VIII. Conclusion

The purpose of this research is to investigate the effect of increasing food prices on poverty in Pakistan. Result shows that in Pakistan the relationship between food prices and poverty is significant. The negative sign with CPI food show that Consumer Price Index of food increases and poverty decreases. Constantine (2008) explains in his research that World Bank estimate that in developing countries almost 900 million people in rural area are attach with agriculture that create, opportunity for them to come out of poverty. Islam and Buckley (2008) mentioned in their study that people who are net producers get benefit from increasing food prices and other people who are net consumers are adversely affected from increasing in food prices. Those people who live in urban area and landless poor people live in rural area are more vulnerable to increase in food prices. In Pakistan people living in rural area are more than people living in urban area. In rural areas people belong to agriculture sector that contribute in economic growth and also generate employment. The relationship between economic growth and poverty is insignificant because benefit of growth doesn't trickle down to poor and only rich people are getting benefit from growth. The impact of government expenditure on poverty is negative and significant. Pakistani government tries to overcome food crisis by giving rashan card in 2008 and also budget fix for social safety nets. Currently Pakistan government made social safety net names as pro poor expenditure. And spending on these expenditure are 14.16% of GDP that help in reducing poverty. In Pakistan the accumulation of wealth is in rich class of society these are feudal, landlord, industrialist and politicians. On the other side farmer, laborer and employee belong to poor and

middle class of society. These people worked throughout their life but not earn enough money. Increase income and property taxes and decreases sales taxes on food items can helps in reducing gap between rich and poor. The relationship between unemployment and poverty is positive and significant. Agriculture contributes more in economy of Pakistan as well as generates employment. The effect of employment on poverty is significant. Pakistan government has to increase its development expenditure that creates employment. By providing employment opportunities people have benefit to earn and overcome the impact of rising food prices on poverty by increase their income level. According to economic survey in 2009 National Education Policy was formulated. It's mentioned there by 2015, 7% of GDP shall be allocated to education sector but it's not implemented so far. But currently Government expenditure on education as % of GDP is 2.4 %,education creates opportunity for people to earn basic necessities and better living standard by raising literacy rate poverty can be reduce. Poverty is not only a social or national problem but it's also an international problem. At the global level all countries are putting their efforts to combat poverty since 2000. The government of countries are trying to solve the problems of poor classes everywhere especially in the developing countries such as Pakistan. Many organizations and charities were established to give financial assistance and empower to poor and needy people. These organizations experienced many problems included registering the needy and poor people. Many governments and banks try to be a part of the solution of the problem of poverty.

Nelson Mandela says, "Poverty is not an accident. Like slavery and apartheid, it is man- made and can be removed by the actions of human beings."

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