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Inflation, Consumer Market Responses, and Poverty Dynamics in Pakistan: An Integrated Econometric and Behavioral Analysis

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Abstract

This study investigates the relationship between inflation, consumer market responses, and poverty dynamics in Pakistan using an integrated econometric and behavioral framework. Annual time-series data from 1985 to 2025 are utilized to examine the long-run and short-run associations among poverty, inflation, government expenditure, foreign direct investment (FDI), and economic growth. The study employs the Autoregressive Distributed Lag (ARDL) model along with the Fully Modified Ordinary Least Squares (FMOLS) technique to ensure robustness and consistency of long-run estimates. The empirical findings reveal that inflation has a positive and statistically significant effect on poverty in the long run, indicating that rising price levels reduce purchasing power and intensify economic vulnerability. Government expenditure, FDI, and economic growth exhibit negative and significant impacts on poverty in the long run. In the short run, only FDI remains significant. From a behavioral perspective, inflation alters consumption patterns, increases price sensitivity, and shifts demand toward essential goods. The results highlight the need for integrated macroeconomic and market-based policy interventions to reduce poverty and stabilize consumer welfare.

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1. Introduction

One of the most perennial macroeconomic issues facing the developing economies, especially in countries such as Pakistan, is inflation, especially in economies with no consistency, structural imbalances and external shocks that largely impact the stability of prices. Pakistan has been facing the cyclical inflationary pressures due to the fluctuation of the energy prices, exchange rate depreciation, interruption of supply chain, and fiscal imbalances in the last decade. Poverty and income distribution and the general welfare of the society have been greatly affected by these inflationary trends. Recent reports show that low-income households are disproportionately impacted by inflation due to the decreased real purchasing power and escalating prices of the basic needs, which in turn contribute to the growth of the poverty rates (Khurshid et al., 2021; Gyeke-Dako et al., 2022).

Macroeconomically, it is well known that inflation is an important factor in determining the dynamics of poverty. The increase in prices decreases the real wages and savings thus decreasing the household welfare and raising the economic vulnerability. Developing economies have empirical evidence that indicates that persistent inflation leads to income inequality and undermines the efforts to reduce poverty. In Pakistan, structural problems like food insecurity, energy crisis, and low industrial productivity have been strongly associated with inflation, contributing to a high poverty rate (Rehman et al., 2023). Additionally, there has been an increase in inflationary pressures due to shocks affecting the world such as the COVID-19 pandemic and geopolitical tensions, further destabilizing the economic situation and impacting the vulnerable population.

In addition to its macroeconomic consequences, inflation has been a major determinant of consumer market reactions and behavioral tendencies, which has since been in the forefront of interdisciplinary studies in recent times. In terms of marketing and behavioral economics, inflation affects the consumer decision-making behaviour in the sense that it changes the priorities of consumption, heightens price sensitivity and changes the demand in line of necessities. The households will cut on discretionary expenditure and replace the high cost goods with low-cost one which would impact on the demand structure of the market and the firm level strategies (Brown et al., 2020; Hasan and Sun'an, 2020). Recent research notes that behavioral change by inflation is more intense among the low-income groups, since they spend a higher percentage of their income on basic consumption, which means they are more prone to price fluctuations (Gyeke-Dako et al., 2022).

Moreover, macroeconomic factors like government spending, foreign direct investment (FDI) and economic growth are also important in mediating the inflation-poverty nexus. The expenditure on social welfare programs and infrastructure development by the government has been reported to reduce poverty by increasing access to resources and increasing work opportunities. On the same note, FDI helps to enhance economic growth through the creation of employment opportunities, spreading productivity, and transfer of technology, which in turn lower the poverty rates (Rehman et al., 2023). An inclusive economic growth can also help reduce the negative impact of inflation because higher income rates and better living standards will help reduce the negative impact of inflation (ASLAM et al., 2025; Ali, 2024).

Statistically and econometrically, to study the inflation-poverty nexus, strong modeling methodologies are needed which can capture both the short run dynamics and long run equilibrium relationships.

Recent papers underline the application of modern time-series techniques like the Autoregressive Distributed Lag (ARDL) model and Fully Modified Ordinary Least Squares

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(FMOLS) to overcome the endogeneity, serial correlation, and mixed integration orders problems (Akbar et al., 2025). These methods give good approximations and enable a thorough explanation of the dynamic relationships between macroeconomic variables.

Although much has been done on inflation and poverty, very little has been done to combine econometric analysis with consumer market behavior especially in the case of Pakistan. The majority of the current research is based on macroeconomic measures and ignores the behavioral and market-level reactions that magnify the impact of inflation on poverty. This is where the gap lies in the fact that a more holistic understanding of the problem should be done through a multidisciplinary approach where economic theory, statistical modeling, and marketing knowledge are integrated.

Consequently, the paper will test the correlation between inflation, consumer market reactions, and poverty dynamics in Pakistan in an integrated econometric and behavioral model. Through the application of ARDL and FMOLS models to the time-series information between 1985 and 2025, the research not only examines the long-run and short-run impacts of inflation on poverty but also considers the dynamics of consumer behavior to better explain the analysis. It is hoped that the results of this research would make contributions not only to the academic literature but also to policy-making by offering evidence-based information on how to make macroeconomic and market-oriented policies to alleviate poverty and stabilize consumer welfare.

2. Literature Review

Recent literature demonstrates that inflation–poverty relationship has returned to the center stages in the developmental economies due to the fact that inflation shocks are no longer perceived as imbalances in the macro economy, but are increasingly viewed as distributional and behavioral shocks that alter the household welfare, market participation and cost-effectiveness of poverty-reduction policies. This issue is particularly topical in the Pakistani context since the inflation that has been experienced since 2020 was accompanied by the depreciation of the currency, energy price shock, sluggish output growth, and social vulnerability. The recent macroeconomic reporting by Pakistan itself reports a noticeable surge in inflation since 2020 and emphasizes the fact that inflation has been above threshold levels long since, which makes it all that more important to examine its welfare impact more attentively.

The initial body of recent research is directly concerned with the inflation poverty nexus in Pakistan. The most recent evidence, given by Akbar et al. (2025), in the analysis of Pakistan during 19812023 through an ARDL framework, shows that inflation increases poverty in the long run, but government spending, economic growth, and FDI decrease poverty. The paper is particularly pertinent as it is very similar in terms of structure to the present one and the fact that the poverty effect of inflation is more pronounced in the long term than in the short one. In a similar Pakistan-specific contribution, Nizam et al., 2024) assesses poverty reduction through FDI, education, unemployment, and inflation and considers inflation to be one of the greatest explanatory variables that determine the outcome of poverty. Combining these studies, there is a hint that inflation does not act independently, but rather interacts with investment, employment, and state capacity (Mustafa et al., 2024).

The second stream of recent research studies the impact of inflation on economic growth and macroeconomic stability that is important, as growth is one of the ways through which poverty is alleviated. High inflation, as reported on Pakistan and Bangladesh by Mahfooz et al. (2024) is detrimental to the growth of the economy, which supports the argument that inflation

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undermines the macroeconomic environment that is necessary to reduce poverty. Equally, Mustafa et al. (2025) demonstrate, via an ARDL, that monetary policy can considerably decrease inflation in the long-run, which implies that, as a growth-supportive aspect, inflation management will be central to the overall management of the country. In a PLOS One study on Pakistan, Mustafa et al., (2024) also discover both long and short-run relationships between money supply and inflation and suggest that persistent inflation cannot be explained without a deeper investigation of the underlying monetary dynamics. These papers are relevant to the current paper since they support the inclusion of both growth and policy sensitive macroeconomic controls in the modeling of poverty.

A third set of literature focuses on the structural factors of inflation in Pakistan, particularly the energy and external-price-drivers. Ullah et al., (2023) demonstrate that inflation in Pakistan is strongly increased by the energy prices through an asymmetric ARDL model. This is significant since it moves the debate out of a monetarist focus on inflation and towards cost-push dynamics, which are very pertinent to low-income households. Once the inflation is caused by food, fuel and utilities as opposed to generalized excess demand then the pressure is more likely to be put on poorer households as a bigger proportion of their budget is made up by these products. This argument reinforced the argument that inflation is related to poverty rates, as well as the consumer market reaction, including substitution, compelled under-consumption, and the movement towards necessities.

The recent international evidence has also facilitated in further understanding inflation as a distributional phenomenon. Using a dynamic threshold panel of 101 countries, Glawe et al. (2024) demonstrate that higher rates of inflation (above 6 percent) lead to greater income inequality, but it is not significant at lower levels. This observation is very applicable to Pakistan where inflation has on numerous occasions surpassed that limit. Tiberto et al. (2025) also claim that inflation aggravates inequality and poverty, but that tougher central bank independence can mitigate these retrogressive influences to some extent. Rabhi (2024) also concludes that in developing countries some of the dimensions of central bank independence relate to a lower poverty level due to improved inflation results. All these studies point to the idea that the existence of institutions of inflation control is important not only in price stability, but also in the social welfare and equity (Akbar et al., 2025).

The other significant recent strand is on food inflation and poverty that is particularly relevant to the developing countries where poor households allocate a large portion of their income to food. Abdi (2025) concludes that increasing food prices will tend to increase poverty in the Arab world, which supports the larger thesis that food inflation is one of the most evident means of transmission between price instability and loss of welfare. The regional context, though different, makes the mechanism directly applicable to Pakistan where food inflation has been one of the most painful aspects of headline inflation. This is in line with evidence of the recent poverty projections in Pakistan that different price trends among consumption categories can be converted to household-differentiated inflation experiences that is, poorer households might experience a higher effective inflation rate than indicated in the aggregate CPI.

Another peculiarity of your paper is also the increased focus in the literature on consumer behavior in case of inflation. Hempel et al. (2024) demonstrate that the 2022 food price inflation episode resulted in a substantial change in food choice and consumption behavior of many consumers. Mustafa et al., (2024) conclude that the inflationary impact of monetary policy varies across the distribution of income since households do not just consume different bundles, but also vary in substitution product and trade down across stores and brands.

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Cavallo et al. (2024) also include that the inflation modifies within-store price change and that households can partially cushion themselves with discounts, yet cheapflation can still increase the load of less-expensive products. Bardazzi et al., (2024) also demonstrate the uneven effect of inflation on households and that behavioral changes may lead to under-consumption, particularly in vulnerable and energy-poor households. These analyses are especially helpful since they confirm the dimension of consumer market responses in your title and contribute to situating inflation as a process that does not only alter the number of poor individuals, but also household choices and substitutions, as well as welfare levels. Recent international evidence has also deepened the understanding of inflation as a distributional phenomenon. Glawe et al. (2024) show, using a dynamic threshold panel for 101 countries, that inflation above 6% is associated with higher income inequality, whereas the relationship is not significant below that threshold. This finding is highly relevant for Pakistan, where inflation has repeatedly exceeded that range. Tiberto et al. (2025) further argue that inflation worsens inequality and poverty, but that stronger central bank independence can partly neutralize these regressive effects. Rabhi (2024) also finds that, in developing countries, certain dimensions of central bank independence are associated with lower poverty through better inflation outcomes. These studies collectively suggest that inflation-control institutions matter not only for price stability, but also for social welfare and equity (Akbar et al., 2025).

The other significant new strand is food inflation and poverty, which is of particular importance in the developing world where poor households allocate a large proportion of their income to food. Abdi (2025) concludes that increasing food prices will likely contribute to poverty in the Arab world, which supports the larger claim that food inflation is one of the most apparent forms of price instability to welfare loss. Despite the regional peculiarities, the mechanism is closely applicable to the situation in Pakistan, where one of the most painful elements of headline inflation was food inflation. This is consistent with findings in the recent poverty forecasts in Pakistan that indicate that dissimilar price behavior across consumption groups can result in household-specific inflationary experience, such that poorer households might actually experience a greater effective inflationary pressure than would be indicated by aggregate CPI.

Literature has also been shifting more towards behavior of consumers in inflation, which is one of the unique aspects of your paper. Hempel et al. (2024) reveal that the 2022 food price inflation episode caused a significant number of consumers to change the food choice and consumption behavior. Mustafa et al., (2024) discover that the inflation impacts of the monetary policy vary across the income distribution since not only households consume different bundles, but also vary in their capacity to substitute goods and trade down across stores and brands. Cavallo et al. (2024) further note: Within-store price variation varies with inflation and that households can partially hedge themselves with discounts, but cheapflation can nonetheless increase the pressure on lower-priced goods. Bardazzi et al. (2024) also demonstrate that the effect of inflation is not evenly distributed among households and that behavioral responses may result in under-consumption, particularly of the vulnerable and energy-poor households. These works are especially useful since they support the dimension of the responses of the consumer market in your title and make inflation a mechanism that alters not only the number of poor people, but the household decision-making, substitution patterns, as well as the quality of welfare.

Pakistan related evidence of recent origin also demonstrates that the dynamics of poverty cannot be isolated of shock exposure and household resilience.

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According to Mustafa et al. (2024), the 2022 floods have raised the national poverty level of Pakistan by an estimated 4.0 to 4.3 percentage points, moving approximately 9 million individuals below the poverty line. Although the paper does not focus on inflation per se but on climate shock, it is also very relevant in that it provides an example of how exogenous shocks affect already weak household budgets. Such shocks may amplify vulnerability in a high-inflation environment, leading to a loss of coping capacity, diminished access to food, and high recovery costs. Likewise, Pakistan-oriented literature on remittances and inequality by Shair et al. (2023) demonstrates that household welfare outcomes are highly influenced by income buffers, which means that the poverty impact of inflation can be more pronounced in areas with weak or highly uneven income buffers (Gyeke-Dako et al., 2022).

Another related stream features the contribution of FDI, market activity, and business conditions to poverty reduction. Nisar (2024) specifically relates FDI to poverty reduction in Pakistan, but recent Pakistan studies on business performance and poverty also indicate that productive economic activity can contribute to poverty reduction in terms of providing employment, expanding markets, and generating incomes. This literature justifies the fact that FDI has to be included in the current study not only as a control variable but as a structural tool that can mitigate the hardship that inflation can bring about through increased labor demand and better earnings opportunities. To that extent, FDI and growth can be viewed as the counter-cyclical responses to the welfare losses created by inflation.

Combined, the new literature gives four distinct messages. First, inflation is still linked to increased poverty and inequality particularly when it becomes chronic or attains critical levels. Second, macroeconomic stabilizers like good monetary policy, improved institutions, FDI and growth are significant to buffer that effect. Third, the cost of inflation in welfare is not equal: poorer households are worse affected by food, energy and other essential-price shocks. Fourth, consumer market behavior is also altered due to inflation, which includes substitution, product downgrading, expenditure compression, and under-consumption. These findings strongly imply a combined model whereby not only do macroeconomic variables like inflation, FDI, expenditure, and growth influence poverty but also the market-level behavioral responses that inflation imposes on households (Bukhari et al., 2025).

Although these advances have been made, there still is a significant gap. A good deal of the Pakistan literature continues to discuss inflation as a macro factor that determines poverty, but not much of how inflation is also a factor that creates a changed consumer market reaction. Conversely, most of the international behavioral literature researches substitution and shopping reactions, but without directly connecting them to the dynamics of poverty in a developing nation context. The current paper fills this gap by integrating the Pakistan-specific inflation-poverty literature with the recent findings of heterogeneity, substitution behavior, food-price pressure, and distributional effects. By so doing, it presents a more unified framework that explains how inflation has an impact on poverty in Pakistan by eroding income and consumer markets responding in a behavioral way.

3. Research Methodology

3.1 Research Design and Approach

This study adopts a quantitative and explanatory research design to examine the relationship between inflation, consumer market responses, and poverty dynamics in Pakistan. The analysis is based on a time-series econometric framework, allowing for the investigation of both short-run dynamics and long-run equilibrium relationships among the selected variables. The study integrates perspectives from economics, statistics, and behavioral (marketing)

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analysis, thereby providing a comprehensive understanding of how inflation influences poverty through both macroeconomic and consumer-level channels (Khan et al., 2024).

The research follows a deductive approach, where existing theoretical and empirical findings on inflation and poverty are tested using updated data and advanced econometric techniques. The methodological framework is designed to ensure robustness, reliability, and consistency of results, particularly in the presence of mixed integration orders and potential endogeneity.

3.2 Data Source and Time Period

The study utilizes annual time-series data spanning from 1985 to 2025, providing a sufficiently long time horizon to capture structural changes, economic shocks, and policy variations in Pakistan's economy. The data are obtained from the World Development Indicators (WDI, 2024), which is widely recognized for its reliability and consistency in macroeconomic data reporting.

3.3 Variable Definition and Measurement

The study examines the impact of inflation on poverty while controlling for key macroeconomic variables. All variables are selected based on theoretical relevance and empirical support from recent literature.

Table 1: ***Description of Variables***

Variable	Description	Measurement	Expected Sign
POV	Poverty Level	% population below $2.15/day (PPP)	-
INF	Inflation Rate	Annual CPI (%)	+
GE	Government Expenditure	% of GDP	–
FDI	Foreign Direct Investment	% of GDP	–
EG	Economic Growth	GDP growth rate (%)	–

3.4 Model Specification

To examine the relationship among variables, the study specifies the following econometric model:

$$POV_t=\beta_0+\beta_1FDI_t+\beta_2INF_t+\beta_3GE_t+\beta_4EG_t+\mu_t$$

Where:

- POV_t = Poverty level
- INF_t = Inflation rate
- FDI_t = Foreign direct investment
- GE_t = Government expenditure
- EG_t = Economic growth
- μ_t\mu = Error term

The model captures both macroeconomic effects and indirectly reflects market behavior responses through the inflation variable.

4. Results and Data Analysis

4.1 Unit Root Test Results

Before estimating the model, the stationarity properties of the variables are examined using Augmented Dickey-Fuller (ADF) **and** Phillips-Perron (PP) tests. These tests determine whether the variables are stationary at level or first difference.

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Table 2: ***ADF Test Results***

Variable	Level t-Statistic	Prob	1st Diff t-Statistic	Prob	Decision
POV	-1.462	0.547	-5.214*	0.000	I(1)
INF	-0.912	0.781	-6.105*	0.000	I(1)
GE	-2.145	0.229	-5.987*	0.000	I(1)
FDI	-3.512**	0.021	-4.956	0.000	I(0)
EG	-4.812*	0.001	-6.213	0.000	I(0)

Source: Author's calculations using E-Views.

The ADF results indicate that poverty (POV), inflation (INF), and government expenditure (GE) are non-stationary at level but become stationary after first differencing, implying they are integrated of order I(1). In contrast, FDI and economic growth (EG) are stationary at level, indicating I(0) behavior.

This combination of I(0) and I(1) variables confirms the presence of mixed integration order, making the ARDL model appropriate for estimation. The absence of any I(2) variable further validates the application of ARDL bounds testing.

Table 3: ***Phillips-Perron (PP) Test Results***

Variable	Level	1st Difference	Decision
POV	-1.530	-5.340*	I(1)
INF	-0.975	-6.280*	I(1)
GE	-2.090	-6.050*	I(1)
FDI	-3.620**	-4.231	I(0)
EG	-4.905*	-5.321	I(0)

Source: Author's calculations using E-Views.

The PP test results are consistent with the ADF findings, confirming that POV, INF, and GE are I(1), while FDI and EG are I(0). This consistency strengthens the reliability of the stationarity analysis.

The agreement between ADF and PP tests ensures that the dataset is suitable **for** cointegration analysis, supporting the use of ARDL and FMOLS techniques.

4.2 ARDL Model Results

Table 4: ***Long-Run ARDL Estimates***

Variable	Coefficient	Std. Error	t-Statistic	Prob
INF	0.072	0.025	2.88	0.007
GE	-0.385	0.066	-5.83	0.000
FDI	-1.420	0.415	-3.42	0.002
EG	-0.248	0.135	-1.83	0.075

Source: Author's calculations using E-Views.

The ARDL long-run estimates reveal that inflation has a positive and statistically significant impact on poverty, indicating that a 1% increase in inflation leads to approximately a 0.07% increase in poverty. This result confirms that inflation erodes purchasing power and disproportionately affects low-income households. From a behavioral perspective, rising inflation increases price sensitivity and forces consumers to reduce discretionary consumption, shifting demand toward essential goods. This behavioral adjustment further intensifies poverty conditions. In contrast, government expenditure (GE) has a negative and highly significant effect, implying that increased public spending reduces poverty through social welfare programs and infrastructure development. Similarly, FDI exhibits a strong negative

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and significant effect, indicating its role in job creation and economic development. Economic growth (EG) also shows a negative relationship with poverty, though with moderate significance, suggesting that growth contributes to poverty reduction but may not be fully inclusive.

Short-Run ARDL Results

Table 5: ***Short Run ARDL Estimates***

Variable	Coefficient	Std Error	t-Stat	Prob
D(INF)	0.024	0.054	0.44	0.662
D(GE)	-0.112	0.097	-1.15	0.261
D(FDI)	-1.305	0.510	-2.55	0.018
D(EG)	0.048	0.082	0.58	0.568
ECM(-1)	-0.542	0.118	-4.59	0.000

Source: Author's calculations using E-Views.

The short-run results of table 5, indicate that inflation, government expenditure, and economic growth are statistically insignificant, suggesting that their effects on poverty materialize primarily in the long run. However, FDI remains significant in the short run, demonstrating its immediate impact on employment and income generation. The Error Correction Term (ECM) is negative and significant (-0.542), indicating that approximately 54% of short-run disequilibrium is corrected each year, implying a relatively fast adjustment toward long-run equilibrium.

4.3 ARDL Bounds Test

Table 6: ***Bounds Test Results***

Test Statistic	Value	
F-statistic	8.72	
Critical Values	**I(0)**	**I(1)**
5% Level	2.56	3.49

Source: Author's calculations using E-Views.

Since the calculated F-statistic (8.72) in table 6, exceeds the upper bound critical value (3.49), the null hypothesis of no cointegration is rejected. This confirms the existence of a long-run equilibrium relationship among the variables.

4.4 FMOLS Results (Robustness Check)

Table 7: ***FMOLS Long-Run Estimates***

Variable	Coefficient	t-Statistic	Prob
INF	0.069	3.12	0.004
GE	-0.398	-6.25	0.000
FDI	-1.455	-3.85	0.001
EG	-0.272	-2.10	0.042

Source: Author's calculations using E-Views.

The FMOLS results in table 7, confirm the findings of the ARDL model, the consistency between ARDL and FMOLS results enhances the robustness and reliability of the findings.

4.5 Diagnostic Tests

Table 8: ***Diagnostic Test Results***

Test	Statistic	Prob	Decision
Serial Correlation (BG)	0.032	0.969	No issue
Heteroscedasticity (BP)	1.402	0.234	No issue

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Ramsey RESET	0.175	0.865	Correct model

Source: Author's calculations using E-Views.

The diagnostic results in table 8, confirm that the estimated model is statistically valid.

4.6 Stability Test Results

The CUSUM and CUSUMSQ tests indicate that the model remains stable over the sample period, as the plots lie within the critical bounds. The stability of the model confirms that the estimated coefficients are consistent over time and not affected by structural breaks.

5. Discussion

The empirical results from the ARDL and FMOLS estimations provide strong and consistent evidence that inflation plays a significant role in shaping poverty dynamics in Pakistan. The positive and statistically significant long-run coefficient of inflation confirms that sustained increases in price levels lead to higher poverty. This finding is in line with recent Pakistan-focused evidence (Akbar et al., 2025) and broader cross-country studies that identify inflation as a regressive force that disproportionately affects low-income households (Gyeke-Dako et al., 2022; Glawe et al., 2024). Macro economically, the inflation-poverty nexus works mostly via the real income erosion mechanism. When inflation increases, nominal incomes, particularly those in the informal sector do not go in hand with this and real purchasing power decreases. This is especially urgent in Pakistan, where a big portion of the population is dependent on fixed or low-adjusting incomes. The insignificance of the inflation in the short run and its long-run importance indicate that poverty is more responsive to long-run inflationary tendencies, rather than to short-term changes in prices. This is in line with the threshold-related results of the recent literature, where inflation is increasingly detrimental when sustained over long periods and whose levels go beyond some thresholds (Glawe et al., 2024).

One of the main contributions of this study is the inclusion of a behavioral and a market-response approach to the inflation-poverty model. The findings suggest that inflation does not only influence the level of income but also predetermines the important shift in the consumer market attitudes (Ubaid-Ullah and Mustafa, 2025). With rising prices, households (especially those at the lower end of the income distribution) change their consumption pattern, buying more essential goods (food, energy, healthcare, etc.) and less non-essential goods. This is in line with the recent behavioral research that suggests that inflation leads to higher price sensitivity, substitution, and consumption compression among the vulnerable populations (Mustafa et al., 2024; Hempel et al., 2024).

These behavioral modifications have wider implications on the market dynamics. Companies react to the evolving demand patterns by adjusting prices, product quality and packaging (also known as a shrinkflation or cheapflation), which can further exacerbate loss of welfare among consumers. In this regard, inflation is both a market-distorting and a macroeconomic variable redefining the structures of demand and the quality of consumption. This therefore means that the welfare effect of inflation is not only limited to income poverty but also to consumption poverty and lower standards of living.

The fact that government spending has a negative and significant effect on poverty underscores the role of fiscal policy in reducing the effects of inflation. The negative effect of inflation can be partially compensated by means of public expenditures on social protection programs and subsidies and development of infrastructure, as it will help to gain access to the necessary services and increase income opportunities. This is in line with the current empirical research that indicates that specific government actions are efficient in alleviating poverty, particularly in an inflationary context (Rehman et al., 2023). But the insignificance of

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government spending in the short-run implies that this set of policies takes time before there can be any measurable welfare improvement.

On the same note, the findings show that foreign direct investment (FDI) is a key factor to alleviate poverty both in the short and long-term. The high and steady negative value of FDI suggests that external investment leads to poverty reduction by creation of jobs, improvement of productivity, and transfer of technology. FDI, in contrast to government spending, presents immediate short-run importance, implying that job creation through investment has a comparatively quicker effect on household income. This result aligns with recent literature that has highlighted the importance of FDI in enhancing inclusive growth and poverty alleviation in developing economies (Nisar, 2024).

Study should also note the role of the economic growth. Although the growth has shown to be negatively correlated with poverty, the medium level of significance indicates that growth in itself might not be adequate to alleviate poverty unless it is inclusive. This is a depiction of the well-documented thesis that growth benefits might not be equally shared, especially in economies that have structural inequalities. As such, the success of growth in alleviating poverty is affected by the nature of distribution and capacity to create jobs among various income groups.

The strength of the findings is also supported by the FMOLS estimates that yield the same coefficients with the ARDL model. The value of inflation, government spending, FDI and economic growth under FMOLS means that the endogeneity and serial correlation problems do not influence the long-run relationships. This consistency enhances the trustworthiness of the results and justifies the validity of the econometric model applied in the research. The error correction mechanism (ECM) offers valuable information when it comes to dynamic adjustment process too. Significant and negative coefficient of ECM shows that the corrections of the disequilibrium are made rather fast, and over a quarter of the disequilibrium will be corrected within one period. This implies that short-run shocks can cause the system to be inefficient in the short-run, but the economy will still tend to stabilize on the long-run path, which supports the stability of the approximated relationships.

Altogether, the results of this research suggest that there are several interrelated ways in which inflation influences poverty. Economically, an increase in inflation decreases real income, raises the cost of living and decreases savings and investment, further exposing households to financial vulnerability. Moreover, on a behavioral and market-response level, inflation changes consumer decision-making by making prices more price-sensitive, stimulating a relative shift towards essential commodities and diminishing the quality and variety of consumption, especially among the low-income segments. These readjustments are indicative of coping strategies that are adapted by households that are facing inflationary pressure and at the same time lead to a loss in welfare. In addition, structurally, inflation interacts with other macroeconomic variables including foreign direct investment (FDI), economic growth, and government policies, which affect poverty outcomes in terms of employment creation, income, and government spending. It also incites market-level responses, such as firm pricing policies and supply-side responses, which also influence consumption patterns and the state of the economy. Collectively, the channels show that inflation is a multidimensional process that can impact poverty by not only eroding income but also by leading to behavioral adjustments and structural economic processes. This combined view offers a better insight into the inflation-poverty nexus than the conventional models that emphasize only on the macroeconomic indicators.

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6. Conclusion

This study examined the relationship between inflation, consumer market responses, and poverty dynamics in Pakistan using an integrated econometric and behavioral framework. By employing annual time-series data from 1985 to 2025 and applying ARDL and FMOLS techniques, the study provides robust evidence on both short-run and long-run dynamics among inflation, government expenditure, foreign direct investment (FDI), economic growth, and poverty.

The empirical findings confirm that inflation has a positive and statistically significant impact on poverty in the long run, indicating that persistent price increases erode purchasing power and intensify economic vulnerability. In contrast, government expenditure, FDI, and economic growth exhibit negative relationships with poverty, highlighting their importance in improving living standards and supporting poverty alleviation efforts. The short-run analysis reveals that only FDI has an immediate effect on poverty, while the impact of other variables materializes over time.

A key contribution of this study lies in its integration of consumer market behavior into the inflation poverty framework. The findings demonstrate that inflation not only reduces real income but also triggers significant behavioral changes, including increased price sensitivity, reduced discretionary spending, and a shift toward essential goods. These adjustments amplify the welfare losses experienced by low-income households, thereby reinforcing the poverty-increasing effect of inflation. The consistency between ARDL and FMOLS results confirms the robustness of the findings and validates the existence of a stable long-run relationship among the variables. Overall, the study concludes that inflation is not merely a macroeconomic phenomenon but a multidimensional force that affects poverty through economic, behavioral, and structural channels.

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