

Macroeconomic Determinants of Final Consumption Expenditure in Pakistan: Evidence from Foreign Direct Investment, Income Levels, Capital Formation, and Trade

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ABSTRACT

Backgrounds: Final Consumption Expenditure is essential for maintaining economic activity and improving living standards in emerging nations. Understanding the macroeconomic determinants of consumption patterns is crucial for formulating policies that promote sustained economic stability and inclusive development in Pakistan.

Objectives: This study examines the impact of economic growth, gross fixed capital formation, household income, and trade openness on final consumption expenditure in Pakistan from 1990 to 2023.

Methodology: The study uses annual time-series data from 1990 to 2023 and employs the Generalized Method of Moments (GMM) to obtain robust, efficient parameter estimates and address potential endogeneity.

Findings: The empirical findings demonstrate that foreign direct investment has a statistically significant positive impact on final consumption expenditure, highlighting its role in income generation and in strengthening purchasing power. In contrast, economic growth and gross fixed capital formation are negatively correlated with consumer expenditure, suggesting that a heightened focus on capital accumulation may temporarily inhibit current household spending. Household income and trade openness significantly enhance domestic consumption, highlighting the critical roles of income growth and worldwide market integration.

Conclusions: The results indicate that Pakistan's consumption-led economic development is contingent on implementing balanced macroeconomic policies that encourage productive investment, raise household incomes, and facilitate trade liberalization. To achieve sustainable and inclusive growth, policymakers must meticulously balance the trade-off between short-term consumption needs and long-term capital formation.

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1. INTRODUCTION

A key measure of economic activity is final consumption expenditure, which is the sum of the goods and services households and government entities purchase. The average yearly spending for U.S. consumer units in 2023 was around \$77,280, which was 5.9% more than the year before (Meyers et al., 2024). Household final consumption typically accounts for 60% of GDP globally, demonstrating its importance in promoting stability and economic growth (OECD, 2023). The 2023 household final consumption price levels in the EU differed greatly, with Denmark having the highest at 143% of the EU average and Bulgaria and Romania having the lowest at 60% respectively. In the late 19th century, the government of several European nations spent about 10% of their GDP, but in the 21st century, this percentage is closer to 50% (Ortiz-Ospina et al., 2025).

Various consumer behaviors and economic conditions are reflected in Asia's final consumption expenditure. The Chinese economy is heavily dependent on domestic spending, as evidenced by the country's 2022 household final consumption expenditure, which was reported to be 37.39% of GDP (World Bank, 2024b). Meanwhile, India showcased a higher dependency, with FCE accounting for 60.34% of its GDP in 2023, highlighting the critical role of consumer spending in driving the economy (World Bank, 2024c). Private consumption has historically grown significantly, reaching an all-time high of almost \$322.7 billion in 2022, highlighting the nation's rising purchasing power and economic activity. Private consumption spending in Pakistan was estimated to reach over \$316.3 billion as of December 2024, a considerable rise from \$281.7 billion in 2023 and a sign of an upward trend in consumer spending over the years (CEIC, 2024). Additionally, general government final consumption expenditure constituted about 10.2% of the country's GDP in 2023, highlighting the government's role in providing essential services and goods (World Bank, 2024a).

This study examines the factors that influence final consumption spending in Pakistan, with a particular emphasis on important variables including trade, GDP growth, gross fixed capital formation, average household income, and foreign direct investment. In order to address urgent challenges like poverty reduction and raising living standards, it is essential to comprehend these relationships since they have a direct impact on economic stability and progress. This study makes a substantial contribution to the body of economic literature by examining the interdependencies among these variables and offers useful information to decision-makers. The results are intended to guide policies that improve economic resilience and consumption, which will ultimately promote sustainable development. This study also acknowledges the wider social and environmental effects of consumption patterns, highlighting the necessity of growth policies that give equal weight to responsible resource management and economic prosperity. The study uses a time series dataset from 1990 to 2023 and a quantitative methodology to examine the factors influencing final consumption expenditures in Pakistan.

Reputable organizations like the World Bank provide the data, guaranteeing a strong basis for study. Important independent factors are included in the study to enable a thorough analysis of their combined effects on FCE. Several econometric methods were used to analyze the relationships among variables, including regression analysis to identify relationships or conditional associations among variables, as well as correlation analysis to evaluate initial relationship patterns. Given that this study uses an observational design with aggregate data in the context of a single-country time series and is not yet supported by a validated causal identification strategy, the estimation results are not intended to establish cause-and-effect relationships. Therefore, the resulting coefficients are interpreted as conditional associations among variables, not as evidence regarding impact, driving factors, or causal mechanisms. In addition to facilitating a thorough understanding of the economic forces impacting consumption, this study approach seeks to offer policymakers evidence-based suggestions for promoting sustainable economic growth in Pakistan.

Khan et al. (2014) analyzed the relationship between income and consumption in Pakistan using data from the 1975-2012 period and found a positive relationship between income and consumption, while Kazmi (2015) examined the influence of wealth, income, interest rates, and unemployment on private consumption using data from 1971-2012. Sadiq et al. (2023) analyzed private consumption in Pakistan during the 1972-2021 period by considering government expenditure, income, wealth, real deposit rate, inflation, and population. Meanwhile, Shaikh et al. (2015) incorporated foreign direct investment (FDI), international trade, and gross capital formation into the economic analysis of Pakistan, but household consumption was positioned as one of the factors explaining GDP, rather than as the main dependent variable. This difference in focus indicates that the analysis of final consumption expenditure integrating trade, GDP growth, gross fixed capital formation, average household income, and FDI within a single model remains limited, particularly using a more recent observation period. This study fills that gap by analyzing the influence of these five factors on final consumption expenditure in Pakistan using annual time-series data for the 1990-2023 period, thereby providing more up-to-date empirical evidence regarding the factors influencing consumption in Pakistan.

The possible outcomes of this study are highly relevant for Pakistan's economic policy and general well-being. The results can give policymakers useful information by clarifying the connections between Final Consumption Expenditures and important economic variables. Gaining

insight into these processes can aid in the development of focused economic policies that increase consumption, which will ultimately promote economic expansion and improve residents' quality of life. Furthermore, the findings can point to important areas for investment, especially in boosting household income and trade, both of which are crucial for fostering sustainable economic growth. These findings may also help guide conversations about striking a balance between social justice and economic progress, ensuring that development plans complement more general national objectives.

2. LITERATURE REVIEW

Determinants of household consumption expenditure have been extensively studied in macroeconomics because they affect aggregate demand and GDP growth (Agyepong et al., 2024; Chikeya & Ntsalaze, 2025). In developing economies, where household spending drives economic growth, final consumption expenditure is crucial. This study examines how the selected factors affect consumer spending, drawing on Keynesian Consumer Theory, the Permanent Income Hypothesis, and Endogenous Growth Theory. This study relies on Keynesian Consumption Theory. Keynes believed that disposable income drives consumption and that individuals spend more as their income rises (Bisset, 2025). Due to the positive relationship between income and consumption, growth in foreign investment and trade may raise household incomes and boost consumer spending. The theory also suggests that macroeconomic conditions might significantly affect spending habits.

The Permanent Income Hypothesis suggests that consumers should consider their long-term income while spending (Li et al., 2025). If economic prospects improve due to continuous development, foreign investment, and market integration, consumers may spend more in expectation of higher salaries. Thus, macroeconomic interventions that boost income expectations may affect spending patterns. The study follows Endogenous Growth Theory, which holds that economic development relies on investment, capital accumulation, technological innovation, and international integration (Meiwen et al., 2025). Foreign direct investment may boost productivity, job growth, and technology transfer. These benefits may increase household income and purchasing power, encouraging consumer expenditure. Trade openness may increase domestic consumption by boosting consumer welfare, product availability, access to global markets, and competitiveness.

Gross fixed capital formation affects consumer expenditure among other variables. Increasing productive capacity through capital formation benefits the economy in the long term, but it may require additional investment and savings now. Thus, rising capital accumulation redirects resources from current consumption to future productive activities, allowing families to reduce consumption temporarily (N. H. Khan et al., 2025). Economic growth is expected to raise living standards and family welfare. Economic growth and consumer spending do not necessarily go hand in hand. Rapid economic growth may not necessarily raise consumer spending proportionally, particularly if investment drives expansion or income distribution is uneven (Hussien et al., 2025). Given this possibility, it is crucial to study Pakistan's growth-consumption nexus empirically.

Empirical findings regarding the relationship between economic growth and consumption indicate that increased economic activity is not always followed by a proportional increase in consumption expenditure. Growth that is more driven by investment, capital accumulation, or productivity improvement can create a trade-off between the use of resources for current consumption and investment for future production capacity. This condition can cause economic growth to have a weak or even negative relationship with consumption within a certain period, particularly when the benefits of growth have not been distributed evenly to households. Thus, the relationship between economic growth and final consumption expenditure needs to be tested empirically by considering the growth structure and income distribution within the economy.

Adewunmi (2023) highlights that fiscal and investment-oriented policies, particularly Foreign Direct Investment, play a crucial role in stimulating consumption by enhancing employment, income levels, and access to goods and services through infrastructure and industrial development. Similarly, Toomey (2023) emphasizes Foreign Direct Investment as a key mechanism for bridging savings and investment gaps in developing economies, while also reinforcing trade liberalization, which improves market access and long-term growth. However, macroeconomic stability remains essential, as inflation can erode purchasing power and weaken both consumption and investment incentives, while high interest rates constrain access to credit and suppress investment activity. Complementing

this view, AL-Chaabawi (2024) identifies monetary stability, trade, exports, and financial sector efficiency as central drivers of gross domestic product growth, particularly through efficient resource allocation and export-led expansion. Aluthge et al. (2021) further show that capital expenditure significantly promotes economic growth in both the short and long run, whereas recurrent expenditure contributes little to productive capacity, highlighting the importance of efficient public spending. In contrast, Javed and Husain (2022) find that government expenditure and consumption expenditure may negatively influence long-run growth, while public debt can temporarily stimulate economic activity, underscoring the trade-off between fiscal expansion and sustainable growth.

Empirical evidence from regional studies also supports the growth-enhancing role of capital investment. Miar et al. (2024) demonstrate that capital expenditure improves both economic growth and welfare outcomes, while inefficient supply chain systems may weaken these effects. Sudibyo (2024) further confirms that final consumption is a major driver of gross domestic product, with stronger effects observed over the long run as income and consumption cycles reinforce production dynamics. In a similar direction, Sasmal and Sasmal (2023) highlight the importance of human capital and infrastructure investment in driving sustainable growth, showing that social expenditure improves literacy and income levels, particularly in poverty-stricken regions. On the investment side, Salas-Fumás (2024) explains that weak recovery in capital formation is often driven by excess capacity, rising capital costs, and declining profitability rather than financial constraints. Meanwhile, Gausden and Hasan (2024) show that discretionary consumption is highly sensitive to consumer confidence and income distribution, with higher-income groups maintaining more stable spending patterns. Gajabo (2024) reinforces that household income, education, and credit access significantly shape consumption behavior, while Yun et al. (2024) emphasize that households in low-income regions often smooth consumption based on expected permanent income despite income volatility.

In the perspective of consumption behavior, household income is one of the main factors determining the ability and tendency of households to consume. An increase in income raises purchasing power and enables households to meet basic needs while also increasing expenditure on non-essential goods and services. However, the consumption response to income is also influenced by expectations of future income and the economic conditions faced by households. Therefore, an increase in current income as well as expectations regarding long-term income can drive an increase in final consumption expenditure.

From a macro-financial stability perspective, Fagereng et al. (2024) find that unemployment significantly reduces consumption, with the magnitude depending on liquidity and debt levels, while Etgeton et al. (2023) show that households adjust savings and consumption in response to expected lifetime income changes, supporting the consumption-smoothing hypothesis. In the context of trade, Sunde et al. (2023) demonstrate that exports and trade openness promote growth, while excessive reliance on imports may weaken domestic production. Similarly, Tran et al. (2022) find that fiscal deficits and government expenditure can expand the shadow economy, although economic growth and trade openness help reduce informal activity. Sarigül and Apak (2024) further confirm bidirectional relationships between trade openness, energy consumption, and economic growth, highlighting the interdependent nature of macroeconomic systems in developing economies.

Trade openness can also influence consumption through increased availability of goods, expanded consumer choices, and improved market efficiency. Trade integration enables households to obtain goods and services from international markets with more diverse choices and more competitive prices. In addition, trade openness can increase productivity and income through market expansion and integration with global value chains, which in turn can strengthen domestic purchasing power and consumption. Thus, trade openness is theoretically expected to have a positive relationship with final consumption expenditure.

Based on the theoretical arguments and existing empirical evidence, the conceptual framework of the study is presented in Figure 1, and the following hypotheses are proposed:

H1: Foreign direct investment and economic growth have a positive and significant impact on final consumption expenditure in Pakistan.

H2: Household income has a positive and significant impact on final consumption expenditure in Pakistan.

H3: Gross fixed capital formation has a negative and significant effect on final consumption expenditure in Pakistan.

H4: Economic Growth has a positive and significant effect on final consumption expenditure in Pakistan.

H5: Trade openness has a positive and significant impact on final consumption expenditure in Pakistan.

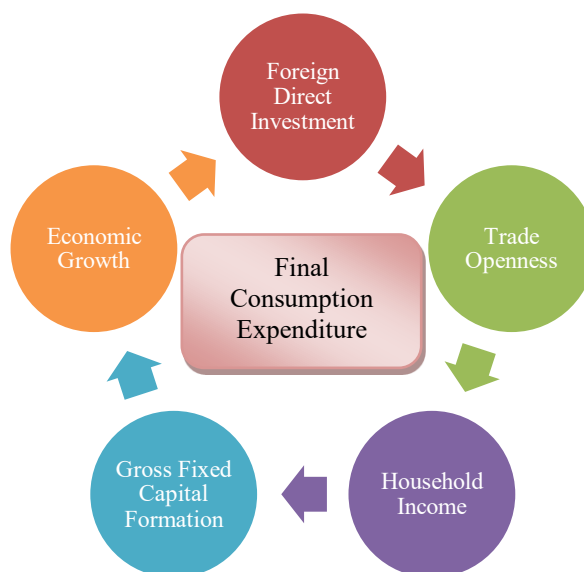


Figure 1. Conceptual Framework

Source: Authors' work

Based on the theoretical foundation and empirical evidence above, the relationship between foreign direct investment, economic growth, gross fixed capital formation, household income, trade openness, and final consumption expenditure is subsequently tested through the research hypotheses. Unlike previous studies that focus on isolated relationships between consumption and individual macroeconomic variables, this research simultaneously examines the joint effects of Foreign Direct Investment, economic growth, capital formation, household income, and trade openness on Final Consumption Expenditure in Pakistan over an extended time horizon. By doing so, it provides a more comprehensive understanding of how investment-led growth and external sector integration interact with household consumption behavior. The study further extends the literature by offering policy-relevant evidence on the trade-offs between capital accumulation and immediate consumption, thereby contributing to both macroeconomic theory and development-oriented policy formulation in emerging economies.

3. METHOD

A unit root indicates a lack of stability or a steady trend over time, as the variable is impacted by random shocks and does not return to a long-term average. To make sure economic data is accurately modeled, these tests are essential in econometric analysis. The Phillips-Perron (PP) and Augmented Dickey-Fuller (ADF) tests are often used unit root tests. The ADF test will be used in this study.

A prominent statistical technique for determining if a time series is non-stationary is the Augmented Dickey-Fuller (ADF) test, which looks for a unit root in the series. In order to address higher-order autocorrelation, it expands on the original Dickey-Fuller test by using lagged differences of the dependant variable. In order to detect more intricate patterns in the data, the ADF test can also incorporate an intercept and an optional trend component. The ADF test offers a more thorough and trustworthy assessment of whether a time series is non-stationary by taking these considerations into consideration.

To test for a unit root in the variables with an intercept but without a trend, the ADF equation (1) takes the following form:

$$\Delta X = \alpha + \gamma X_{t-1} + \sum_{i=1}^k \delta_i \Delta X_{t-1} + \varepsilon t \quad (1)$$

And to test for a unit root in the specified variables with an intercept and trend, the following will be the form of the Augmented Dickey-Fuller (ADF) equation (2):

$$\Delta X_t = \alpha + \beta_t + \gamma X_{t-1} + \sum_{i=1}^k \delta_i \Delta X_{t-1} + \varepsilon t \quad (2)$$

The endogeneity test is conducted to identify the possible relationship between independent variables and the error term that could cause Ordinary Least Squares (OLS) estimation to become inconsistent. The test is performed by comparing OLS estimation results with estimation that considers instruments through the Generalized Method of Moments (GMM) approach. The null hypothesis states that the explanatory variables are exogenous, so that OLS estimation remains consistent, while the alternative hypothesis states that endogeneity is present, so that the instrumental variable/GMM approach is required. The testing decision is based on the probability value of the test statistic at the 5% significance level. A probability value of less than 0.05 indicates rejection of the null hypothesis and indicates the presence of an endogeneity problem, so that GMM is used as the main estimation method. Table 1 shows the list of variables for ready reference.

Table 1. List of Variables

Variables	Units	Representation	Expected Relationship
Dependent Variable			
Final Consumption Expenditures	% of GDP	FCE	-----
Independent Variables			
Foreign Investment	% of GDP	FDI	+
Growth Rate	% growth	GDP	+
Gross Fixed Capital Formation	% of GDP	GFCF	+
Average Household Income	Current USD	HI	+
Trade	% of GDP	TRADE	+

Source: Authors' compilation

The Generalized Method of Moments (GMM) is an econometric methodology widely used in time series and panel data analysis, especially when dealing with potential endogeneity issues. Developed by Lars Peter Hansen in 1982, GMM offers a flexible framework for estimating parameters in econometric models by utilizing “moment conditions,” which are assumptions based on the data’s statistical properties. These moment conditions allow GMM to provide consistent and unbiased estimates even when traditional assumptions about error terms are violated, such as in cases of heteroscedasticity or autocorrelation (Baum et al., 2003; Hansen, 1982). GMM is particularly effective in scenarios where independent variables may be correlated with the error term, which could bias estimates if not properly addressed. By using instruments, variables that are correlated with endogenous regressors but uncorrelated with the error term GMM minimizes this bias, making it especially popular for analyzing economic relationships where endogeneity is common, such as in studies on investment, consumption, and production functions (Arellano & Bond, 1991). GMM is often used in dynamic panel data settings, where its application in systems GMM or difference GMM can effectively address issues of unobserved heterogeneity and dynamic relationships within panel data structures (Blundell & Bond, 1998). For my model the equation of GMM will be:

$$FCE_{it} = \alpha + \beta_1 FCE_{it-1} + \beta_2 FDI_{it} + \beta_3 GDP_{it} + \beta_4 GFCF_{it} + \beta_5 HI_{it} + \beta_6 TRADE_{it} + \epsilon_{it} \quad (3)$$

The instruments used in the GMM estimation consist of the lag values of the endogenous and predetermined variables as well as exogenous variables that satisfy the moment condition. In this model, the lag of FCE and the lag of the variables suspected to be endogenous, namely FDI, GDP, and GFCF, are used as internal instruments, while variables considered exogenous can be used in level form as instruments. The use of lags as instruments is based on the assumption that the past

values of these variables are correlated with the current explanatory variables, but not correlated with the error term in the current period. Thus, the instruments are expected to satisfy two main requirements, namely relevance to the endogenous variables and exogeneity to the error component. The selection of these instruments is intended to obtain consistent estimation by reducing the bias arising from the possible simultaneous relationship between the independent variables and the error term.

4. RESULTS AND DISCUSSION

4.1. Research Results

Table 2 shows the descriptive statistics of the variables. FCE has a high average of 89.02% of GDP, with a relatively narrow standard deviation of 3.94, indicating stability over time. FDI displays significant variability, with a mean of 0.926% of GDP and a standard deviation of 0.659, as well as high skewness (2.043), suggesting infrequent but substantial increases in investment inflows.

Table 2. Descriptive Statistics Results

Methods	FCE	FDI	GDP	GFCF	HI	TRADE
Mean	89.020	0.926	4.013	14.986	929.286	30.667
Median	89.836	0.696	4.239	14.422	947.191	31.105
Maximum	96.567	3.036	7.831	19.112	1620.743	38.499
Minimum	82.601	0.310	-1.274	12.000	346.669	21.460
Std. Dev.	3.943	0.659	2.091	1.822	437.297	4.736
Skewness	-0.021	2.043	-0.300	0.586	0.109	-0.135
Kurtosis	1.759	6.454	3.035	2.338	1.515	1.982

Source: Processed data, 2026

GDP growth has an average of 4.01% but ranges widely from -1.27% to 7.83%, reflecting periods of economic contraction and expansion. GFCF, with a mean of 14.99% and a low standard deviation (1.822), appears more consistent, though slightly positively skewed (0.586), indicating a tendency towards higher values. HI has a high variability, with an average of \$929.29 and a large standard deviation of 437.30, influenced by income disparities. Trade, averaging 30.67% of GDP, has a standard deviation of 4.736 and is near-symmetrically distributed, with low skewness (-0.135). Table 3 shows the unit root estimates.

Table 3. Unit Root Test Results

Variables	Level		1st Difference		Decision
	Intercept	Intercept & Trend	Intercept	Intercept & Trend	
FCE	-1.0330	-5.2864	-8.2146	-7.9317	I(0)
	0.7297	0.0008	0.0000	0.0000	
FDI	-3.0602	-3.0718	-3.8349	-3.7941	I(0)
	0.0400	0.1299	0.0064	0.0301	
GDP	-4.3915	-4.4076	-6.9266	-6.8075	I(0)
	0.0015	0.0070	0.0000	0.0000	
GFCF	-1.2920	-2.1739	-4.8331	-4.7387	I(1)
	0.6215	0.4877	0.0005	0.0032	
HI	-0.5844	-1.2764	-6.2710	-6.1212	I(1)
	0.8601	0.8752	0.0000	0.0001	
TRADE	-1.9840	-2.1681	-5.6866	-5.5922	I(1)
	0.2921	0.4908	0.0000	0.0004	

Source: Processed data, 2026

The Augmented Dickey-Fuller (ADF) test results assess the stationarity of variables FCE, FDI, GDP, GFCF, HI, and Trade, indicating their integration order and suitability for time-series analysis. At level form, FCE, FDI, and GDP are stationary, denoted as I(0), given that the ADF test statistic values exceed the critical values at a 5% significance level for these variables, especially under

intercept & trend. However, GFCF, HI, and Trade are non-stationary at level, confirmed by p-values above 5%. After differencing once, these variables achieve stationarity, as evidenced by significantly low p-values, suggesting they are integrated of order one I(1). Table 4 shows the endogeneity test estimates.

Table 4. Endogeneity Test Estimates

Dependent Variables	Independent Variables					
	FCE	FDI	GDP	GFCF	HI	TRADE
FCE		0.0146	0.0472	0.0465	0.0000	0.0125
FDI	0.0539					
GDP	0.0683					
GFCF	0.0664					
HI	0.0000					
TRADE	0.3471					

Source: Processed data, 2026

The table 4 presents the Ordinary Least Squares (OLS) results for checking potential endogeneity between Final Consumption Expenditure and each independent variable which are FDI, GDP, Gross Fixed Capital Formation, Average Household Income, and Trade. The coefficients here represent the correlation between FCE and each independent variable when regressed independently. A few notable results include the relationship between FCE and GFCF (p-value = 0.0000), which shows a highly significant association, indicating a strong influence of GFCF on FCE. Similarly, GDP and FDI have significant p-values (0.0472 and 0.0465, respectively), suggesting potential endogeneity concerns, as they exhibit noteworthy associations with FCE. Conversely, Trade, with a p-value of 0.3471, appears to have a less significant association with FCE, implying weaker endogeneity concerns in this particular context. These results highlight the importance of using an appropriate methodology, such as the Generalized Method of Moments (GMM), to manage potential endogeneity issues, particularly with variables like GFCF, GDP, and FDI. Table 5 shows the GMM estimates.

Table 5. GMM Estimates

Dependent Variable: FCE				
Method: Generalized Method of Moments				
Variables	Coefficient	Std. Error	t-Statistic	Prob.
FCE(-1)	-0.0602	0.1714	-0.3511	0.7284
FDI	0.7725	0.1816	4.2545	0.0002
GDP	-0.2333	0.1128	-2.0673	0.0488
GFCF	-0.3792	0.1737	-2.1831	0.0382
HI	0.0091	0.0016	5.7800	0.0000
TRADE	0.1563	0.0726	2.1523	0.0408
C	86.9459	14.7760	5.8843	0.0000
R-squared	0.9464	Mean dependent var		89.0955
Adjusted R-squared	0.9341	S.D. dependent var		3.9795
S.E. of regression	1.0218	Sum squared resid		27.1468
Durbin-Watson stat	1.7010	J-statistic		0.0000
Instrument rank	7.0000			

Source: Processed data, 2026

The estimation results indicate significant relationships between Final Consumption Expenditure and several independent variables. The lagged FCE coefficient (-0.0602) is statistically insignificant ($p = 0.7284$), suggesting weak persistence in FCE over time. Foreign Direct Investment shows a strong, positive association with FCE (coefficient = 0.7725, $p = 0.0002$) consistent with the results of John (2022), implying that higher FDI tends to increase consumption, likely due to investment inflows spurring economic activity. When foreign firms invest in a country, they create

jobs, improve wages, and introduce new technology and skills that boost productivity, which collectively raises disposable income and consumer purchasing power. This influx of financial resources can also stimulate domestic industries through demand for local inputs, further expanding income opportunities and consumption. Additionally, FDI contributes to economic stability, fostering a more favorable environment for long-term consumption by reducing poverty and creating higher standards of living. GDP has a significant negative relationship with FCE (coefficient = -0.2333, $p = 0.0488$) as in the study of Ghana by Ofori-Abebrese (2012).

In Pakistan, economic growth is frequently coupled with higher costs of living, this shift reduces consumption as households balance against the risks of inflation and income uncertainty, thereby reinforcing the negative effect of GDP growth on consumption. Gross Fixed Capital Formation is also negatively related to FCE (coefficient = -0.3792, $p = 0.0382$), potentially indicating that as more funds are allocated to fixed investments, immediate consumption is curtailed, this result is consistent with the results of Jammeh (2022). In Pakistan, there is limited fiscal space and reliance on debt-financed development projects, which prioritize capital formation to support future growth, often leading to reduced current spending power among households. Consequently, while GFCF fosters economic growth in the long run, it tends to suppress consumption in the short term as financial resources are locked into fixed investments.

Conversely, Household Income has a strong positive effect on FCE (coefficient = 0.0091, $p = 0.0000$), highlighting the direct impact of income increases on consumption consistent with findings of Adedeji and Adegboye (2013) as well as Sekantsi (2016). This relationship is particularly significant in Pakistan, where rising household incomes enable families to meet basic needs and invest in discretionary spending, such as education and healthcare. Moreover, higher income levels foster consumer confidence, prompting households to increase their consumption levels in anticipation of sustained financial stability. This trend reflects the basic economic principle that as income rises, so does the propensity to consume. Trade positively influences FCE (coefficient = 0.1563, $p = 0.0408$), consistent with the findings of Mehta and Mallikarjun (2023) suggesting that trade openness may facilitate higher consumption through greater access to goods and services.

In Pakistan, trade liberalization has facilitated access to imported goods, allowing households to enjoy a wider array of products at competitive prices, which directly boosts consumer spending. This access not only enhances consumer choice but also improves the overall quality of life, as consumers can obtain better and more affordable products. Moreover, trade stimulates economic growth by generating employment and increasing income levels, further supporting higher consumption. As the economy becomes more integrated into the global market, households are likely to experience increased purchasing power, enabling them to allocate a larger share of their income to consumption. The high R-squared (0.9464) indicates that the model explains a substantial portion of the variation in FCE, while the Durbin-Watson statistic (1.7010) suggests no major issues with autocorrelation.

4.2. Discussion

This analysis supports many well-established economic theories and illuminates Pakistan's macroeconomic determinants affecting final consumer spending. The study employs the Generalized Method of Moments (GMM) to show that FDI, GDP growth, GFCF, household income, trade openness, and economic development affect domestic consumption. Possible endogeneity issues are addressed. Economic activity indicates that FDI has a positive and statistically significant effect on FCE. Endogenous Growth Theory emphasizes the role of outside investment in innovation, job creation, and productivity (Ngoc, 2025). Economic opportunities and household earnings increase with foreign direct investment (FDI), improving families' purchasing power and consumer demand. The result supports Keynesian Consumption Theory, which holds that income increases expenditure (Morelli, 2025). Foreign investment in emerging nations like Pakistan boosts family welfare through infrastructure, industry, and labor market reforms. This finding supports previous studies showing investment-led economic integration increases domestic demand via economic confidence and income (Fan et al., 2026; Sobirov et al., 2026).

Economic growth and final consumer spending are negatively correlated, contrary to common opinion. Contrary to the idea that growth improves living standards and family spending, Pakistani growth may have been more investment-driven than consumption-driven during the study period.

From a structural change perspective, this outcome indicates that families are temporarily limiting their consumption to support productive investments and industrial expansion (Mizik et al., 2025). This result suggests another explanation, i.e., unequal income distribution, in which some individuals or sectors benefit from economic development at the cost of others (Wong, 2023). According to the Permanent Income Hypothesis, families may defer spending if they lack stable expectations about future discretionary income stemming from economic growth. Thus, high economic growth may not boost aggregate spending without inclusive income-generating processes.

Gross fixed capital formation and final consumption expenditure are negatively related. This supports the long-held investment-consumption trade-off in economic theory. Endogenous Growth Theory requires such spending to sustain economic growth and increase productivity. Meanwhile, governments and individuals may limit consumption to save for the future. Thus, the finding represents a choice between spending now and prospering hereafter. Emerging economies show comparable results, as investment-intensive growth approaches temporarily reduce consumer spending but improve quality of life (László, 2025).

The strong positive correlation between family income and final consumption expenditure supports Keynesian Consumption Theory. According to Keynes, discretionary income drives consumer expenditure. In Pakistan, rising incomes still drive consumer spending. This result supports the Permanent Income Hypothesis, which holds that families seek to increase their purchasing power in anticipation of economic stability. Higher family incomes make it simpler to acquire goods and services, raising living standards for everyone (Zheng et al., 2024). Increased consumer spending and economic activity are expected to amplify the effects of more jobs, higher earnings, and a more diversified income distribution.

Final consumption spending also benefits from trade openness. This research supports theoretical arguments for international economic integration. Trade liberalization increases market competition, which reduces consumer costs by expanding product selection (Barros & Martínez-Zarzoso, 2022). These procedures boost consumer welfare by encouraging spending. According to Endogenous Growth Theory, openness promotes technology transfer, productivity gains, and knowledge diffusion, which raises incomes and expenditure. Trade liberalization in Pakistan may have increased local demand by increasing product availability and linking local markets to global value chains. This study's positive correlation underscores the importance of consumption-led economic development plans and open, competitive trade policies.

5. CONCLUSION

This study examined the macroeconomic determinants of Final Consumption Expenditure in Pakistan over the period 1990 to 2023, focusing on Foreign Direct Investment, economic growth, Gross Fixed Capital Formation, household income, and trade openness. Using annual data obtained from the World Bank, the empirical analysis first applied the Augmented Dickey-Fuller test to ensure data stationarity and establish appropriate integration orders of the variables. Potential endogeneity among the variables was initially assessed, and the Generalized Method of Moments estimation technique was subsequently employed to obtain consistent and efficient estimates. The results reveal a complex but policy-relevant relationship between macroeconomic fundamentals and consumption behavior. Foreign Direct Investment emerges as a key driver of consumption, reflecting its role in generating employment opportunities and strengthening household purchasing power. In contrast, economic growth and Gross Fixed Capital Formation exhibit a negative association with consumption, suggesting that periods of intensified investment and capital accumulation may temporarily constrain household expenditure. Household income shows a strong positive influence on consumption, underscoring the central role of income growth in sustaining domestic demand. Similarly, trade openness significantly enhances consumption by improving access to a wider variety of goods and services at competitive prices.

From a policy perspective, the findings suggest that consumption-led growth in Pakistan requires a balanced macroeconomic strategy. Strengthening household disposable income through targeted fiscal relief, expanding social protection programs, and ensuring wage growth can directly enhance consumption capacity. At the same time, improving the investment climate through regulatory efficiency, infrastructure development, and Special Economic Zones can sustain foreign

investment inflows that indirectly support consumption through job creation. Moreover, diversifying the economic structure and investing in human capital development are essential for achieving sustainable growth without suppressing short-term consumption. Enhancing public-private partnerships and improving financial access for small and medium-sized enterprises can further strengthen capital formation without dampening household demand.

Future research can develop this analysis through several directions. First, final consumption expenditure can be broken down into several consumption categories to identify whether the influence of FDI, economic growth, capital formation, household income, and trade openness differs across each type of consumption expenditure. Second, future research can consider structural breaks to capture structural changes or economic shocks that occurred during the observation period. Third, the analysis can be expanded using panel data from several South Asian countries with comparable economic characteristics so that the research results can provide broader comparative evidence. Finally, considering that the unit root test results in Table 3 indicate a combination of $I(0)$ and $I(1)$ variables, future research can use the ARDL bounds testing approach as a robustness test to examine the short-run and long-run relationships between variables.

Overall, the study highlights that while investment and growth-oriented policies are essential for long-term development, equal emphasis must be placed on income distribution and trade facilitation to sustain robust consumption-driven economic stability in Pakistan.

Conflict of Interest Statement

The authors declare that there is no conflict of interest regarding the publication of this paper.

Author Contributions

M.H.H. : Conceptualization, Investigation, Data Curation, Writing - Original Draft.

K.Z. : Methodology, Supervision, Validation, Writing - Review & Editing.

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Ethical Approval

This article does not contain any studies with human participants or animals performed by the authors.

Data Availability

The data that support the findings of this study are available from the corresponding author [K.Z.] upon reasonable request.

Declaration of Generative AI and AI-assisted Technologies

During the preparation of this manuscript, the authors used ChatGPT (OpenAI) to improve the language and readability of the text and grammar. All outputs generated by the AI tool underwent rigorous critical review and thorough editing by the authors to ensure factual accuracy, enhance clarity of expression, and confirm adherence to established academic standards. The authors assume full responsibility for the integrity and content of this manuscript

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