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# FOREIGN DIRECT INVESTMENT AND EXPORT DYNAMICS: EVIDENCE FROM PAKISTAN'S MANUFACTURING INDUSTRIES

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## Abstract

Foreign direct investment (FDI) is one of the key drivers of manufacturing industry and export competitiveness. To run the economic system in the right direction low financial capital requires FDI. This study examines the relationship between FDI and export performance of selected manufacturing industries in Pakistan. Time series data on FDI and exports, along with other relevant macroeconomic indicators from 1990 to 2024; have been extracted from World Bank data (world development indicators 2024) for Pakistan. The Autoregressive Distributed Lag (ARDL) approach has been used to investigate long-run relationships and the Error Correction Model (ECM) to analyze short-run dynamics. There is a negative relationship between FDI and exports in the short run and a significant positive relationship in the long run. Other variables—GDP, relative prices, and domestic demand pressure—also positive and significant and the real effective exchange rate has a negative relationship with exports in both the short and the long run. It is suggested that policymakers should focus on the factors affecting FDI and their relationship with export performance. This can be achieved through effective policy reforms and the creation of a favorable situation for attracting FDI inflows, which can ultimately enhance exports.

**Keywords:** FDI, Export Performance, ARDL, ECM

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## 1. INTRODUCTION

The role of foreign direct investment (FDI) in manufacturing industry is significant in developing economies. It causes technology transfer, productivity enhancement, and export competitiveness, though it may cause negative effect on trade structures and creates dependency (Sadiku et al., 2016). Pakistan faces political instability, weak governance, which challenge its capacity to attract FDI. It remains an important factor for addressing capital shortages and accelerating industrial growth, particularly in export-oriented manufacturing sectors.

Pakistan has strategized to maintain stable export growth and consistent inflows of FDI through various strategies such as trade liberalization and market-oriented reforms in the 1990s. Weak institutional capacity and policy inconsistency have limited the productive utilization of FDI and its contribution to export expansion. FDI has been influenced by geopolitics and regime-specific policies. During the military regime (2001–2008), major investments originated from the USA, UK, and UAE, whereas subsequent political transitions redirected investment toward China through the China-Pakistan Economic Corridor (CPEC), involving an estimated USD 46 billion (Dagha et al., 2021). However, the investment pattern has remained volatile, around USD 2 billion annually and peaking at USD 5.4 billion in 2008. Empirical evidence suggests that FDI enhances technological advancement, productivity, and export competitiveness within Pakistan's manufacturing sector (Shar et al., 2020; Shaheen et al., 2019). Nevertheless, the sectoral dynamics of this relationship remain underexplored. Therefore, this study investigates the impact of FDI on the export performance of selected manufacturing industries—textile, leather, cement, and sugar—using sectoral data from 1990 to 2024. The study aims to examine the relationship between FDI and exports to provide empirical insights for promoting manufacturing industrial development and export-led growth.

## 2. LITERATURE REVIEW

Global FDI peaked at \$1,356 billion in 2000s, with the most significant expansion in 1990s and regained momentum between 2006 and 2015 reaching \$ 2,050 billion and decreases by 35% during 2019–2020 due to the global pandemic (UNCTAD, 2022). Institutional quality has been identified as a vital determinant of FDI inflows (1996–2021). Msakni et al. (2023) found that institutional factors have strong long-term positive effects on FDI, while short-term results remain insignificant due to slower institutional adjustment. In Ghana, institutional policies were found to have a direct cointegration with FDI both in the short and long run (Yakubu, 2020). Institutional quality and regional stability are essential in attracting FDI, as strong governance, corruption control, and political stability positively influence inflows (Asiedu, 2005; Bouchoucha, 2018). FDI is encouraged through liberal trade policies, tariff reductions, and limited government intervention, contributing to capital deepening, technology transfer, and trade expansion (Owusu & Nantwi, 2019). Qureshi et al. (2020) demonstrated a bidirectional linkage between FDI, corruption control, and economic growth across 54 countries, concluding that improved institutional quality fosters sustainable investment and growth. Classical growth theorists (Solow, 1956; Koopmans, 1965) highlight that differences in per capita income stem from variations in saving and investment rates. FDI plays a key role in bridging this gap by transferring technology, enhancing skills, and improving productivity, thereby contributing to employment and growth (Khan, 2018; Lipsey, 2001). Sabir et al. (2019) further noted that FDI in industrialized nations is more responsive to institutional quality, while in developing economies, trade openness and agricultural share in GDP are stronger determinants.

Trade liberalization has also played a critical role in strengthening regional cooperation and growth. For BRICS economies, both the export-led growth (ELG) and import-led growth (ILG) hypotheses hold under specific conditions (Raghutla, 2019). Empirical literature shows mixed findings regarding the relationship between FDI and growth. While some studies report positive effects (Reisen & Soto, 2001; Olofsson, 1998), others find weak or negative associations (Johnson, 2006; Mencinger, 2003). Similarly, export-led growth studies emphasize that ignoring import dynamics may lead to spurious results, suggesting bidirectional causality between trade and growth (Esfahani, 1991; Awokuse, 2008). Evidence from 126 countries confirms that exports significantly influence income growth, particularly in Asian economies supported by investment, human capital, and import growth (Riezman et al., 1996). In East and South Asia, multinational enterprises (MNEs) have played a central role in promoting export performance through FDI-driven integration with global markets (Srinivasan, 1998). However, FDI effects vary depending on whether investments are export-oriented or market-seeking (World Bank, 1993). In India, despite substantial FDI inflows, no direct effect on export performance was found (Sharma, 2000), while in Bangladesh, a unidirectional causality runs from exports to FDI (Ahmed et al., 2023). Pakistan's trade liberalization during the 1990s boosted exports and attracted substantial FDI. Empirical evidence shows a long-run positive association between FDI and exports (Khalil et al., 2013), while human capital, technological advancement, and manufacturing output remain critical for growth (Rehman, 2016). Export performance continues to be a strong driver of GDP, though imports and inflation exert negative influences (Ahmad et al., 2017). Excessive reliance on external debt, however, has not translated into sustainable growth (Iqbal et al., 2018). Comparative analysis between Pakistan and India confirms that exports significantly enhance economic growth in both economies (Khan et al., 2019).

Chinese FDI under the China–Pakistan Economic Corridor (CPEC), valued at USD 62 billion, has transformed Pakistan's infrastructure and industrial sectors. ARDL analysis reveals that Chinese investment positively influences Pakistan's economic growth, particularly in renewable energy and transport (Ahmad et al., 2022). However, persistent challenges such as weak institutional frameworks, inconsistent policies, and low productivity hinder FDI's full potential. Pakistan's declining competitiveness ranking underscores the need for reforms to strengthen institutional capacity, promote private sector participation, and attract sustainable investment in manufacturing and export-led sectors (Ahmad & Qadir, 2022; Siddique, 2020).

## 3. Econometric Model Specification

Based on the theoretical model and hypothesis of the study, the following econometric model is specified to capture the relationship between FDI and export performance of selected manufacturing industry. The model captures the functional relationship among key macroeconomic variables influencing export dynamics in Pakistan.

$$\log EXPt = f(\log FDI_t, \log REXt, \log PGDPt, \log WGDPt, \log RPt, \log DPt)$$

Whereas

EXPt= Export Performance with respect to time.

FDIt= Foreign Direct investment

REXt= Real Effective Exchange Rate

PGDPt= Pakistan Gross Domestic Product

WGDPt= World Gross Domestic Product

DPt= Domestic Demand Pressure

RPt= Relative Prices

$\beta_0$  Shows the intercept of the model

T = Time period

$\beta_1 \dots 6$  are the coefficient of the respective variables

$\varepsilon_t$  = residual term.

### Unit Root test and Auto Regressive Distributed Lag Model

To examine the stationarity of the data, two well-known tests—the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests—are applied. The variables are found to be stationary at a mix of I(0) and I(1) levels, the Autoregressive Distributed Lag (ARDL) bounds testing approach is specified to estimate the long-run and short-run relationships among the variables.

The ARDL model is a least squares regression model that integrates the appropriate lag structure, where  $p$  denotes the lag of the dependent variable (autoregressive lag) and  $q$  represents the lags of independent variables (distributed lags). Following Pesaran et al. (2001), the study employs the unrestricted error correction form of the ARDL model, specified as follows:

$$\begin{aligned} \Delta \ln EXP_t = \beta_0 + \beta_1 \sum_{i=1}^n \Delta \ln EXP(t-i) + \sum_{i=1}^n \beta_2 \Delta \ln FDI(t-i) + \sum_{i=1}^n \beta_3 \Delta \ln REX(t-i) + \\ \sum_{i=1}^n \beta_4 \Delta \ln PGDP(t-i) + \sum_{i=1}^n \beta_5 \Delta \ln WGDP(t-i) + \sum_{i=1}^n \beta_6 \Delta \ln RP(t-i) + \sum_{i=1}^n \beta_7 \Delta \ln DP(t-i) + \\ \lambda_1 \ln EXP(t-1) + \lambda_2 \ln FDI(t-1) + \lambda_3 \ln REX(t-1) + \lambda_4 \ln PGDP(t-1) + \lambda_5 \ln WGDP(t-1) + \\ \lambda_6 \ln RP(t-1) + \lambda_7 \ln DP(t-1) + \varepsilon_t \end{aligned} \quad (1)$$

Whereas,

$\Delta$  Shows the short run changes and  $\lambda_1 \lambda_2, \dots, \lambda_7$  shows the long run cointegration. Here the null hypothesis of no cointegration between the variables against the alternative hypothesis of there is a long run relationship (co-integration) between the variables. The null hypothesis is given below

$$\lambda_1 = \lambda_2 = \lambda_3 = \lambda_4 = \lambda_5 = \lambda_6 = \lambda_7 = 0$$

When the long run co-integration is found to be exist in the model than the following model is followed for long run co-integration.

$$\begin{aligned} \ln EXP_t = \beta_0 + \sum_{i=1}^n \Phi \ln EXP(t-i) + \sum_{i=1}^n \beta_1 \ln FDI(t-i) + \sum_{i=1}^n \beta_2 \ln REX(t-i) + \sum_{i=1}^n \beta_3 \ln PGDP(t-i) + \\ \sum_{i=1}^n \beta_4 \ln WGDP(t-i) + \sum_{i=1}^n \beta_5 \ln RP(t-i) + \sum_{i=1}^n \beta_6 \ln DP(t-i) + \varepsilon_t \end{aligned} \quad (2)$$

The model for the estimation of short run coefficients and Error Correction Model (ECM) is mentioned below.

$$\begin{aligned} \Delta \ln EXP_t = \beta_0 + \sum_{i=1}^n \Phi \Delta \ln EXP(t-i) + \sum_{i=1}^n \beta_1 \Delta \ln FDI(t-i) + \sum_{i=1}^n \beta_2 \Delta \ln REX(t-i) + \\ \sum_{i=1}^n \beta_3 \Delta \ln PGDP(t-i) + \sum_{i=1}^n \beta_4 \Delta \ln WGDP(t-i) + \sum_{i=1}^n \beta_5 \Delta \ln RP(t-i) + \sum_{i=1}^n \beta_6 \Delta \ln DP(t-i) + ECT(t-i) + \varepsilon_t \end{aligned} \quad (3)$$

### Bound test and Diagnostic Test

The Bound test of Pesaran et al. (2001) is applied to assess long-run cointegration, as non-stationary series do not converge to equilibrium. If the F-statistic exceeds the upper bound, cointegration exists. To ensure model reliability, diagnostic tests are conducted: the Breusch-Godfrey LM test detects serial correlation, the Breusch-Pagan-Godfrey test identifies heteroskedasticity, and the Jarque-Bera test examines residual normality through skewness and kurtosis. Finally, CUSUM and CUSUMSQ tests assess model stability, where plots within critical bounds indicate stable short- and long-run parameters.

## 4. RESULTS AND DISCUSSION

This section presents the econometric results and their interpretation, focusing on the relationship between FDI and export performance of the selected manufacturing industry. The findings are analyzed in light of the theoretical framework and existing empirical evidence.

### Correlation Table

The correlation table shows the strength and direction of relationships among exogenous variables, with values ranging from -1 to +1. The correlation matrix below presents the relationships and directions among the variables.

**Table 1 Correlation matrix**

	<b>LNEXP</b>	<b>LNFDI</b>	<b>LNPGDP</b>	<b>LNREX</b>	<b>LNRP</b>	<b>LNGDP</b>	<b>DP</b>
<b>LNEXP</b>	1.00						
<b>LNFDI</b>	0.41	1.00					
<b>LNPGDP</b>	0.75	0.57	1.00				
<b>LNREX</b>	-0.62	-0.28	-0.54	1.00			
<b>LNRP</b>	-0.73	-0.50	-0.96	0.63	1.00		
<b>LNGDP</b>	0.75	0.57	0.99	-0.58	-0.96	1.00	
<b>DP</b>	0.12	-0.30	-0.05	-0.30	-0.10	-0.00	1.00

The correlation matrix indicates the degree of linear association among the study variables. A coefficient above 0.7 reflects a strong relationship. Export performance (LNEXP) and FDI show a moderate positive correlation of 0.41. The correlation between world GDP and Pakistan's GDP is 0.99, indicating a strong positive association, while Pakistan's GDP has strong negative correlated with relative prices. High correlations may cause multicollinearity. However, the diagnostic tests confirm data suitability for the estimation.

#### Stationarity Tests

Phillip perron test and Augmented Dickey-Fuller (ADF) test have been applied to check stationarity of the time series. Results of the tests are given below table 2.

**Table 2 Unit Root with Phillips Perron (PP) Test**

Variables	At level I(0)		At First Difference I(1)		Status
	T-Statistic	Probability	T-Statistic	Probability	
<b>LNEXP</b>	--	--	-5.506	0.001***	I(1)
<b>LNFDI</b>	--	--	-5.998	0.000***	I(1)
<b>LNPGDP</b>	--	--	-5.699	0.000***	I(1)
<b>LNREX</b>	--	--	-4.645	0.007***	I(1)
<b>LNPR</b>	--	--	-5.240	0.001***	I(1)
<b>LNGDP</b>	--	--	-4.838	0.004***	I(1)
<b>DP</b>	-3.593	0.0112**			I(0)

The Phillips–Perron (PP) test shows a mixed order of integration, with one variable stationary at level and others at first difference. Domestic demand pressure (DP) is stationary at level I(0), with a t-statistic of -3.593 and a probability of 0.012, the null hypothesis of a unit root is rejected. Other variables are non-stationary at level but stationary at first difference I(1).

**Table 3 Unit Root with Augmented Dickey-Fuller (ADF) Test**

Variables	I(0)		I(1)		Status
	T-Statistic	Probability	T-Statistic	Probability	
<b>LNEXP</b>	3.073	0.039**	--	--	I(0)
<b>LNFDI</b>	--	--	-5.133	0.003***	I(1)
<b>LNPGDP</b>	--	--	-5.373	0.001***	I(1)
<b>LNREX</b>	--	--	-4.912	0.004***	I(1)
<b>LNPR</b>	--	--	-4.154	0.002***	I(1)
<b>LNGDP</b>	--	--	-4.825	0.004***	I(1)
<b>DP</b>	-4.621	0.008***	--	--	I(0)

The Augmented Dickey-Fuller (ADF) test results shows that domestic demand pressure (DP) is stationary at level I(0), while the remaining variables become stationary after first differencing, i.e., I(1). The export performance variations between ADF and PP results may arise from differences in test sensitivity. Overall, the mixed order of integration—some variables being I(0) and others I(1)—confirms that the data are suitable for estimation using the ARDL model.

### Lag selection for ARDL Model

Lag selection criteria is the important step for ARDL Model. It shows us the optimal lag selection during estimation. Generally AIC criteria are considered for the optimal lag selection. Below table have minimum value 17.0539\* of AIC at second lag. Therefore the model will consider 2 lags.

**Table 4 Lag Selection Criteria**

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-441.22	NA	1480.34	27.16	27.48	27.27
1	-234.65	312.98*	0.1129	17.615	20.154*	18.46
2	-176.39	63.56	0.0993*	17.0539*	21.815	18.656

The polynomial graph illustrates the model's stability diagnostics, where each blue dot represents a root of the autoregressive characteristic polynomial. The unit circle in the complex plane indicates stability; if all roots lie within it, the model is stable. As shown, all points fall inside the circle, confirming that the ARDL model is stable and the selected lag structure is appropriate. According to the Akaike Information Criterion (AIC), the lag length with the lowest value (17.0539 at lag 2) indicates the best model fit, thus two lags are selected as optimal.

### F-Bound Test Cointegration

Long-run cointegration is confirmed when the F-statistic exceeds the upper bound at the chosen significance level. In this case, the F-statistic (9.17) is greater than the upper bound (3.61) at the 5% significance level, confirming a stable long-run equilibrium relationship among the variables.

**Table 5 F-bound test**

F-statistic		9.17	
		Critical value Bounds	
Significance level		Lower bound values	Upper bound values
10%		2.12	3.23
5%		2.45	3.61
2.5%		2.75	3.99
1%		3.16	4.43

### Output of the Estimated Model

ARDL model has been estimated with both short and long run co-integration to check the possible impact of FDI on the export performance of the selected industries in Pakistan. Exports of the selected industries is used as a proxy for export performance and taken as a response variable. While FDI of the selected industries along with other determinants of export performance are the control variables and taken as an exogenous variable.

**Table 6 ARDL Model Long Run**

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LNFDI	-0.03322	0.01564	-2.12404	0.0479**
LNWGDP	0.0687	0.22650	0.30346	0.7640
LNPGDP	0.8777	0.20275	4.32914	0.0002***
LNREX	-1.2592	0.23740	-5.30418	0.0000***
LNRP	0.0303	0.10850	2.7973	0.0096***
DP	0.2756	0.13695	2.01241	0.0508**
C	4.3288	0.28794	4.98435	0.0577**

### Interpretation and discussion:

The above table presents the long-run ARDL estimation results. The intercept (C) of 4.32, significant at the 5% level, represents the baseline log-level of exports when all explanatory variables are zero. The elasticity of FDI (-0.033) indicates that foreign direct investment exerts a negative long-run effect on export performance, implying that FDI inflows to Pakistan are largely efficiency- or market-seeking rather than export-oriented. This finding is consistent with Khalil et al. (2013) and Majeed et al. (2007), who also observed a conditional relationship between FDI and export growth. World income (WGDP) exhibits an insignificant coefficient, suggesting limited responsiveness of Pakistan's exports to global demand fluctuations. Conversely, Pakistan's GDP (PGDP) shows a positive and significant elasticity of 0.87, indicating that a one percent increase in domestic output enhances export performance by 0.87 percent. This supports the export-led growth hypothesis, as higher domestic production and income levels stimulate export supply. The result aligns with Ahmad et al. (2017).

The real effective exchange rate (REX) emerges as a critical determinant, displaying a significant negative elasticity of -1.25. This suggests that currency appreciation reduces export competitiveness and demand, consistent with the findings of Joshi and Little (1994) and Srinivasan (1998). Relative price (RP) demonstrates a positive and significant long-run elasticity of 0.303, implying that a one percent increase in relative prices enhances export performance by 0.303 percent, reflecting the competitiveness of Pakistan's exports vis-à-vis domestic prices (Khalil et al., 2013). Domestic demand pressure (DP) also exerts a positive and significant effect, with an elasticity of 0.27. A one percent increase in domestic demand raises exports by 0.27 percent, possibly reflecting surplus production capacity that allows industries to serve both domestic and external markets. This outcome contrasts with Sharma (2000), who found a substitution effect between domestic and foreign demand.

**Table 7 ARDL Short Run Results**

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
D(LNFDI)	0.06725	0.03880	1.73298	0.0949 *
D(LNWGDP)	0.09853	0.32531	0.30288	0.7644
D(LNPGDP(-1))	1.08244	0.29768	3.63626	0.0012***
D(LNREX(-2))	-1.19192	0.38481	-3.097385	0.0046***
D(LNRP)	-0.19745	0.015692	-3.46890	0.0019***
D(DP)	0.25426	0.121665	2.08983	0.04928**
CointEq(-1)	-1.14335	0.213984	-6.69921	0.0000***
R-Square			0.7353	
Probability F-Statistics			0.00157	
Durban Watson stat.			1.821	

### Interpretation and discussion

The above table presents the short-run ARDL estimation results. Most variables are statistically significant, except world GDP (WGDP). The primary objective is to assess the short-run impact of foreign direct investment (FDI) on the export performance of Pakistan's manufacturing industries. The coefficient of FDI (0.06) is positive and weakly significant at the 10% level ( $p = 0.09$ ), indicating that a one percent rise in FDI increases exports by 0.06 percent in the short run. This suggests that FDI inflows temporarily stimulate export activity, possibly reflecting short-term capital movements or efficiency-seeking investments. Similar short-run effects are reported by Jawaid et al. (2016) and Sultan (2013).

Pakistan's GDP (PGDP) shows a positive and significant coefficient of 1.08, implying that a one percent rise in GDP enhances exports by 1.08 percent in the short run. This finding aligns with the theory of national income, which posits a direct relationship between economic growth and net exports. The real effective exchange rate (REX) exhibits a significant negative elasticity (-1.19), indicating that currency appreciation reduces export competitiveness and demand. This inverse relationship is consistent with Bacha (1992), Pagano (1994), and Jappelli (1990). Similarly, relative prices (RP) have a negative and significant coefficient (-0.19), suggesting that a one percent increase in relative prices reduces exports by 0.19 percent, as higher domestic prices weaken external competitiveness (Sharma, 2000).

Domestic demand pressure (DP) shows a positive and significant impact, with an elasticity of 0.25, meaning that a one percent increase in domestic demand raises exports by 0.25 percent. This indicates that strong domestic demand and export performance can coexist in the short run, possibly due to economies of scale or excess production capacity. The error correction term (CointEq -1) is negative (-1.14) and highly significant, confirming the presence of long-run cointegration and indicating rapid adjustment toward equilibrium. Its magnitude (>1) suggests an over-adjustment mechanism, meaning deviations are corrected within approximately eight months.

Model diagnostics confirm robustness. The F-statistic ( $p < 0.05$ ) indicates that the overall model is statistically significant. The Durbin-Watson statistic (1.82) falls within the acceptable range (1.8–2.2), implying no serial

correlation. The  $R^2$  value of 0.73 suggests that 73% of the variation in export performance is explained by the model's independent variables.

#### Diagnostic Tests

**Table 8 Breusch Godfrey LM Test for Serial correlation**

LM Serial correlation	
Chi Square ( probability)	0.2
Durban Watson test value	2.14

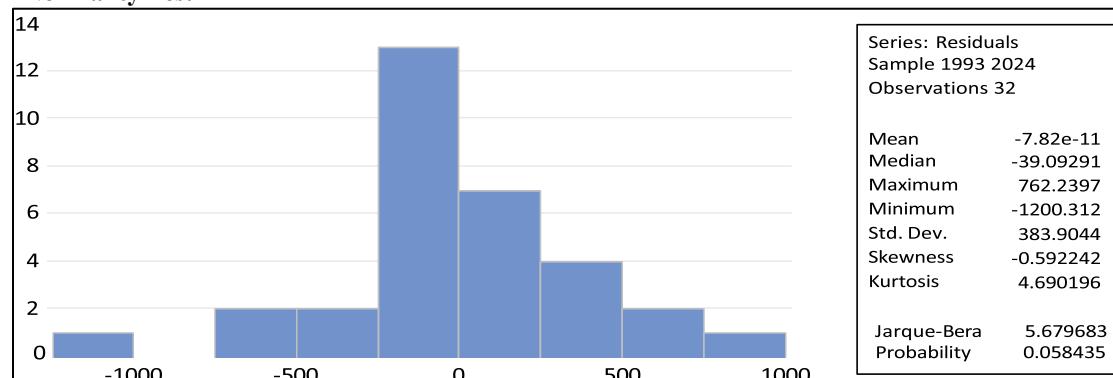
The probability value of chi-square is more than 0.05. When the value is greater than 0.05, it is said to accept null hypothesis. Therefore there is no serial correlation.

**Table 9 Breusch-Pagan-Godfrey Test for Heteroskedasticity**

Breusch-Pagan-Godfrey Test	
Chi Square Statistic (probability)	0.57

The Chi-square statistical probability value of heteroskedasticity is more than 0.05. Since the probability value (0.57) is greater than the 5% significance level, the null hypothesis of homoscedasticity is not rejected. This indicates that the model does not suffer from heteroskedasticity.

#### Normality Test



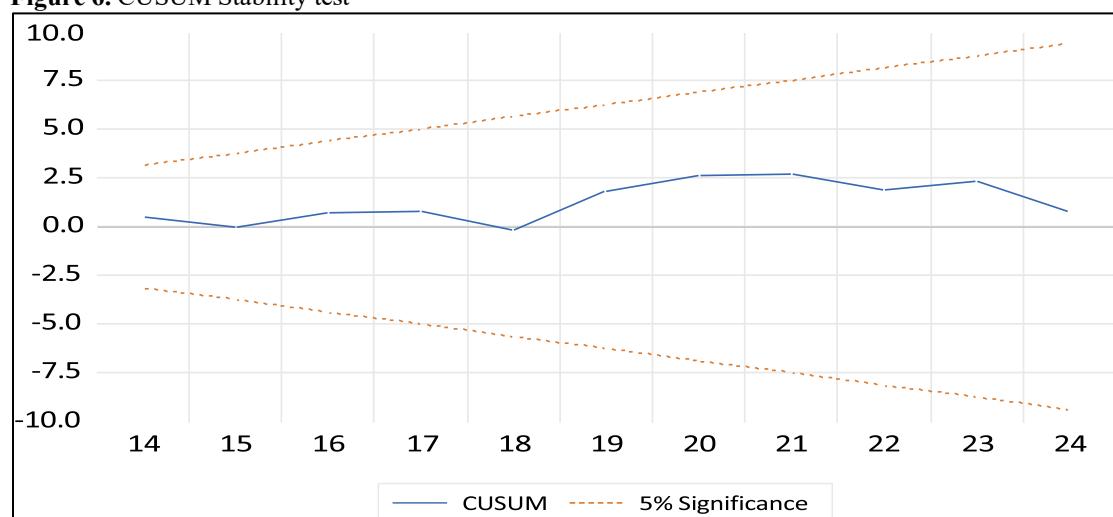
\*Source: Author's calculations using EViews 12.

The above shape of the histogram shows the normality of the data and the Jarque-Bera Probability value is 0.058 greater than 0.05. When the Jarque-Bera probability value is greater than 0.05 it means that the data is normal.

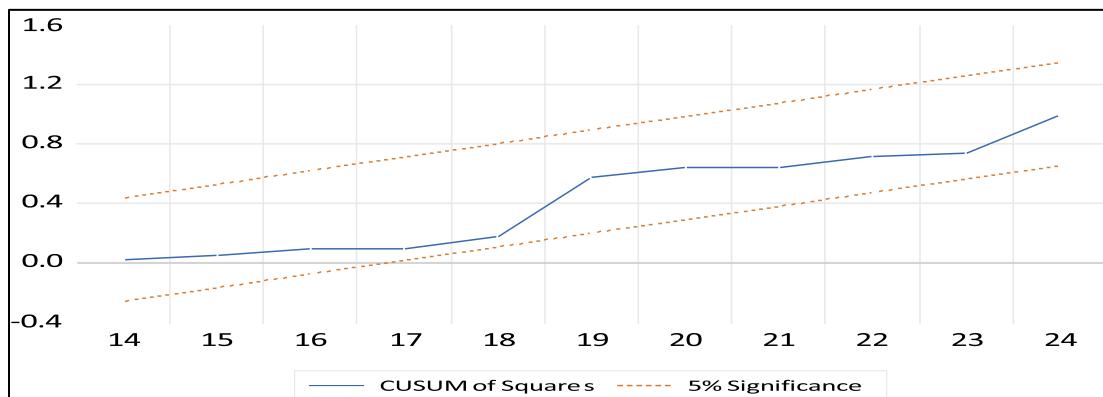
#### Model Robustness

Robustness tests were applied to check the model stability and are given below. It shows the unbiasedness in long run and avoid model from the mis-specification in the model.

**Figure 6.** CUSUM Stability test



**Figure 7.** CUSUM Square stability test



When the graph of the CUSUM and CUSUM Square are the recursive residual cumulative and its square graphs. When the graph remains inside the border, it indicate that the model is stable because the graph or line remains within the 5% critical bounds. Figure 6 depicts the CUSUM graph inside the crucial values at 5 % significance level. While figure 7 also indicate the CUSUMSQ graph inside the border lines at 5 percent significant level. Both CUSUM and CUSUMSQ are showing the stability of the model in long run.

**Table 10 VAR Granger Causality test**

Dependent Variable	Excluded variable	Chi Square	Probability
EXP	FDI	5.43	0.06
PGDP	FDI	5.19	0.07
	RP	10.25	0.00
	DP	11.07	0.00
REX	PGDP	14.48	0.00
	RP	11.98	0.00
	WGDP	4.70	0.00
	DP	13.70	0.00
RP	PGDP	22.09	0.00
	REX	10.97	0.00
	DP	15.81	0.00
DP	FDI	4.96	0.08

There is one way-causality from export performance towards foreign direct investment. It means that export performance will granger cause FDI of the selected industries. There is also a one directional causality from GDP of Pakistan towards FDI and domestic demand pressure.

While bi-directional causality is found between Pakistan GDP and relative Prices (RP). Real effective exchange rate has one way causality towards GDP, relative prices (RP), world GDP and Domestic demand Pressure (DP). There is one way-causality from relative prices (RP) towards real effective exchange rate and domestic demand pressure (DP). There is a one way causality from domestic demand pressure towards foreign direct investment (FDI) at 10 % significance level.

## 5. CONCLUSIONS & RECOMMENDATIONS

FDI shows a structural imbalance in Pakistan implies temporary export gains through capital inflows and efficiency-enhancing activities. However, the long-run results show a negative elasticity of FDI, suggesting that FDI inflows are primarily domestic-market-seeking rather than export-oriented, limiting sustained export growth contribution. Pakistan's GDP supports the export-led growth link and highlighting the role of domestic productive capacity in boosting external trade. The real effective exchange rate consistently shows a negative and significant impact implies that currency appreciation undermines export competitiveness. Relative prices show short-term competitiveness pressures but longer-term adjustment benefits. Domestic demand pressure enhances exports in both periods, suggesting that Pakistan's industries possess sufficient capacity to meet domestic needs while simultaneously expanding exports.

Based on the estimation results of the study, the following recommendations have been made.

1. Policymakers should focus on attracting export-oriented and technology-intensive FDI rather than domestic-market-seeking investments.

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2. Consider the real effective exchange rate as an important factor in export policy and need careful exchange rate management to sustain export competitiveness.
3. Treat relative prices as a key indicator for export performance. Policymakers should ensure price competitiveness to enhance export growth

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