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Digital Export Intensity, External Inflows, and Domestic Demand as Drivers of Economic Growth in Pakistan: An ARDL Approach

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Abstract

Pakistan's efforts to achieve long-term economic growth are becoming more and more reliant on its ability to export digital goods, foreign financial inflows, and local demand. However, empirical research is necessary to determine these factors' short- and long-term contributions to economic growth. This study looks at how workers' remittances (REM), gross fixed capital formation (GCF), foreign direct investment (FDI), household consumption (CON), and digital export intensity (DEI) affect Pakistan's GDP growth from 1993 to 2025. Using an error correction model (ECM), the autoregressive distributed lag (ARDL) technique has been used to inspect short-term dynamics along with long-term associations. Serial correlation, heteroskedasticity, and functional form specification tests are used to evaluate the reliability of the model. According to the long-run estimations, there are positive and statistically significant relationships between economic growth and DEI (0.699, $p = 0.026$), FDI (0.956, $p = 0.023$), GCF (2.301, $p < 0.001$), and household consumption (0.204, $p = 0.026$). The significance of capital accumulation is highlighted by GCF's greatest estimated coefficient. Remittances, in contrast, have a constructive but statistically insignificant coefficient (0.092, $p = 0.449$). The model is jointly significant and accounts for 86.7% of the growth variation. Rapid adjustment toward long-run equilibrium is indicated by the error correction coefficient, which is negative and significant (-0.802, $p < 0.001$). There is no discernible evidence of heteroskedasticity, serial correlation, or functional form misspecification according to diagnostic testing. The results highlight how crucial it is to boost domestic demand, increase capital creation, draw in profitable FDI, and improve digital export capacity. However, the negligible remittance coefficient raises the possibility that, in the absence of efficient investment channels, foreign transfers by themselves would not result in long-term growth. Therefore, policies that encourage profitable investment and digital export competitiveness may improve Pakistan's long-term growth prospects.

Keywords: Digital Export Intensity; Remittances; FDI; Capital Formation; Household Consumption; Economic Growth; ARDL

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Introduction

Background of the Study

Economic growth (EG) has been a major focus of development studies, and remittances have emerged as a vital external source of funding for developing nations like Pakistan. Since the 1970s, when the boom in oil production in the Gulf Cooperation Council (GCC) countries generated a strong demand for foreign labor, remittances from expatriate workers have become a reliable source of foreign currency. They have been helpful in financing imports, paying debts, and supporting household spending. In fiscal year 2025, workers' remittances reached a record US$38.3 billion, up from US$30.3 billion in FY2024, and data for FY2026 point to a further rise to about US$41.6 billion; Saudi Arabia, the United Arab Emirates (UEA), the European Union (EU), the United Kingdom (UK), and the United States of America (USA) are the largest source regions (State Bank of Pakistan, 2025). As a result, remittances are one of Pakistan's primary sources of foreign cash, although despite lessening resource restrictions and balance-of-payments pressures, their impact on economic progress has proven erratic.

Growth is not solely driven by remittances. Although its advantages depend on the host economy's ability to absorb them, foreign direct investment (FDI) may offer capital, technology, and management expertise (Borensztein et al., 1998). Although the evidence across nations is disputed (Rodriguez & Rodrik, 2000), trade openness can boost growth by expanding markets and disseminating technology (Frankel & Romer, 1999). The investment as well as consumption elements of aggregate demand, which in the Keynesian perspective drive short-run production and, via capital accumulation, long-term growth, are represented domestically by gross fixed capital formation and household consumption (Keynes, 1936; Solow, 1956).

A further, less studied dimension is the digital content of exports. Digital export intensity, measured here by ICT goods/service exports as a percentage of total exports, shows how far an economy's export basket has shifted towards computers, communication equipment, consumer electronics and electronic components (World Bank, 2026). What a country exports matters for growth (Hausmann et al., 2007), ICT infrastructure and investment have been linked to higher growth and productivity (Roller & Waverman, 2001; Jorgenson & Vu, 2005; Czernich et al., 2011), and digital technologies can lower the costs of trade (Freund & Weinhold, 2004). For Pakistan, however, the evidence on ICT and growth is mixed: Rehman et al. (2023) report that ICT negatively affected EG in the short run as well as in the long run, as explored by an asymmetric ARDL model for 1976-2019. Whether a more digitally intensive export base adds to growth alongside remittances, FDI and domestic demand remains an open empirical question.

There are two schools of thought on remittances. One holds that remittances, as a way of ensuring smooth consumption, can discourage labour supply and have an adverse effect on overall growth. The other holds that remittances facilitate household consumption and encourage investment by easing financial constraints, lowering the cost of capital and enabling the accumulation of human and physical capital. At the microeconomic level, remittances raise household welfare by increasing disposable income and access to education, healthcare and housing. At the macroeconomic level, they boost aggregate demand, reduce poverty, support financial inclusion, stabilise exchange rates and act as a countercyclical cushion when domestic output or exports are weak (Chami et al., 2005;

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Ratha & Mohapatra, 2007). In Pakistan, studies find that much of the remitted money is spent on consumption (Ellahi & Omer, 2020), although some evidence points to investment in assets (Adams, 1998).

Remittances may also create problems for recipient countries. These include the exodus of skilled workers (brain drain), inflationary pressure, Dutch disease through real exchange rate appreciation, moral hazard on the part of recipient families and a shift towards less productive non-tradables, which can raise foreign debt, lower reserves and increase output volatility (Chami et al., 2005). The motivation to implement sensible macroeconomic policies and fundamental structural changes may also be diminished by a heavy reliance on remittances (Chami et al., 2005). While informal routes like hawala and hundi, which transport a significant portion of flows, reduce the developmental benefit of remittances, channeling them through official institutions like banks and regulated money-transfer companies strengthens them (Ozaki, 2012).

The empirical evidence on the remittance-growth link is inconsistent. Some studies report that remittances stimulate growth by raising national spending power (Fayissa and Nsiah, 2010; Catrinescu et al., 2009), whereas others find weak, insignificant or negative effects (Barajas et al., 2009; Chami et al., 2005). The effect appears to depend on institutional quality, macroeconomic policy, human capital, financial development, and rates of saving and investment (Catrinescu et al., 2009; Barajas et al., 2009; Giuliano and Ruiz-Arranz, 2009). Remittance inflows have risen sharply in India, the Philippines, Mexico, Pakistan, China, and Egypt, but growth has been stable in some of them and volatile in others, which motivates country-specific evidence.

Problem Statement and Research Gap

Despite the volume of remittances, the evidence for Pakistan remains unsettled. Iqbal and Sattar (2005), Ellahi and Omer (2020) and Ahmad and Khan (2021) report positive growth effects of remittances, whereas Sutradhar (2020) finds a negative effect for Pakistan in a four-country South Asian sample. Among the studies reviewed here, none analyses remittances, FDI and the two domestic demand components together with a measure of the digital content of exports in one ARDL framework that separates short-run from long-run effects. The gap has been filled in this study by adding digital export intensity to the standard set of external and domestic drivers of growth.

Objectives of the Study

The objectives of the present study are as follows:

- To examine the long-run relationship between digital export intensity, remittances, gross fixed capital formation, FDI, household consumption and GDP per capita growth in Pakistan.
- To estimate their short-run effects as well as the speed of adjustment to long-run equilibrium through an error correction model (ECM).
- To derive policy implications for mobilizing external inflows and digital export capacity for sustained growth.

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Significance and Structure of the Paper

This study is valuable because remittances are not only a buffer against foreign exchange deficits but also directly involved in investment, consumption and development as a whole, and because digital export capacity is increasingly seen as a route to export upgrading. Policymakers can control labor migration, draw in profitable FDI, and lessen reliance on foreign debt by being aware of these consequences. The remains of the document is designed as follows: The literature review has been presented in Section 2. Section 3 represents the theoretical framework and hypotheses. The data and methodology are described in Section 4, the results discussion is reported in Section 5, the conclusion is presented in Section 6, along with the policy implications, contributions, and limitations.

Literature Review

The relationship among digital exports intensity, remittances, investment, consumption and FDI, and economic growth has been widely studied for the world as a whole, for developing countries, for South Asia and specifically for Pakistan, with results that vary by method, period and region. The econometric methods used include panel estimations, Autoregressive Distributed Lag (ARDL) models, and with real GDP growth rate as DV (Dependent Variable) and digital exports intensity, remittances, consumption and investment, FDI as independent variables.

Remittances and Growth

The results are questionable. According to Meyer and Shera (2017), Driffield and Jones (2013), Ramirez and Sharma (2008), Giuliano and Ruiz-Arranz (2009), and Imai et al. (2014), remittances greatly increase growth. Remittances help reduce poverty in the Caribbean, and Latin America according to Acosta et al. (2008). On contrary, Chami et al. (2005) and Barajas et al. (2009) find no effect or even a negative effect. Driffield and Jones (2013) use a systems approach inorder to examin the combined effects of FDI, official development assistance, and migrant remittances on growth in poor countries, demonstrating that foreign flows should be examined collectively rather than separately. Meyer and Shera (2017) find that remittances positively affect EG using panel dataset for six countries.

The outcomes are diverse at the international level. Chami et al. (2005) examined 113 countries between 1970 and 1998 and found a adverse effect of remittances on growth, which they attribute to reduced work effort and unproductive use of remittances. In contrast, Catrinescu et al. (2009) discover a tiny but positive growth effect that is dependent on the caliber of institutions and policies. According to Mundaca (2009), remittances foster economic growth in Latin American and Caribbean nations, especially in areas with more advanced banking systems. Remittances support economic growth in African nations, particularly in those with less established financial systems, according to Fayissa and Nsiah (2010). Nyamongo et al. (2012) study how financial development affects the remittance-growth relationship by analyzing 36 African nations between 1980 and 2009.

For Pakistan, research mainly records encouraging results, although short- and long-run dynamics differ. Iqbal and Sattar (2005) find a constructive contribution of workers' remittances to EG. Ellahi and Omer (2020), using the generalized method of moments (GMM) for 1976–2017 to address

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endogeneity and simultaneity bias, find that remittances raise growth mainly through consumption, while the investment channel is not significant. Ahmad and Khan (2021), using an ARDL model on data for 1990–2018, find that FDI and foreign remittances play a positive role in long-term growth. Rehman et al. (2023), using an asymmetric ARDL model for 1976–2019, find that positive remittance shocks have a constructive and significant effect on EG, although positive FDI shocks have a detrimental effect and ICT has a negative effect. Sutradhar (2020) finds a negative effect of remittances on EG in Pakistan, Bangladesh, and Sri Lanka and a positive effect in India.

Previous research on Pakistan was primarily based on household-level and descriptive data. The extensive impacts of Middle Eastern remittances on employment and the balance of payments were documented by Amjad (1986). Burney (1987) discovered that remittances decreased the current account deficit, the burden of foreign debt, and the necessity for further foreign borrowing using time-series data from 1969–1970 to 1985–1986. Nishat and Bilgrami (1991) estimated a significant remittance multiplier for Pakistan that operates mostly through consumption using a straightforward Keynesian framework, while Nishat and Bilgrami (1993) investigated the factors influencing workers' remittances. Using panel data from rural Pakistan, Adams (1998) discovered that foreign remittances had a beneficial impact on the accumulation of rural assets, defying the notion that they are mostly used for consumption. Arif (1999) investigated household investment and remittances. Kozel and Alderman (1990) discovered that remittance income had a negative impact on men's labor force participation in urban Pakistan.

FDI, Capital Formation and EconomicGrowth

Borensztein et al. (1998) show that FDI contributes to growth more strongly as the host economy has a sufficient human capital stock, which highlights the role of absorptive capacity. According to De Long and Summers (1991), there is a substantial correlation between growth and equipment investment. The evidence regarding foreign direct investment (FDI) in Pakistan is conflicting: Ahmad and Khan (2021) claim that FDI has a beneficial long-term role, Saqib et al. (2013) discover that FDI has a negative impact on economic performance while domestic investment improves it, and Rehman et al. (2023) find that positive FDI shocks are harmful. These variations imply that the EG impact of FDI in Pakistan depends on the timeframe and the specification.

Household Consumption and Growth

In the Keynesian tradition, consumption is the largest component of aggregate demand and drives short-run output. Nishat and Bilgrami (1991) and Ellahi and Omer (2020) show that, in Pakistan, remittances operate largely through consumption. Adams and Cuecuecha (2010) find, for Guatemala, that households receiving remittances spend more at the margin on education and housing and less on food, which suggests that consumption of remittance-receiving households can also have investment-like effects.

Digitalization, ICT Exports and Growth

A growing literature links digital technologies and technology-intensive exports to growth. Roller and Waverman (2001) show that telecommunications infrastructure contributes to growth through network effects; Jorgenson and Vu (2005) show that information technology investment contributes

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to growth in the world economy; and Czernich et al. (2011) find that broadband infrastructure raises per capita growth. Freund and Weinhold (2004) show that Internet growth raises international trade, and Hausmann et al. (2007) show that countries specialising in more sophisticated export goods grow faster. Yoo (2008) finds in a 91-country sample for 1988–2000 that high-technology exports contribute significantly to economic output, and Falk (2009) studies the effect of high-tech exports on growth in industrialised countries. Gani (2009), however, finds that the effect is significant only for technological leaders and insignificant for potential leaders, which suggests that low-income countries may not benefit unless they have sufficient technological capability. Srholec (2007) cautions that the growth effect of high-tech exports from emerging nations may be restricted since they frequently reflect the assembly of imported elements within global manufacturing networks rather than home technological capabilities. For Pakistan, Rehman et al. (2023) report a negative effect of ICT on growth.

Summary and Research Gap

In general, remittances have a positive impact on growth in South Asia and Pakistan, where they boost consumption and investment and reduce poverty. Nevertheless, studies conducted globally and in developing countries show conflicting outcomes, with some negative or insignificant effects, probably because of differences in financial systems, in the use of remittances or in the structure of the economy. Differences in methods and time periods also matter, so context-specific policies are needed to maximise the growth potential of remittances. The literature reviewed here does not combine remittances, FDI, capital formation, household consumption and digital export intensity in one ARDL framework for Pakistan, and this study addresses that gap.

Theoretical Background

This study is based on a theoretical framework that draws on classical and modern growth theories, which explain the contribution of external inflows of finance, such as remittances, to economic growth. The first model is the Keynesian aggregate demand, $AD = C + I + G + (X - M)$, that is, aggregate demand (AD) consists of consumption (C), investment (I), government expenditure (G) and net exports ($X - M$). In this context, remittances have direct impacts on consumption and investment by boosting household income, raising spending power and business activity. Once households receive remittances, a certain fraction is usually spent on direct consumption (food, housing and education) and some part may be saved or invested in more productive activities, thus increasing aggregate demand and overall GDP.

There are opposing sides to theory as well. Remittances may reduce recipients' desire to invest in productive assets or engage in productive activities, especially if a large portion is consumed rather than banked, according to moral hazard and reliance arguments (Chami et al., 2005). Remittances may then lead to economic reliance, when households depend on foreign revenue rather than their own output, leading to long-term inefficiencies. The remittance-growth relationship in Pakistan adheres to both endogenous and Keynesian growth theories. Remittances are a crucial component of stability since they are one of the primary means of protecting the economy from outside shocks given a current account deficit and the substantial amount of foreign debt. These inflows support local demand, reduce financial restrictions, and promote investments in both physical and human capital. Therefore, it is anticipated that remittances will have an impact on economic activity both

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directly through increased spending and indirectly through investment, financial depth, and increased productivity.

According to endogenous growth theory, the economy's technological advancements, human capital, and capital accumulation all contribute to long-term growth (Romer, 1986, 1990; Lucas, 1988). According to this theory, FDI and remittances boost growth if they transfer technology or finance human and physical capital (Borensztein et al., 1998). There are two ways that digital export intensity reaches the market. First, a rising proportion of ICT items in exports indicates a change in the export basket toward more productive goods, which boosts growth in accordance with the claim that a nation's exports are important (Hausmann et al., 2007). Second, ICT production and exporting generate learning, scale and technology spillovers and complement ICT infrastructure, which raises productivity (Roller & Waverman, 2001; Jorgenson & Vu, 2005). These gains are not automatic: where ICT exports mainly reflect assembly of imported components, domestic value added and spillovers may be limited (Srholec, 2007). Trade openness widens markets and transmits technology (Frankel & Romer, 1999), but exposure to external shocks and import competition can also lower growth (Rodriguez & Rodrik, 2000).

$$AD = C + I + G + (X - M)$$

On this basis, remittances affect consumption (C) and investment (I), which in turn affect GDP growth. Economic theory predicts that remittances have a positive relationship with economic growth through direct household spending or indirectly through capital investment. Although the short-run effects may come largely through consumption-based growth, the long-run effects are expected to materialise through investment-based channels that expand the productive capacity of the economy. The following hypotheses are tested.

H1: digital export intensity (DEI) has a positive effect on GDP growth.

H2: remittances (REM) have a positive effect on growth.

H3: FDI has a positive effect on growth.

H4: gross fixed capital formation (GCF) has a positive effect on growth.

H5: household consumption (CON) has a positive effect on growth.

Data and Methodology

This section will provide a description of the data and the source used in the study.

Data and Sources

This study uses annual time-series data on Pakistan for 1993-2025, which gives a sample to detect short-term fluctuations as well as long-term trends. All variables are taken from the World Bank's World Development Indicators (WDI) (World Bank, 2026), which is the primary source; the digital export intensity series is compiled from UNCTADstat and UN Comtrade data and published in WDI. The analysis employs annual data because it minimizes the seasonal distortions of quarterly or monthly databases and is consistent with the annual reporting of national accounts and remittance

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inflows. The data availability and notable structural changes in the Pakistani economy throughout this time, such as labor migration booms, changes in exchange rate regimes, and financial liberalization, account for the selected timeframe.

Dependent and Independent variables.

Dependent Variable: GDP Growth.

Independent Variables: ICT service exports, personal remittances (REM), net foreign direct investment (FDI), gross fixed capital creation, and household final consumption expenditure (CON) are all indicators of digital export intensity (DEI).Table 1 provides variable definitions, sources, and expected signs.

Table 1: Variable Definitions, Sources and Expected Signs

Variable	Symbol	Definition	Source	Expected sign
Economic growth	EG	GDP growth	World Bank, WDI	Dependent
Digital export intensity	DEI	ICT service exports	UNCTADstat / UN Comtrade via WDI	+
Workers' remittances	REM	Personal remittances	World Bank, WDI	+
Foreign direct investment	FDI	Foreign direct investment	World Bank, WDI	+
Capital formation	GCF	Gross capital formation	World Bank, WDI	+
Household consumption	CON	Households and NPISHs final consumption expenditure	World Bank, WDI	+

Model Specification

The empirical approach is grounded in endogenous growth theory and Keynesian aggregate demand theory, which contend that external inflows and digital export capacity impact economic performance through channels of productivity, investment, and consumption.

The functional form of the model is expressed as:

$$EG_t = \beta_0 + \beta_1 DEI_t + \beta_2 REM_t + \beta_3 FDI_t + \beta_4 GCF_t + \beta_5 CON_t + \mu_t$$

The unrestricted ARDL error correction specification used in the bounds test is:

$$\Delta EG_t = \alpha_0 + \sum_{i=1}^{p} \alpha_{1i} \Delta EG_{t-i} + \sum_{i=0}^{q1} \alpha_{2i} \Delta DEI_{t-i} + \sum_{i=0}^{q2} \alpha_{3i} \Delta REM_{t-i}$$

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$$+ \sum_{i=0}^{q3} \alpha_{4i} \Delta FDI_{t-i} + \sum_{i=0}^{q4} \alpha_{5i} \Delta GCF_{t-i} + \sum_{i=0}^{q5} \alpha_{6i} \Delta CON_{t-i}$$

$$+ \delta_1 EG_{t-1} + \delta_2 DEI_{t-1} + \delta_3 REM_{t-1} + \delta_4 FDI_{t-1} + \delta_5 GCF_{t-1} + \delta_6 CON_{t-1} + \varepsilon_t$$

where ε is the error term, the α coefficients capture the short-run dynamics, the δ coefficients capture the long-run relationship, p and q1,..., q5 are the ideal lag lengths, and Δ is the first-difference operator. The F-statistic is used to compare the alternative to the null hypothesis of no cointegration (no long-run relationship):

$$H_0: \delta_1 = \delta_2 = \delta_3 = \delta_4 = \delta_5 = \delta_6 = 0$$

$$H_1: at\ least\ one\ \delta_j \neq 0$$

Econometric Techniques

In order to investigate both short-term and long-term relationships, this study used a multi-step econometric methodology that incorporates the Unit Root Test (Augmented Dickey-Fuller (ADF) investigation). Each variable was subjected to the following tests to ascertain the integration order (Dickey & Fuller, 1979) and the ARDL Bounds Testing Approach, which looks at long-term cointegration of variables (Pesaran et al., 2001). The test comprises estimating an unrestricted error correcting version of the ARDL model and computing the F-statistic. Following cointegration verification, ARDL was used to estimate the long-run coefficients, and the information criteria (AIC, SC, HQ, etc.) were used to determine the lag duration. The ARDL long-run model clarified how each independent variable—such as remittances, foreign direct investment, domestic demand variables, and the intensity of digital exports—affects GDP growth over time. Furthermore, the ARDL framework was used to construct the Error Correction Model (ECM), which assesses short-term relationships. The Error Correction Term (ECT−1), which measures how quickly departures from the long-run equilibrium are corrected, is a crucial component. A negative and significant ECT indicates cointegration; a value of less than 1 suggests rapid convergent adjustment. Stability and diagnostic testing has also been done to guaranty the strength and dependability of the findings. The Breusch–Godfrey LM test for serial correlation is one of the post-estimation diagnostic assessments that are performed (Breusch, 1978; Godfrey, 1978). The Breusch–Pagan test for heteroskedasticity (Breusch & Pagan, 1979), the CUSUM and CUSUM of Squares tests for model stability (Brown et al., 1975), and the Ramsey RESET test for model specification (Ramsey, 1969).

Results Discussion

The estimates reported in this section come from the baseline specification (DEI, REM, FDI, GCF, and CON, form 1993 to 2025).

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Table 2: Descriptive Statistics

Statistic	EG	DEI	REM	FDI	GCF	CON
Mean	3.806	18.323	4.839	0.935	2.540	4.350
Median	3.737	15.585	4.653	0.717	3.607	3.958
Maximum	7.831	46.060	9.938	3.036	17.843	12.187
Minimum	-1.274	6.519	1.081	0.310	-14.128	-2.832
Std. Dev.	2.034	10.954	2.489	0.668	7.180	3.127
Skewness	-0.305	1.183	0.430	1.987	-0.345	0.189
Kurtosis	3.191	3.478	2.125	6.217	2.769	2.959
Jarque-Bera	0.563	8.009	2.072	35.939	0.727	0.199
Probability	0.755	0.118	0.355	0.000	0.695	0.906
Sum	125.584	604.651	159.701	30.849	83.808	143.552
Sum Sq. Dev.	132.374	3840.003	198.269	14.260	1649.849	312.942
Observations	33	33	33	33	33	33

The descriptive statistics in Table 2 represent the distribution, dispersion and central tendency of the variables in the study. Average GDP growth is 3.81%, while foreign direct investment (FDI) averages only 0.94%. Household consumption, with an average of 4.4 percent, while gross fixed capital formation (GCF) is relatively low at 2.54 percent. The average contribution of DEI, forms the largest part of the economy with 18.33 per cent and that of personal remittances is 4.84 per cent. FDI ranges between 0.310 and 3.04 percent o and GDP growth falls below zero in some years, reflecting sporadic economic recessions. While the other variables are comparatively regularly distributed, skewness and kurtosis show that FDI has a large positive skew (1.99) and high kurtosis (6.22). The Jarque-Bera test confirms that FDI is not normally dispersed ($p < 0.01$), though the other variables do not diverge significantly from normality. Overall, these statistics give a sense of the variability and distribution of the numbers before applying empirical models.

Table 3's unit root results demonstrate that while DEI becomes stationary after initial differencing, I(1), EG, DEI REM, FDI, GCF, and CON are stationary at level, I(0). No variable of order two, I(2), is integrated. While the ARDL bounds-testing method of Pesaran et al. (2001) can be used whether the regressors are purely I(0), purely I(1), or a combination of both, as long as no variable is I(2), this combination of integration orders excludes the Johansen cointegration test, which requires all variables to be integrated of the same order (Pesaran & Shin, 1999). There are three more reasons why the ARDL technique is appropriate for the current data. First, the sample size is small (33 annual observations), and Narayan (2005) offers suitable critical values for the limits test, which has been demonstrated to outperform other cointegration procedures in small samples. Second, the method permits each variable to have a distinct ideal lag length, which is appropriate for a model that integrates domestic demand, digital export intensity, and foreign inflows. Third, if the lag order is properly selected, a single reduced-form equation yields both the

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long-run coefficients and the short-run dynamics by the error correction term. It also provides valid estimates of the long-run relationship even when some regressors are endogenous (Pesaran & Shin, 1999). For this reason, the ARDL bounds-testing method is suitable.

Table 3: Unit Root Test Result

Variable	t-Statistic	p-Value	Order of integration
EG	-4.454	0.0013	I(0)
DEI	-5.413	0.0000	I(1)
REM	-3.803	0.0299	I(0)
FDI	-2.873	0.0601	I(0)*
GCF	-3.826	0.0004	I(0)
CON	-2.570	0.0119	I(0)

*Note: Statistics for I(0) variables are at level and for I(1) variables at first difference. Variables are as defined in Table 2. * FDI is stationary at level only at the 10% significance level (p = 0.0601).*

Table 4: Lag Length Selection (VAR Test)

Variable	Lag	LogL	LR	FPE	AIC	SC	HQ
EG	0	-103.005	N/A	4.085	4.245	4.284	4.260
DEI	1	-117.133	44.017	7.574	4.863	4.940	4.892
REM	1	-65.780	84.794	0.986	2.824	2.902	2.854
FDI	1	-16.538	56.416	0.125	0.757	0.834	0.786
GCF	1	-65.070	65.514	0.905	2.738	2.815	2.767
CON	1	-101.850	78.544	4.059	4.239	4.316	4.268

Note: LogL = log-likelihood; LR = sequential modified likelihood ratio statistic; FPE = final prediction error; AIC = Akaike information criterion; SC = Schwarz criterion; HQ = Hannan–Quinn criterion. The lag shown is the one selected by the criteria for each variable.

Information for choosing the ideal lag length for the model is provided in Table 4 by the VAR test. Based on the information criteria (AIC, SC and HQ, etc.), the majority of variables, including DEI, REM, FDI, GCF, and CON, indicate that a lag of 1 is adequate. GDP growth **s**hows no lag, which may be because the variable is stationary at level. Proper lag selection is essential to model the dynamic interactions between the variables accurately.

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Table 5: ARDL Bounds Test Results

Test statistic	Value	k
F-statistic	9.301	5
Significance level	I(0) bound	**I(1) bound**
10%	2.080	3.000
5%	2.390	3.380
2.5%	2.700	3.730
1%	3.060	4.150

Note: k = number of regressors. The null hypothesis of no long-run relationship is rejected if the F-statistic exceeds the upper (I(1)) bound.

The factors' long-term relationship is ascertained using the F-bounds test in Table 5. The calculated F-statistic of 9.301 is more than the upper critical constraint of 4.150 (k = 5) at the 1% significance level. This demonstrates the long-term cointegrating link between economic growth, digital export intensity, remittances, FDI, capital formation, and consumption in Pakistan; in other words, these variables move together over time. As a result, the null hypothesis that there is no long-term link is rejected (Pesaran et al., 2001).

Table 6: Long-Run Relationship

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.420	4.544	-0.974	0.339
DEI	0.699	0.297	2.354	0.026
REM	0.092	0.120	0.768	0.449
FDI	0.956	0.395	2.415	0.023
CON	0.204	0.087	2.355	0.026
GCF	2.301	0.290	7.934	0.000
R-squared	0.867			
Adjusted R-squared	0.858			
F-statistic	8.886			
Prob(F-statistic)	0.000			

The long-term impacts of the explanatory variables on economic growth are displayed by the long-run coefficient estimates in Table 6. A one-unit increase in digital export intensity (DEI) is linked to a 0.699-unit increase in growth over the long term, according to a positive and significant coefficient (0.699, p = 0.026). This supports H1 and the claim that a more digitally intensive export base boosts growth (Hausmann et al., 2007). Furthermore, FDI has a positive and significant impact (0.956, p = 0.023), which is consistent with its role as a financial and technological supplier

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(Borensztein et al., 1998). Gross capital formation (GCF) has the largest and most significant coefficient (2.301, $p < 0.001$). This shows that capital accumulation is the main long-term development engine and that consumption (CON) is likewise positive and significant (0.204, $p = 0.026$), suggesting that local demand supports long-term growth. There is no evidence that remittances boost growth over the long run, according to studies that show modest or conditional remittance impacts (Barajas et al., 2009; Catrinescu et al., 2009). The coefficient for remittances (REM) is positive but not statistically significant (0.092, $p = 0.449$). The intercept is not significant at $p = 0.339$. The model explains over 86.7% of the growth variation ($R2 = 0.867$) and is jointly significant ($F = 8.886$, $p < 0.001$). Hypotheses H1, H2, H3, H4, and H5 are supported because all of the coefficients have the expected positive sign.

Table 7: ARDL Error Correction Regression

Dependent variable	CointEq(−1)*	p-Value
Economic growth (EG)	-0.802	0.000

The short-run dynamics in Table 7 show how quickly GDP growth recovers to its long-run shock following a shock. The error correction term, CointEq(−1), has an extremely significant value of -0.802. A stable long-term connection is confirmed by the boundaries test, and the error correction term has an adverse, representational convergence to long-term steadiness with a value of -0.802. Its size shows that around 80.2% of the long-run equilibrium divergence from the previous period is corrected in less than a year. This demonstrates the existence of an effective compensatory mechanism following transient shocks. With a value of -0.802, the error correction term is unfavorable, indicating merging to the long-run equilibrium, and the limits test confirms a stable long-run relationship. Its size shows that around 80.2% of the long-run equilibrium divergence from the previous period is corrected in less than a year. If it is statistically significant, this indicates that there is an effective compensation mechanism following short-term shocks. The reliability of the model in Table 8 was assessed using diagnostic tests. There is no serial correlation in the residuals according to the Breusch–Godfrey LM test ($F = 1.245$, $p = 0.262$), no heteroskedasticity according to the Breusch–Pagan test ($F = 0.984$, $p = 0.473$), and no functional form misspecification according to the Ramsey RESET test ($F = 0.428$, $p = 0.520$). Since all three p-values are more than 0.05, it is impossible to reject the null hypothesis. As a result, the model passes the diagnostic tests, and the previously indicated significance tests and standard errors are reliable.

Table 8: Diagnostic Test Results

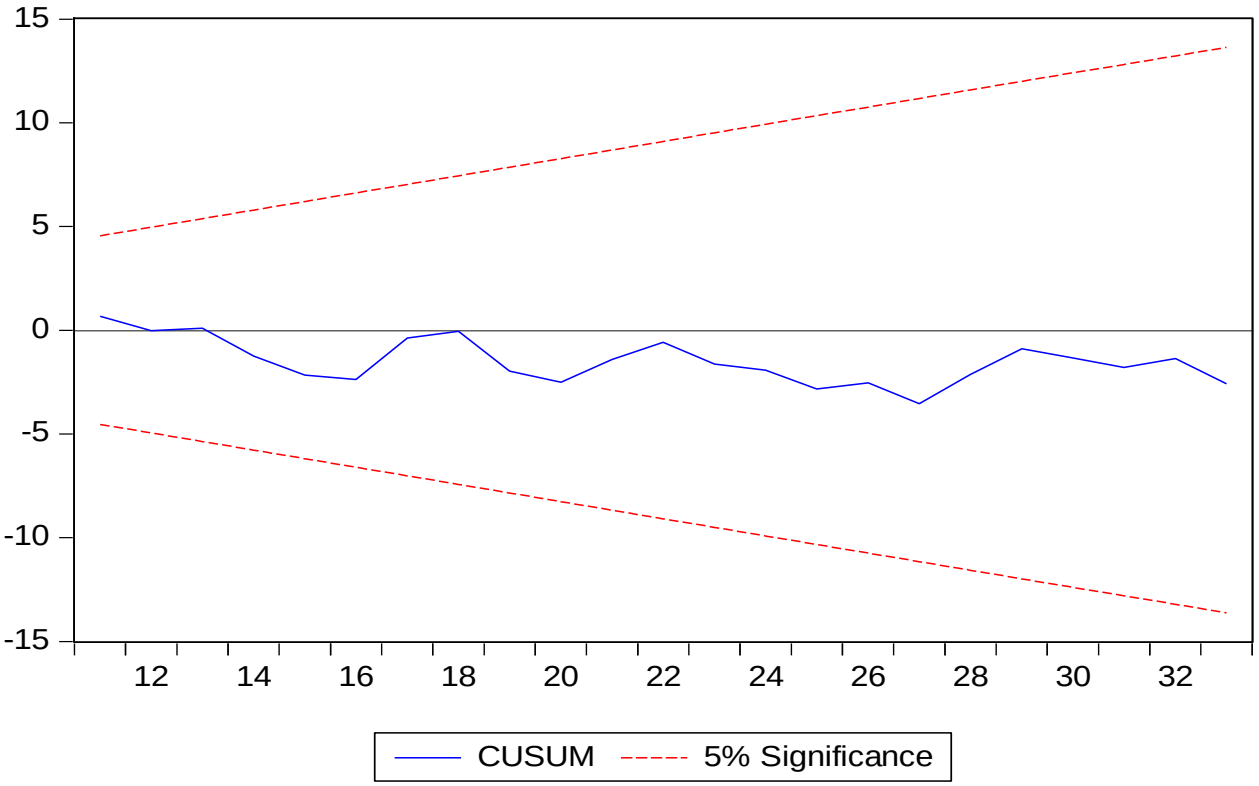
Diagnostic test	F-Statistic	Prob.	Decision at 5%
Breusch–Godfrey LM test (serial correlation)	1.245	0.262	Do not reject H_0
Breusch–Pagan test (heteroskedasticity)	0.984	0.473	Do not reject H_0
Ramsey RESET test (functional form)	0.428	0.520	Do not reject H_0

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Note: H_0 for the LM test is no serial correlation; for the Breusch–Pagan test, homoskedastic residuals; and for the Ramsey RESET test, correct functional form.

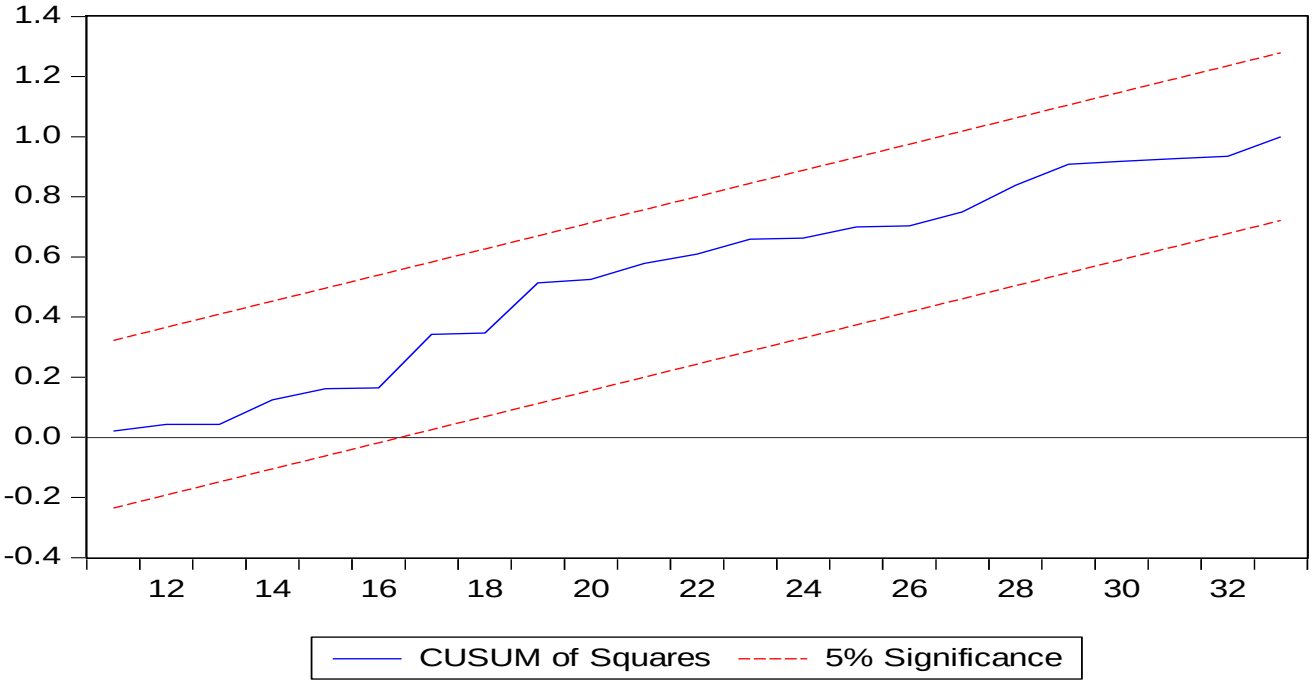
The CUSUM test looks at how stable the regression coefficients are over time. The cumulative sum of recursive residuals remains under the 5% significance thresholds throughout the duration of the sample, as Figure 1 illustrates. This suggests that the model's parameters are constant and that the relationship between economic development and digital export intensity, remittances, FDI, capital formation, and consumption in Pakistan does not show any signs of systematic structural change. As a result, it is possible to measure the reliable long-run and short-run coefficients for policy analysis. The model's consistency was assessed using the CUSUM and CUSUM of squares tests (Brown et al., 1975). Both statistics stay inside the 5% significance boundaries for the course of the sample period, as seen in Figures 1 and 2. While the CUSUM of squares plot shows that there is no abrupt structural break and that the discrepancy of the remainders is also constant, the CUSUM plot shows that the regression coefficients are constant throughout time. As a result, it is possible to measure the predicted long-run and short-run coefficients with confidence. This outcome is in line with the diagnostic tests mentioned above, which do not reveal any functional form misspecification, heteroskedasticity, or serial correlation.

Figure 1. CUSUM Test



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Figure 2. CUSUM of Squares Test



Conclusion

The results show that long-run growth in Pakistan is driven by digital export upgrading, foreign investment and domestic demand, while remittances play no significant long-run role. The bounds test approves a stable long-run relationship, with a value of -0.802, the error correction term is undesirable, indicating merging to the long-run equilibrium. Its magnitude indicates that within a year, about 80.2% of the long-run equilibrium divergence from the preceding period is corrected. This shows that there is a successful compensation mechanism after short-term shocks. Gross capital formation has the largest effect on growth (2.301), which supports the Keynesian and endogenous growth view that investment is the main channel to long-run growth (De Long & Summers, 1991; Romer, 1986).

Digital export intensity has a constructive and significant long-run effect (0.699), so a more ICT-intensive export basket is associated with faster growth. This supports the argument that what a country exports matters for growth (Hausmann et al., 2007) and agrees with evidence that technology-intensive exports and ICT contribute to output (Roller & Waverman, 2001; Jorgenson & Vu, 2005; Yoo, 2008). It contrasts with the negative effect of ICT on growth in Pakistan reported by Rehman et al. (2023), which may be because DEI measures ICT goods exports, not ICT adoption or usage. The effect should also be read with care, since high-technology exports from developing countries often reflect assembly of imported components (Srholec, 2007) and benefit growth mainly where technological capability exists (Gani, 2009).

FDI also raises long-run growth (0.956), consistent with its role as a source of capital and technology (Borensztein et al., 1998) and with the positive long-run role reported for Pakistan by

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Ahmad and Khan (2021). According to the Keynesian perspective (Keynes, 1936), household consumption shows a lower but considerable positive effect (0.204), indicating that domestic demand promotes growth over the long term.

There is no proof that remittances increase growth because their long-run coefficient is positive but negligible (0.092). This is consistent with research showing that remittances primarily function through consumption rather than investment (Ellahi & Omer, 2020) and that their growth benefits are either weak or restricted (Barajas et al., 2009; Catrinescu et al., 2009; Giuliano & Ruiz-Arranz, 2009). It is more in line with the weak effect discovered for Pakistan by Sutradhar (2020) than the positive remittance effects indicated by Ellahi and Omer (2020) and Ahmad and Khan (2021).

The model does not exhibit heteroskedasticity, serial correlation, or functional form misspecification, and it passes all diagnostic tests. The associations are structurally stable throughout the study period since the CUSUM and CUSUM of squares plots remain within the 5% bounds (Brown et al., 1975). Overall, the findings indicate that Pakistan's long-term growth is primarily driven by capital accumulation, foreign investment, and digital export capacity; remittances, on the other hand, do not boost growth unless they are transformed into profitable investments. Therefore, to maintain growth, a balanced strategy that incorporates productive FDI, domestic investment, and digital export upgrading is required.

Policy Implications

Several recommendations are made for the government to boost Pakistan's economic growth through remittances, foreign direct investment, local investment, and digital export capabilities based on the research findings. The government should first lower transaction costs, support formal financial intermediaries, and increase household financial literacy in order to use remittances effectively. By directing remittances toward profitable uses like housing, infrastructure, and small and medium-sized businesses (SMEs), the government can increase their contribution to long-term growth. Second, by enhancing the investment climate, guaranteeing macroeconomic and political stability, offering sector-specific incentives, and bolstering the economy's absorptive capacity, FDI should be drawn in and made more productive. Third, policies that encourage domestic savings and investment through easily accessible loans, tax breaks, and financial inclusion initiatives can strengthen the domestic investment base and lessen susceptibility to external shocks because capital formation is the most reliable generator of development. Fourth, the DEI result is positive, policies that expand ICT manufacturing/service and export capacity, such as skills development, technology parks and integration into global value chains, should be pursued. When combined, an integrated policy approach that includes digital export upgrading, remittance mobilization, and investment promotion can assist Pakistan in achieving a more inclusive and sustainable growth path.

Contribution of study

Three contributions are made by this paper. By analyzing remittances, FDI, capital formation, and household consumption together, in a single ARDL framework that distinguishes short-run from long-run impacts, it first expands the remittance-growth literature for Pakistan. Second, it introduces digital export intensity, measured by ICT service exports, as an indicator of the digital

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upgrading of the export base. Third, it shows that long-run growth in Pakistan depends mainly on capital formation, while external inflows matter mainly in the short run, and it gives practical suggestions to policymakers on how to use remittances and FDI more effectively to address some of the structural issues that affect the economy of Pakistan.

Limitation and Future Research.

These are some of the limitations of this research. The data come from the World Bank, so they do not show how families actually use their remittance money on a daily basis, or whether they use it for financially productive purposes rather than to meet daily needs. We investigated macroeconomic impacts and did not consider the micro level, such as how remittances affect schooling, healthcare or small businesses. Digital export intensity captures only the service side of digital trade and not ICT goods; ICT goods exports may also reflect the assembly of imported components (Srholec, 2007); and the series starts later than 1993, which shortens the sample for the full model. Families' spending and investment choices should be directly surveyed in the future. ICT services exports, internet and mobile dispersion (for instance, in a PCA-based digitalization index), and financial digitalization indicators should be added, and these effects should be compared across South Asian nations to comprehend regional variation.

References

1. Acosta, P., Calderón, C., Fajnzylber, P., & López, H. (2008). What is the impact of international remittances on poverty and inequality in Latin America? *World Development, 36*(1), 89–114.
2. Adams, R. H., Jr. (1998). Remittances, investment, and rural asset accumulation in Pakistan. *Economic Development and Cultural Change, 47*(1), 155–173.
3. Adams, R. H., Jr., & Cuecuecha, A. (2010). Remittances, household expenditure and investment in Guatemala. *World Development, 38*(11), 1626–1641.
4. Ahmad, S., & Khan, M. W. (2021). Investigating the effect of foreign direct investment (FDI) and foreign remittances on economic growth in Pakistan (1990–2018): A time series analysis using ARDL model approach. *Bulletin of Business and Economics, 10*.
5. Amjad, R. (1986). Impact of workers' remittances from the Middle East on Pakistan's economy: Some selected issues. *The Pakistan Development Review, 25*(4). https://doi.org/10.30541/v25i4pp.743-755
6. Arif, G. M. (1999). *Remittances and investments at the household level in Pakistan* (PIDE Working Paper 1999:166). Pakistan Institute of Development Economics.
7. Barajas, A., Chami, R., Fullenkamp, C., Gapen, M., & Montiel, P. (2009). *Do workers' remittances promote economic growth?* (IMF Working Paper No. 09/153). International Monetary Fund.
8. Borensztein, E., De Gregorio, J., & Lee, J.-W. (1998). How does foreign direct investment affect economic growth? *Journal of International Economics, 45*(1), 115–135.
9. Breusch, T. S. (1978). Testing for autocorrelation in dynamic linear models. *Australian Economic Papers, 17*(31), 334–355.

Online ISSN: 3006-8886
Print ISSN: 3006-8878

10. Breusch, T. S., & Pagan, A. R. (1979). A simple test for heteroscedasticity and random coefficient variation. *Econometrica, 47*(5), 1287–1294.
11. Brown, R. L., Durbin, J., & Evans, J. M. (1975). Techniques for testing the constancy of regression relationships over time. *Journal of the Royal Statistical Society: Series B, 37*(2), 149–192.
12. Burney, N. A. (1987). Workers' remittances from the Middle East and their effect on Pakistan's economy. *The Pakistan Development Review*, *26*(4), 745–763.
13. Catrinescu, N., Leon-Ledesma, M., Piracha, M., & Quillin, B. (2009). Remittances, institutions, and economic growth. *World Development, 37*(1), 81–92.
14. Chami, R., Fullenkamp, C., & Jahjah, S. (2005). Are immigrant remittance flows a source of capital for development? *IMF Staff Papers, 52*(1), 55–81.
15. Czernich, N., Falck, O., Kretschmer, T., & Woessmann, L. (2011). Broadband infrastructure and economic growth. *The Economic Journal, 121*(552), 505–532.
16. De Long, J. B., & Summers, L. H. (1991). Equipment investment and economic growth. *The Quarterly Journal of Economics, 106*(2), 445–502.
17. Dickey, D. A., & Fuller, W. A. (1979). Distribution of the estimators for autoregressive time series with a unit root. *Journal of the American Statistical Association, 74*(366), 427–431.
18. Driffield, N., & Jones, C. (2013). Impact of FDI, ODA and migrant remittances on economic growth in developing countries: A systems approach. *The European Journal of Development Research, 25*(2), 173–196.
19. Ellahi, S., & Omer, M. (2020). Do workers' remittances promote economic growth? A case study of Pakistan. *Journal of Islamic Monetary Economics and Finance*, *6*(4), 713–728.
20. Falk, M. (2009). High-tech exports and economic growth in industrialized countries. *Applied Economics Letters, 16*(10), 1025–1028.
21. Fayissa, B., & Nsiah, C. (2010). The impact of remittances on economic growth and development in Africa. *The American Economist, 55*(2), 92–103.
22. Frankel, J. A., & Romer, D. (1999). Does trade cause growth? *American Economic Review, 89*(3), 379–399.
23. Freund, C., & Weinhold, D. (2004). The effect of the Internet on international trade. *Journal of International Economics, 62*(1), 171–189.
24. Gani, A. (2009). Technological achievement, high technology exports and growth. *Journal of Comparative International Management, 12*(2).
25. Giuliano, P., & Ruiz-Arranz, M. (2009). Remittances, financial development, and growth. *Journal of Development Economics, 90*(1), 144–152.
26. Godfrey, L. G. (1978). Testing against general autoregressive and moving average error models when the regressors include lagged dependent variables. *Econometrica, 46*(6), 1293–1301.
27. Hausmann, R., Hwang, J., & Rodrik, D. (2007). What you export matters. *Journal of Economic Growth, 12*(1), 1–25.
28. Imai, K. S., Gaiha, R., Ali, A., & Kaicker, N. (2014). Remittances, growth and poverty: New evidence from Asian countries. *Journal of Policy Modeling, 36*(3), 524–538.
29. Iqbal, Z., & Sattar, A. (2005). *The contribution of workers' remittances to economic growth in Pakistan* (PIDE Research Report No. 187). Pakistan Institute of Development Economics.

Online ISSN: 3006-8886
Print ISSN: 3006-8878

30. Jorgenson, D. W., & Vu, K. (2005). Information technology and the world economy. *Scandinavian Journal of Economics, 107*(4), 631–650.
31. Keynes, J. M. (1936). *The general theory of employment, interest and money*. Macmillan.
32. Kozel, V., & Alderman, H. (1990). Factors determining work participation and labour supply decisions in Pakistan's urban areas. *The Pakistan Development Review, 29*(1), 1–17.
33. Lucas, R. E. (1988). On the mechanics of economic development. *Journal of Monetary Economics, 22*(1), 3–42.
34. Meyer, D., & Shera, A. (2017). The impact of remittances on economic growth: An econometric model. *EconomiA, 18*(2), 147–155.
35. Mundaca, B. G. (2009). Remittances, financial market development, and economic growth: The case of Latin America and the Caribbean. *Review of Development Economics, 13*(2), 288–303.
36. Narayan, P. K. (2005). The saving and investment nexus for China: Evidence from cointegration tests. *Applied Economics, 37*(17), 1979–1990.
37. Narayan, P. K., & Smyth, R. (2006). What determines migration flows from low-income to high-income countries? An empirical investigation of Fiji–U.S. migration 1972–2001. *Contemporary Economic Policy, 24*(2), 332–342.
38. Nishat, M., & Bilgrami, N. (1991). The impact of migrant worker's remittances on Pakistan economy. *Pakistan Economic and Social Review, 29*(1), 21–41.
39. Nishat, M., & Bilgrami, N. (1993). The determinants of workers' remittances in Pakistan. *The Pakistan Development Review, 32*(4), 1235–1245.
40. Nyamongo, E. M., Misati, R. N., Kipyegon, L., & Ndirangu, L. (2012). Remittances, financial development and economic growth in Africa. *Journal of Economics and Business, 64*(3), 240–260.
41. Ozaki, M. (2012). *Worker migration and remittances in South Asia* (South Asia Working Paper Series No. 12). Asian Development Bank.
42. Pesaran, M. H., & Shin, Y. (1999). An autoregressive distributed-lag modelling approach to cointegration analysis. In S. Strøm (Ed.), *Econometrics and economic theory in the 20th century: The Ragnar Frisch Centennial Symposium* (pp. 371–413). Cambridge University Press.
43. Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometrics, 16*(3), 289–326.
44. Phillips, P. C. B., & Perron, P. (1988). Testing for a unit root in time series regression. *Biometrika, 75*(2), 335–346.
45. Ramirez, M. D., & Sharma, H. (2008). *Remittances and growth in Latin America: A panel unit root and panel cointegration analysis* (Working Paper No. 51). Yale University, Department of Economics.
46. Ramsey, J. B. (1969). Tests for specification errors in classical linear least-squares regression analysis. *Journal of the Royal Statistical Society: Series B, 31*(2), 350–371.
47. Ratha, D., & Mohapatra, S. (2007). *Increasing the macroeconomic impact of remittances on development* (Development Prospects Group Note). World Bank.
48. Rehman, A., Radulescu, M., Ahmad, F., Kamran Khan, M., Iacob, S. E., & Cismas, L. M. (2023). Investigating the asymmetrical influence of foreign direct investment, remittances, reserves, and information and communication technology on Pakistan's economic

development. *Economic Research-Ekonomska Istraživanja, 36*(2). https://doi.org/10.1080/1331677X.2022.2131591

49. Rodriguez, F., & Rodrik, D. (2000). Trade policy and economic growth: A skeptic's guide to the cross-national evidence. *NBER Macroeconomics Annual, 15*, 261–325.
50. Roller, L.-H., & Waverman, L. (2001). Telecommunications infrastructure and economic development: A simultaneous approach. *American Economic Review, 91*(4), 909–923.
51. Romer, P. M. (1986). Increasing returns and long-run growth. *Journal of Political Economy, 94*(5), 1002–1037.
52. Romer, P. M. (1990). Endogenous technological change. *Journal of Political Economy, 98*(5, Part 2), S71–S102.
53. Saqib, N., Masnoon, M., & Rafique, N. (2013). Impact of foreign direct investment on economic growth of Pakistan. *Advances in Management and Applied Economics, 3*(1).
54. Solow, R. M. (1956). A contribution to the theory of economic growth. *The Quarterly Journal of Economics, 70*(1), 65–94.
55. Srholec, M. (2007). High-tech exports from developing countries: A symptom of technology spurts or statistical illusion? *Review of World Economics, 143*(2), 227–255.
56. State Bank of Pakistan. (2025). *Annual report 2024–25: The state of Pakistan's economy*. https://www.sbp.org.pk/reports/annual/Gov-AR/pdf/2025/Gov-AR.pdf
57. Sutradhar, S. R. (2020). The impact of remittances on economic growth in Bangladesh, India, Pakistan and Sri Lanka. *International Journal of Economic Policy Studies, 14*(1), 275–295. https://doi.org/10.1007/s42495-020-00034-1
58. World Bank. (2026). *World Development Indicators* [1993-2025]. https://databank.worldbank.org/source/world-development-indicators
59. Yoo, S.-H. (2008). High-technology exports and economic output: An empirical investigation. *Applied Economics Letters, 15*(7), 523–525. https://doi.org/10.1080/13504850600721882