

Khawaja Asif Mehmood¹, Farzana Munir¹, Fareeha Riaz², Sidra Ilyas¹, Sulaman Ali³

1. Assistant Professor, School of Economics, Bahauddin Zakariya University, Multan Pakistan

2. Assistant Professor, Department of Management Science, National University of Modern Languages, Islamabad

3. MPhil Economics Scholar, School of Economics, Bahauddin Zakariya University, Multan Pakistan

ISSN: 3006-6557 (Online)

ISSN: 3006-6549 (Print)

Vol. 3, No. 2 (2025)

Pages: 281-291

Key Words:

FDI, industrial growth, domestic credit

Access to electricity, ARDL

Corresponding Author:**Khawaja Asif Mehmood**Email: khawjaasif@bzu.edu.pk**License:**

Abstract: Foreign Direct Investment (FDI) is an integral ingredient to foster the industrial progress in a recipient country. This study is initiated to explore the impact of FDI on the industrial growth of Pakistan. Moreover, the internal factors which are foresighted to affect industrial growth like domestic credit to private sector and access to electricity are also traced for their impacts on industrial growth. The time series analysis was carried out on the secondary data of the length 1980 to 2023. The Autoregressive Distributed Lag (ARDL) model is incorporated to find the regression estimates. The results confirm significant positive long run impacts of these variables on industrial growth of Pakistan. As a policy norm, the state government needs to facilitate FDI together with an extended base of credit to private sector in line with availability of electricity for a better industrial performance.

Introduction

FDI is vital in its significance for the development of a recipient country like Pakistan. Such investments which are made by the foreign entities in the tangible assets of the host country are a composite of plant, machinery, and buildings which trigger the growth of industry and macro economy. Industrial growth is also related to the innovations in the country together with a creation of employment opportunities (UNCTAD, 2021).

According to the ministry of finance, FDI is treated as a requisite for the achievement of macroeconomic progress. Pakistan has always struggled to be a better host for the foreign investors (Ministry of Finance, 2023). Therefore, attempts are made to enrich the business climate for posing Pakistan as an attractive country for the foreign investors. In this regard, China-Pakistan Economic Corridor (CPEC) is an exemplary project which is worthy to be mentioned as an attractive collaboration of foreign and local investment initiative. The taxes also matter while the results of FDI are cited. The state government has introduced a few tax incentives for the promotion of FDI-led industrial progress despite of the challenges like the complex tax system and institutional rigidities. The reduction in the tax burden and assurance of progressive taxation system is a need to time to engage permanent flow of FDI to Pakistan.

Table 1. FDI and Industrial Growth in Pakistan

Year	FDI (In Million USD)	Industrial Growth (In Percentage Annual)
2015	1281	3.2
2016	2305	5.7
2017	2847	4.1
2018	3101	5.2
2019	2818	2.9
2020	2561	-0.5
2021	2642	3.8
2022	2900	4.2
2023	1820	-3.7
2024	1330	1.21

Source: UNCTAD World Investment Report, 2024; Ministry of Finance, Government of Pakistan

The trend of FDI and patterns of industrial growth are given in Table 1. The series show unstable trend. FDI during the last decade remained volatile and industrial growth is also evident to be imprudently frail in its path of consistency. There are many reasons for the oscillated patterns of industrial growth and FDI inflows. Political instability, global economic environment, and economic policies are the significant causes for such abrupt statistics. The most affected areas at the back of volatile FDI inflows are telecommunication, construction industry, and energy sector.

The domestic credit for the private sector is a significant factor to rely upon (Ministry of Finance, 2024). Hereafter 2023, the domestic credit base is enhanced to 11.98 percent of the GDP. According to the State Bank of Pakistan, private sector credit is mounted to 815 percent during July 01, 2024 to January 17, 2025 reaching at unprecedented volume of PKR 1.398 trillion. This growth is mainly due to a heavy borrowing by the industrial sector of Pakistan. Such hasty fluctuations turn down the macroeconomic statuses particularly the employment, poverty, and industrial statue at the local level. Knowing that the scope of the effects of FDI, this study is initiated to explore if the industrial growth relies upon FDI! Moreover, the other essential factor of domestic credit is also analyzed to enhance the novelty of this study, since the industrial growth is a matter of concern.

This study is dynamic in holding a significant importance by meticulously examining the interplay of crucial macroeconomic variables such as FDI, domestic credit, and industrial growth. The novelty of this study rests at a point that industrial growth is a cornerstone of a sustainable economic development which is transmitted towards the creation of jobs, advancement in technology, and overall poverty reduction. By disaggregating these factors, this study offers the nuanced insight towards the spell outs of FDI and factual of domestic credit especially towards the industrial growth of Pakistan. Moreover, the study has a wider scope for the policymakers due to a guidance which is got from the state of being of the said variables with each other. A country which is striving hard towards reaching reasonable economic stability and growth needs an insight on such vital variables in order to frame a better policy for the coming days to be more attractable for the foreign investors to address the macroeconomic upsets.

The study is organized into five sections where Section I is the Introduction of the study which is led towards the Literature Review and then the Methodological Issue in Section II and Section III. Later on, Section IV and Section V are allocated to sight the Results and Discussions and Conclusions and Policy Recommendations.

Literature Review

Theoretically, the Keynesian and Neo-classical versions state that low interest rate policies lead to high investment. Later on, this notion was challenged by McKinnon (1973) and Shaw (1973) who argued that low interest rate cause economy to get inflated. In this regard, Solow (1956) pointed out that efficient funds' allocation from capital rich industrialized nation result in achieving the desired objectives of industrial growth and better distribution of funds (Obstfeld, 1998; Summers, 2000; Fischer, 1998; Obstfeld & Rogoff, 1994). Schumpeter's theory also infers that a strong positive connection between FDI and industrial developed is apparent (Grossman & Helpman, 1991; Coe & Helpman, 1995). Alfaro et al.

(2004) investigated the relationship of FDI and found that FDI alone displayed uncertain role towards the industrial growth however, countries those are financially liberalized in terms of economic markets do gain more benefits on account of such foreign inflows. The effects of FDI are not traceable in unidirectional manner. In some studies, the effects are meek and negative whereas, opposite trend are evident in the other empirical literature (Caves, 1974; Globerman, 1979; Haddad & Harrison, 1993; Agosin & Mayer, 2000; Singh, 1992).

FDI is multifaceted in effects on the macroeconomic status of the host country's economic growth and development of the domestic firms (Wang et al., 2018; Dar et al., 2017; Cipollina et al., 2012). The effects of FDI are more welcoming when the host country has a capacity to adapt technological innovations and is engaged with economic stability (Fauzel et al., 2015; Borensztein et al., 1998; Bengoa & Sanchez-Robles, 2003). Capital scarce countries like Pakistan relies upon the foreign capital source such as FDI (Rehman, 2016; Mehmood et al., 2025a, 2025b; Mehmood, 2023). The FDI and industrial sector's productivity is measured in a bilateral manner. If FDI causes industrial revolution and other macroeconomic favors, the same are the reasons to comfort the smooth flows of FDI (Chang & Wong, 2005; Balasubramanyam et al., 1996; De Mello, 1999; Mehmood et al., 2021; Blonigen & Slaughter, 2001; Carkovic & Levine, 2005; Liu, 2012).

Findings of Suleman and Amin (2015) confirm significant positive impact of FDI on the industrial economic growth of Pakistan. Studies are found while locating FDI and economic growth (Mehmood et al., 2025a; Adeleke, 2014; Uttama, 2011; Khaliq, 2007; Iram & Nishat, 2009). However, CO2 emission is also a matter of concern in this regard (Mehmood, 2022). Exploration of the empirical facts also highlight that gain of technology is a positive function of foreign capital of the host country (Koizumi & Kopecky, 1977). Not only the industrial side but the economic development is also found resting upon FDI (Atique et al., 2004; Yao, 2006; Katerina et al., 2004; Bengoa & Sanchez-Robles, 2003; Zhang, 2001). Researchers like Ali et al. (2024), Sen (2008), Adegbite and Ayadi (2011), found positive FDI led industrial growth records under the varied data length and methodologies. FDI reduces the burden of imports, improves trade and causes the development of the host country (UNCT&D, 1999; Tsai, 1994). Same is stated by Alfaro et al. (2004) while FDI and industrial development was under the study considerations. In this regard, Sen (2008) found FDI in a promising role towards the industrial development. Better domestic situation in term of governance, political stability, and law and order improves FDI related foresighted objectives' achievements (Mehmood et al., 2021; Suleiman et al., 2015).

Khan et al. (2023) investigated FDI in the way of employment, economic growth, and industrialization. The results confirmed employment spillovers at the back of FDI opposite to what was found by Mehmood et al. (2018a, 2018b). Therefore, it is hard to expect one sided outcome of these foreign inflows for always. Among macroeconomic issues unemployment is not of undue concerns (Wang et al., 2021, Temin, 2016; Overy, 2020; Hasan & Zaheer, 2021). Many-sided facts of FDI are located towards the energy-transits, agriculture, and industry (Kousar et al., 2018; Abid & Ashfaq, 2015; Khurshid et al., 2018; Kalim & Syed, 2020). The impact of FDI in case of skill development and managerial expertise is deduced from the local and foreign firms' collaborations and suitable environment which results in increasing knowledge base together with a healthy industrial competition (Isik, 2013; Ganda, 2021; Zaman et al., 2022; Yi et al., 2020; Mazher et al., 2020; Le & Pomfret, 2011).

Exploration of the literature motivates towards the inception of the study which is to base upon the factual that FDI and industrial growth is unique related to each other. Moreover, the domestic credit and its effects on industrial growth are altogether meek in size while the classical literature is explored. Therefore, this study is objectively focused on the relationship of FDI, domestic credit, and industrial growth of Pakistan. The intention behind this study is to consolidate the relationship of these three core variables with the affiliation of latest time series data along with the well-deserved regression technique for getting the empirical results. Pakistan is chosen for analyses because it is located in South Asia and emerges as a well-deserved country for engaging the foreign capital in terms of FDI for better state of economy at macro level.

Methodological Issues

Variables and Source of Data

This study attempts to explore the effects of FDI and domestic credit on the industrial growth of Pakistan. For this purpose, the FDI and domestic credit are used as independent variables in a single equation having industrial growth as a dependent variable. The control variables used are; access to electricity, exports of goods and services, and import of goods and services, respectively. The study covers the data length of 43 years from 1980 to 2023. The sources of data used in this study are; The World Bank Development Indictors and Trading Economics. The descriptions of the variables are given in Table 2.

Table 2. Descriptions of the Variables

Variables	Notation	Description	Source of Data
Foreign Direct Investment	FDI	Foreign direct investment, net inflows (% of GDP)	World Bank Development Indictors
Access to Electricity	AET	Access to electricity as a % of total population	Trading Economics
Domestic Credit to Private Sector	DCPS	Domestic credit to private sector by banks (% of GDP)	World Bank Development Indictors
Exports of Goods & Services	EGS	Exports of goods and services (current LCU)	World Bank Development Indictors
Imports of Goods & Services	IGS	Imports of goods and services (current LCU)	World Bank Development Indictors
Industry Value Added	IND	Industry (including construction), value added (annual % growth)	World Bank Development Indictors

Equation Specification

The specification of the equation in terms of a linear regression is given in Eq. [1]

$$IN_t = \beta_0 + \beta_1 FDI_t + \beta_2 AET_t + \beta_3 DCPS_t + \beta_4 EGS_t + \beta_5 IGS_t + \mu_t$$

Where β_0 is the intercept of the model and μ_t is the error term.

The requirement for the application of the ARDL model is that; series must be stationary at $I(0)$, $I(1)$, or a combination of both but not of $I(2)$. The ARDL technique is suitable due to its applicability on the series of varied states of stationarity. Moreover, ARDL is advantageous over conventional regression techniques of Johansen Cointegration and Engle and Granger (Mehmood et al., 2025a, 2025b).

The applied unrestricted, long run, and short run ARDL models are given in Eq. [2], Eq. [3], and Eq. [4], respectively.

$$\Delta IN_i = \beta_0 + \beta_1 IN_{t-1} + \beta_2 FDI_{t-1} + \beta_3 AET_{t-1} + \beta_4 DCPS_{t-1} + \beta_5 EGSC_{t-1} + \beta_6 IGSC_{t-1} + \sum_{i=1}^p \partial_1 \Delta IN_{t-i} + \sum_{i=1}^q \partial_2 \Delta FDI_{t-i} + \sum_{i=1}^q \partial_3 \Delta AET_{t-i} + \sum_{i=1}^q \partial_4 \Delta DCPS_{t-i} + \sum_{i=1}^q \partial_5 \Delta EGS_{t-i} + \sum_{i=1}^q \partial_6 \Delta IGS_{t-i} + \mu_t \quad [2]$$

Where Δ denotes the difference operator, the β 's are the model intercept and coefficients of the variables in unrestricted ARDL model. The p and q are the lag orders of ARDL. The ∂_i are the coefficients of short run.

The long run coefficient estimation is given below in Eq. [3]

$$\Delta IN_i = \beta_0 + \beta_1 IN_{t-i} + \beta_2 FDI_{t-i} + \beta_3 AET_{t-i} + \beta_4 DCPS_{t-i} + \beta_5 EGSC_{t-i} + \beta_6 IGSC_{t-i} + \mu_t \quad [3]$$

The error correction form of ARDL is given in Eq. [4].

$$\Delta IN_i = \sum_{i=1}^p \partial_1 \Delta IN_{t-i} + \sum_{i=1}^q \partial_2 \Delta FDI_{t-i} + \sum_{i=1}^q \partial_3 \Delta AET_{t-i} + \sum_{i=1}^q \partial_4 \Delta DCPS_{t-i} + \sum_{i=1}^q \partial_5 \Delta EGS_{t-i} + \sum_{i=1}^q \partial_6 \Delta IGS_{t-i} + \partial ECM_{t-1} + \mu_t \quad [4]$$

The ∂ is a speed of adjustment for the residuals of ECM. The long run relationships exists if the coefficient of ECM is negative and significant.

Diagnostic Checks

The diagnostics are performed to locate the stability and legitimacy of the estimates. The diagnostics are performed through Breusch-Godfrey serial correlation (LM Test). In this test, if the chi-square value is greater than 0.05, it confirms that there's no serial correlation and otherwise true.

Similarly, for the heteroskedasticity checking, the probability of chi-square value is to be higher than 0.05 and if vice versa, the series is said to be homoscedastic (Wang et al., 2021). Also, Cumulative Sum of Recursive Residuals (CUSUM) and of the CUSUM squared are also explored for the stability of the results. If the series diagram shows that the trend line remains within the boundaries of red lines at 5 percent significance level, the parameters are then according to the requirement and are stable in structure and otherwise true (Zaman et al., 2022). The Ramsay RESET Test and Jarque Bera Test of correctly specified model and the issue of abnormality of residuals are also check for proving reliability of regression results.

Results & Discussions

This section presents the discussion on the results. To start with, the descriptive statistics are given in Table 3.

Table 3. Descriptive Statistics

Variables	IN	FDI	AET	DCPS	EGS	IGS
Mean	55.6	0.79	73.7	20.7	14007	248252
Maximum	17.2	3.04	95.2	29.7	702613	1499186
Minimum	-5.8	0.10	49.4	13.8	2948.5	5457.8
Std. Dev.	3.1	0.65	14.5	4.55	165574	335452.9
Skewness	-0.28	2.15	-0.04	-0.09	1.41	1.78
Kurtosis	4.9	7.41	1.72	1.74	4.60	6.11
Jarque-Bera	6.4	68.2	2.92	2.89	18.97	40.24
Probability	0.04	0.00	0.23	0.23	0.000076	0.0000

The findings conclude that wider dispersion is recorded on IN, AET, DCPS, EGS, and IGS from the mean value. In case of FDI, the inflows are recorded to be less in divergence during the selected length of data. Moreover, apart from EGS and IGS, the series re negatively skewed having IN, FDI, EGS, and IGS to be leptokurtic distribution with AET and DCPS as normally distributed.

The stationarity test results are presented in Table 4.

Table 4. Stationarity Test Results

Variables	Test Statistics (At 5% level of significance)	Augmented Dickey Fuller test statistic (At Level)	Augmented Dickey Fuller test statistic (At 1st Difference)
IN	-2.935001	0.0001	0.0000
FDI	-2.935001	0.0012	0.0409
AET	-2.935001	0.6972	0.0000
DCPS	-3.596616	0.0442	0.0000
EGS	-3.544284	0.0342	0.0063
IGS	-3.004861	0.0542	0.0082

The stationarity test results confirm that all the series are stationary at I(0) and I(1) and there is no trace of either series to be stationary at I(2). Therefore, the ARDL technique of regression estimates is viable to be run for the computation of long run and short run coefficient results hereafter the imputation of bound test.

The Bound Test results are shown in Table 5.

Table 5. Bound Test

Test Statistic			F-statistic	
Value			6.131295	
k			5	
Significance	10%	5%	2.5%	1%
I (0) Bound	2.08	2.39	2.7	3.06
I (1) Bound	3	3.38	3.73	4.15

The bound test results show that the computed F-statistic is significant at 5 percent level of significance and is higher than the table value at I(1). Therefore, the long run relationship is accorded on the prescribed model given in Eq. [2].

The long run ARDL results are published in Table 6.

Table 6. Long Run ARDL Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FDI	2.845293	1.634837	1.740414	0.0989
AET	0.203341	0.188273	1.080037	0.2944
DCPS	0.467438	0.252427	1.851778	0.0805
EGS	0.013387	0.003308	4.047007	0.0008
IGS	0.029829	0.008145	3.662088	0.0018
C	9.938380	14.633331	0.679160	0.5057

The computations of long run coefficients are inspiring. One unit increase in FDI causes industrial growth to swell by 2.84 unit. The findings confirm the positive affectation of FDI and industrial growth. The results are in line with the empirics and theorists (McKinnon, 1973; Shaw, 1973; Solow, 1956; Fischer, 1998; Mehmood, 2023). The strong and robust correlation of FDI inflows and the industrial revolution reasonably concludes that FDI acts as a catalyst to address the macroeconomic issues where industrial growth is not foreign to talk about. Though some studies concluded that FDI tends to crowd out the developmental aspect of the local firms like; (Caves, 1974; Globerman, 1979; Haddad & Harrison, 1993; Agosin & Mayer, 2000; Singh, 1992), this study demonstrates a net positive effect and confirms that FDI lead to industrial progress by outweighing the potential downsides. These results are consistent with the global precedents when we fix the lens of focus towards countries like; China, Singapore, and South Korea. As earlier said by Mazher et al. (2020), Zaman et al., (2022), and Mehmood et al., (2025a), the findings authenticate that; FDI contributes towards the industrial expansion by captivating the industrial value-added factor via the technological vives, fostering competitive markets, and the creation of the back-and-forth linkages of the local manufacturers.

The coefficient of DCPS is also significant and positive. Therefore, it is concluded that release of credit to private sector especially for the expansion of production, technology updating, and the setting of a high scale of operation boosts the industrial growth. Access to credit is a key driver for an industry which enables the manufacturers to mitigate the financial constraints and accelerate in the race of industrial progress.

Furthermore, the EGS and IGS are also found positively affecting industrial value addition. Therefore, any liberal move towards the freeing of boarders is to improve the industrial growth in long run time span. However, the impact of IGS is greater than that of EGS. Hence, the option is to not be limited to locate the export oriented industrial during the policy making so that the overall industrial growth is recorded together with meet-up of the employment targets, control on inflation, and poverty reduction but the imports also facilitate IN. The intercept of the model is insignificant thus the omitted variables are not influential to affect the IN. The coefficient of AET is insignificant may be due to the reason that

alternative sources of energy are followed to meet the targets of industrial production and the industrialists are now addict to consider electricity provision from the government side to be reliable sources for meeting the needs of the electricity at industry level.

Table 7 presents the short run ARDL results. Much of the series related to FDI except at three-year lag are insignificant. Hence, it is recorded that the effects of FDI on industrial value addition are traceable in long run. In case of DCPS, the coefficient is significant and positive. Therefore, the conclusion is that credit sanctions are of a value in either time span as far as the industrial growth is concern. Furthermore, the results on EGS and IGS are mixed. The coefficient of ECM is significant and correctly signed. The results show that entire deviation from equilibrium is adjusted in long run.

Table 7. Short Run ARDL Results

Variable	Coefficient	Std. Error	t-statistic	Prob.
D(FDI)	1.091211	1.151626	0.947539	0.3559
D(FDI(-1))	0.145668	1.383681	0.105276	0.9173
D(FDI(-2))	7.055602	1.369669	5.151321	0.0001
D(FDI(-3))	2.379269	1.471832	1.616536	0.1234
D(AET)	-0.606106	0.353259	-1.715753	0.1034
D(AET(-1))	-0.384857	0.446176	-0.862568	0.3997
D(AET(-2))	-1.259701	0.439171	-2.868363	0.0102
D(AET(-3))	-1.008658	0.429303	-2.349524	0.0304
D(DCPS)	0.598368	0.225239	2.656596	0.0161
D(EGS)	-0.000561	0.002433	-0.230454	0.8203
D(EGS(-1))	-0.007080	0.001988	-3.561162	0.0022
D(IGS)	0.016912	0.006953	2.432234	0.0257
D(IGS(-1))	0.003671	0.006827	0.537668	0.5974
D(IGS(-2))	-0.012775	0.004813	-2.654386	0.0161
D(IGS(-3))	-0.027343	0.005003	-5.465070	0.0000
ECM	-1.082137	0.138101	-7.835811	0.0000

The diagnostics are given in Table 8. The conclusion approves no traces of serial correlation and heteroskedasticity. Moreover, the model is also found to be correctly specified with no traces of abnormally distributed residuals.

Table 8 Diagnostics

Test	Statistics (Prob. Chi-Square)	Conclusion
Breusch-Godfrey Serial Correlation LM Test	0.72	No serial correlation
Heteroskedasticity Test: Breusch-Pagan-Godfrey	0.99	No issue of heteroskedasticity
Ramsey RESET Test	0.17	Model is correctly specified
Jarque-Bera	0.89	Residuals are normally distributed

The CUSUM and CUSUM squared results are shown in Figure 1. The series are located within the 5 percent level of significant. The conclusion is that; the results are stable and foreign to the structural instability.

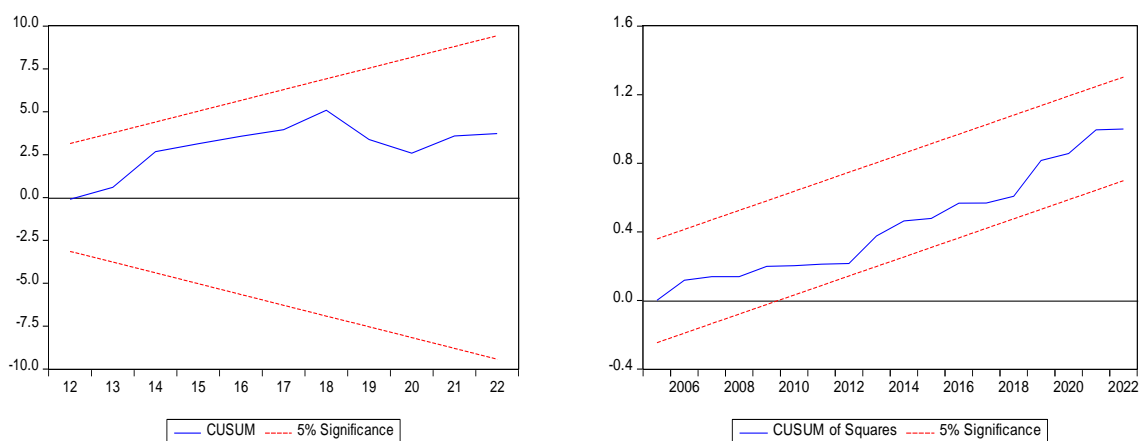


Figure 1 CUSUM-CUSUM Squared

Conclusion and Policy Recommendations

The findings of this research underscored the critical role of FDI, domestic credit to private sector, and the access to electricity towards the industrial sector of Pakistan. The ARDL model ascertained the significant positive impacts of these variables in long run thus highlighted the significance of the key variables for industrial expansion. The FDI brings capital, managerial expertise, technology, and the operational scalability to the host country. Meanwhile, the synergistic framework of credit sanctions for the industry ensures the uninterrupted industrial productivity.

As a policy recommendation, government needs to enhance the incentives for foreign investors for attaining the FDI inflows without disruption. Also, there is a need to strengthen the financial inclusion policies to ensure that industry have an access to easy and in-time credit. Leverage of China Pakistan Economic Corridor (CPEC) supplemented with bilateral trade agreements which channelize the smooth flow of FDI inflows are required so that the industrial sector value addition is achieved and industrial potential is unlocked.

References

- Abid, M., & Ashfaq, A. (2015). CPEC: Challenges and opportunities for Pakistan. *Journal of Pakistan Vision*, 16(2), 142–169.
- Adegbite, E. O., & Ayadi, F. S. (2011). The role of foreign direct investment in economic development: A study of Nigeria. *World Journal of Entrepreneurship, Management and Sustainable Development*, 6(1/2), 133-147.
- Adeleke, A. I. (2014). Fdi-Growth Nexus in Africa: Does Governance Matter? *Journal of Economic Development*, 39(1), 111–135.
- Agosin, M., & Mayer, R. (2000). Foreign direct investment: Does it crowd in domestic investment (United Nations Conference on Trade and Development, Working Paper No. 146). Geneva, Switzerland.
- Alfaro, L., Chanda, A., Kalemli-Ozcan, S., & Sayek, S. (2004). FDI and economic growth: the role of local financial markets. *Journal of International Economics*, 64(1), 89-112.
- Ali, M., Zahid, M., & Akbar, S. (2024). FDI and industrialization: Evidence from selected Asian developed and developing countries. *Pakistan Journal of Humanities and Social Sciences*, 12(4), 3093-3101.
- Atique, Z., Ahmad, M. H., & Azhar, U. (2004). The Impact of FDI on Economic Growth under Foreign Trade Regimes: A Case Study of Pakistan. *The Pakistan Development Review*, 43(4), 707–718.
- Balasubramanyam, V. N., Salisu, M., & Sapsford, D. (1996). Foreign direct investment and growth in EP and IS countries. *The Economic Journal*, 106(434), 92-105.
- Bengoa, M., & Sanchez-Robles, B. (2003). Foreign direct investment, economic freedom and growth: new evidence from Latin America. *European Journal of Political Economy*, 19(3), 529-545.

- Blonigen, B. A. & Slaughter, M. J. (2001). Foreign-affiliate activity and US skill upgrading. *Review of Economics and Statistics*, 83(2), 362-376.
- Borensztein, E., De Gregorio, J., & Lee, J. W. (1998). How does foreign direct investment affect economic growth? 1. *Journal of International Economics*, 45(1), 115-135.
- Carkovic, M., & Levine, R. (2005). Does foreign direct investment accelerate economic growth? (World Bank Conference, April, 2004). The World Bank. Retrieved from: https://www.piie.com/publications/chapters_preview/3810/08iie3810.pdf
- Caves, R. E. (1974). Multinational firms, competition, and productivity in host-country markets. *Economica*, 41(162), 176–193.
- Chang, & Wong. (2005). FDI and labour in China: The actors and possibility of a new working-class activism. In D. O. Chang, & E. Shepherd (eds). *Asian transnational corporation outlook 2004: Asian TNCs, workers and the movement of capital* (104-154). Asia Monitor Resource Centre.
- Cipollina, M., Giovannetti, G., Pietrovito, F., & Pozzolo, A. F. (2012). FDI and growth: what cross-country industry data say. *The World Economy*, 35(11), 1599-1629.
- Coe, D. T., & Helpman, E. (1995). International R&D spillovers. *European Economic Review*, 39(5), 859–887.
- Dar, A. A., Bhatti, H. M. A., & Muhammad, T. (2017). FDI and economic growth in Pakistan: A sector wise multivariate cointegration analysis. *Pakistan Development Review*, 56(4), 67-90.
- De Mello, L. R. (1999). Foreign direct investment-led growth: evidence from time series and panel data. *Oxford Economic Papers*, 51(1), 133-151.
- Fauzel, S., Seetanah, B., & Sannasee, R. V. (2015). Productivity spillovers of FDI in the manufacturing sector of Mauritius. Evidence from a dynamic framework. *The Journal of Developing Areas*, 49(2), 295-316.
- Fischer, S. (1998). Capital account liberalization and the role of the IMF (IMF Seminar Presentation, September, 19). International Monetary Fund, Hong Kong.
- Ganda, F. (2021). The environmental impacts of human capital in the BRICS economies. *Journal of the Knowledge Economy*, 113(2021), 611-634.
- Globerman, S. (1979). Foreign direct investment and ‘spillover’ efficiency benefits in Canadian manufacturing industries. *Canadian Journal of Economics*, 12(1), 42–56.
- Grossman, G. M., & Helpman, E. (1991). Quality ladders in the theory of growth. *The Review of Economics Studies*, 58(1), 43–61.
- Haddad, M., & Harrison, A. (1993) Are there positive spillovers from direct foreign investment? Evidence from panel data for Morocco. *Journal of Development Studies*, 42(1), 51–74.
- Hasan, A., & Zaheer, R. (2021). Factors responsible for unemployment in Pakistan: A time series evidence. *Pakistan Journal of Social Issues*, 1(1), 57–69.
- Iram, S., & Nishat, M. (2009). Sector level analysis of FDI-growth nexus: a case study of Pakistan. *The Pakistan Development Review*, 48(4), 875–882.
- Işık, C. (2013). The importance of creating a competitive advantage and investing in information technology for modern economies: An ARDL test approach from Turkey. *Journal of the Knowledge Economy*, 4(4), 387–405.
- Kalim, I., & Syed, A. (2020). Maritime economy and Gwadar port: A growth catalyst. *Policy Perspectives*, 17(1), 73–82.
- Katerina, L., John, P., & Athanasios, V. (2004). Foreign direct investment and economic growth in

- transition economies. *South-Eastern Europe Journal of Economics*, 2(1), 97–110.
- Khaliq, A., Noy, I., et al. (2007). Foreign direct investment and economic growth: Empirical evidence from sectoral data in Indonesia (Working Paper No. 7-26). University of Hawaii, Manoa.
- Khan, I., Xue, J., Zaman, S., & Mehmood, Z. (2023). Nexus between FDI, economic growth, industrialization and employment opportunities: Empirical evidence from Pakistan. *Journal of the Knowledge Economy*, 14(1), 3153-3175.
- Khurshid, M., Rashid, A., & Zahid, R. A. (2018). Impact of CPEC energy projects on socioeconomic development of Pakistan (In Proceedings of the International Conference on Renewable, Applied and New Energy Technologies), Air University Islamabad, Pakistan.
- Koizumi, T., & Kopecky, K. J. (1977). Economic growth, capital movements and the international transfer of technical knowledge. *Journal of International Economics*, 7 (1), 45–65.
- Kousar, S., Rehman, A., Zafar, M., Ali, K., & Nasir, N. (2018). China-Pakistan Economic Corridor: A gateway to sustainable economic development. *International Journal of Social Economics*, 45(6), 1-23.
- Le, H. Q., & Pomfret, R. (2011). Technology spillovers from foreign direct investment in Vietnam: Horizontal or vertical spillovers? *Journal of the Asia Pacific Economy*, 16(2), 183–201.
- Liu, L. (2012). FDI and employment by industry: A co-integration study. *Modern Economy*, 3(1), 16-22.
- Mazher, M., Mukhtar, T., & Sohail, S. (2020). Impact of foreign direct investment and foreign remittances on unemployment in Pakistan: A Time Series Analysis. *IIIE Journal of Economics and Finance*, 1(1), 65-83.
- McKinnon, R. I. (1973). *Money and capital in economic development*. Brookings Institution Press: Washington DC.
- Mehmood, K. A. (2023). FDI and poverty in-line with quality of governance and voice and accountability: Follow-ups based on linear and non-linear ARDL. *Pakistan Journal of Commerce and Social Sciences*, 17(2), 394-423.
- Mehmood, K. A., Batool, S. A., & Ishaq, M. (2021). Ramifications of governance infrastructure and FDI flux in Pakistan. *International Journal of Management Research and Emerging Sciences*. 11(1), 24-38.
- Mehmood, K. A., Faridi, M. Z., & Hassan, S. (2018b). Foreign direct investment and employment downfall: Panel evidence from South Asian economies. *Pakistan Journal of Social Science*, 38(2), 595-609.
- Mehmood, K. A., Hassan, S., & Azam, A. (2018a). Inward foreign investment and labor throw outs in Pakistan, *Pakistan Journal of Social Science*, 38(1), 23-39.
- Mehmood, K. A., Ilyas, S., Munir, F., & Riaz, H. (2025a). Employment outcome of financial development and FDI: Empirical findings on Pakistan. *Journal of Social Horizons*, 2(1), 91-103.
- Mehmood, K. A., Iqbal, A., Bashir, F., & Ahmad, R. (2022). Impact of foreign direct investment, rising oil prices, and industry value added on economic growth of Pakistan. *iRASD Journal of Economics*, 4(2), 204-214.
- Mehmood, K. A., Riaz, H., Munir, F., & Ilyas, S. (2025b). Effects of financial development on economic growth in Pakistan: Does FDI matter? *Qlantic Journal of Social Sciences*, 6(1), 324-336.
- Obstfeld, M. (1998). The global capital market: Benefactor or menace? *Journal of Economic Perspectives*, 12(4), 9–30.
- Obstfeld, M., Rogoff, K.: The intertemporal approach to the current account (Working Paper No. 4893).

National Bureau of Economic Research.

Overy, R. J. (2020). *The air war, 1939–1945*: Plunkett Lake Press: London.

Rehman. (2016). FDI and economic growth: empirical evidence from Pakistan. *Journal of Economic and Administrative Sciences*, 32(1), 63-76.

Sen, K. (2008). Trade, FDI and industrial transformation in India (Conference Proceedings). University of Manchester, UK., Brisbane, Australia.

Shaw, E. (1973). *Financial deepening in economic growth*. Oxford University Press: Oxford.

Singh, R. D. (1992). Government-introduced price distortions and growth: evidence from twenty-nine developing countries. *Public Choice*, 73(1), 83–99.

Solow, R. (1956). A contribution to the theory of economic growth. *Quarterly Journal of Economics*, 70, 65-94.

Suleiman, N. N., Kaliappan, S. R., & Ismail, N. W. (2015). Determinants of foreign direct investment: Empirical evidence from Southern Africa Customs Union (SACU) Countries. *International Journal of Economics & Management*, 9(1), 1-24.

Suleman, M. T., & Amin, M. T. (2015). The impact of sectoral foreign direct investment on industrial economic growth of Pakistan, 2(1), 151-165.

Summers, L. H. (2000). International financial crises: causes, prevention, and cures. *American Economic Review*, 90(2), 1–16.

Temin, P. (2016). Great Depression. In *Banking Crises* (pp. 144–153): Springer.

Tsai, P. L. (1994). Determinants of foreign direct investment and its impact on economic growth. *Journal of economic development*, 19(1), 137-163.

United Nations Conference on Trade and Development. (1999). World Investment Report 1999: Foreign Direct Investment and the Challenge of Development. United Nations, Geneva, Switzerland.

United Nations Conference on Trade and Development. (2021). 2021 annual report: reducing inequality. United Nations, Geneva, Switzerland.

Uttama, N. P. (2011). Spatial panel cointegration analysis on FDI-IIT-growth nexus in ASEAN (International Conference Proceedings No. 10). International Proceedings of Economics Development and Research.

Wang, Z., Zaman, Q. U., & Zaman, S. (2021). A dynamical assessment of multidimensional poverty in agro-climatic zones: An evidence from Punjab, Pakistan. *Environmental Science and Pollution Research*, 28(18), 22944–22956.

Wang. (2009). Manufacturing FDI and economic growth: Evidence from Asian economies. *Applied Economics*, 41(8), 991-1002.

Yao, S. (2006). On economic growth, FDI and exports in China. *Applied Economics*, 38(3), 339-351.

Yi, C., Xu, X., Chen, C., & Wu, Y. J. (2020). Institutional distance, organizational learning, and innovation performance: Outward foreign direct investment by Chinese multinational enterprises. *Emerging Markets Finance and Trade*, 56(2), 370-391.

Zaman, S., Wang, Z., Rasool, S. F., Zaman, Q., & Raza, H. (2022). Impact of critical success factors and supportive leadership on sustainable success of renewable energy projects: Empirical evidence from Pakistan. *Energy Policy*, 162. Retrieved from: <https://doi.org/10.1016/j.enpol.2022.112793>

Zhang, K. (2001). Does foreign direct investment promote economic growth? Evidence from East Asia and Latin America. *Contemporary Economic Policy*, 19(2), 175-185.