



Social Sciences Spectrum

A Double-Blind, Peer-Reviewed, HEC recognized [Y-category](#) Research Journal

E-ISSN: [3006-0427](#) P-ISSN: [3006-0419](#)

Volume 03, Issue 04, 2024

Web link: <https://sss.org.pk/index.php/sss>



Check for updates

The Financial Crisis, Economic Development and Business Management in Pakistan: An Evidence through Time-Series Data Analysis in Pakistan

Dr. Allah Bux Lakhan

Assistant Professor (Economics), Shah Abdul Latif University, Ghotki Campus, Pakistan

Correspondence: allahbuxlakhan@salu.edu.pk

Muzamil Saeed

Campus Manager, Virtual University of Pakistan, Campus Ghotki, Pakistan

Email: muzamilsaeedmhr@gmail.com

Dr. Kewal Talreja

Assistant Professor, Department of Law, Shaheed Zulfiqar Ali Bhutto University of Law, Karachi, Sindh, Pakistan

Email: kewaltalreja@szabul.edu.pk

Article Information [YY-MM-DD]

Received 2024-11-25

Accepted 2024-12-27

Citation (APA):

Lakhan, A. B., Talreja, K & Saeed, M. (2024). The Financial Crisis, Economic Development and Business Management in Pakistan: An Evidence through Time-Series Data Analysis in Pakistan. *Social Sciences Spectrum*, 3(4), 468-481. <https://doi.org/10.71085/sss.03.04.196>

Abstract

The aim of this research work is to analyze the causal linkage among Pakistan's economic development and the three main financial crisis indicators—interest rates, inflation, and the amount of foreign debt. Additionally, this analysis emphasizes how consistently financial crisis indicators and economic growth. The analysis makes use of sample size covering data from 2000 to 2024. The convergence of equilibrium for series utilized in the work is examined using Johansen's co-integration test. The findings show that the three elements of Pakistan's financial crisis and economic growth have overall causal relationship. The business, economic and each financial crisis indicator taken into consideration in this study have a bidirectional causal relationship, according to estimations based on the pair-wise Granger Causality test. Whereas, the management of economy is determined on the economic and business parameters as analyzed on data which provides a sometimes unidirectional or bidirectional indication for solution of economic crisis and way for economic development.

Keywords: Financial crisis, Development, Causality, Interest rate, Economy.



Content from this work may be used under the terms of the [Creative Commons Attribution-Share-Alike 4.0 International License](#) that allows others to share the work with an acknowledgment of the work's authorship and initial publication in this journal.

1. Introduction

The empirical analysis has examined financial and economic development in great detail. Effective wealth allocation and risk diversification are topics covered by a well-designed financial system. Greater savings and, eventually, larger returns could be the outcome of a higher degree of financial development (Ndou et al. 2024). The breadth, depth, accessibility, and accuracy of the financial system are only a few of the variables that can be used to gauge financial progress. Examining the activities taken by banks and other markets can also be used to measure it. They discovered that a lesser fringe effect on growth was probably associated with more financial development (Arif, 2023). Economic development, as is evident, is linked to the following aforementioned roles influences investment and savings decisions as well as technological advancements, which ultimately support economic expansion (Ayana, 2022).

The economic well-being in this setting is measured by the misery index (MI), which indicates the state of a nation. The declining economic wealth is guided by the rising index, which affects the population's standard of living (Hussain, 2022). The MI, a measure of the macroeconomic health of various nations, is derived from the unweighted sum of the unemployment and inflation rates.

The misery index (MI) was created by Arthur Okun and has since been expanded by others, who believe that higher MI levels lead to significant economic and societal challenges. We may claim that the MI is employed to gauge economic well-being (Islam, 2022). A rise in the MI indicates how frequently a nation's public and economic well-being deteriorates. The literature has extensively examined economic development; however, political instability has not been addressed by certain elements, such as the misery index, which is the main cause of the main barrier to economic progress in society. Political stability in the area is the outcome of a decline in the misery index and any improvement in the efficiency of the government and/or the rule of law (Shah et al, 2021). One important indicator of the recipient countries' economic health is remittances. Foreign direct investment (FDI) is the most common source of foreign funding, followed by remittances. Compared to foreign aid, foreign direct investment, and international obligations, remittances are thought to be the most reliable source of funding for rising economies from abroad. The research indicates that

In emerging economies, remittances have grown more quickly. If the outcome in the financial sector is noteworthy, there is a greater assumption of financial progress. All things considered, financial development is thought to be crucial to a nation's economic expansion (Rahman et al, 2020).

The basic matter that is of interest and discussion is that although the precise impact of trade is far from being indisputable, prior research has primarily found that trade openness regulations contribute to economic growth. According to some research, trade openness may not be as important as it could be because of a nation's preference for its assets or its poor market integration. predicted in their theoretical model that financial development and global trade both boost productivity growth (Ehsan,2018).

Here the data sources are covered in detail in the third section. The econometric findings and discussion are presented in the fourth section (Haider et al. 2019). The conclusion and some observations regarding the remittance policies and the misery index are finally provided in the fifth section.

1.1 Objectives of Study:

- i. To analyze the impact of financial development values and growth.
- ii. To analyze trade openness and growth of economy of Pakistan.
- iii. To evaluate the impact of personal remittances and economic growth.
- iv. To assess the impact of real interest rate on economic growth.

1.2 Research Questions:

- i. What is relationship of financial development to economic growth?
- ii. What is impact of trade openness on economic growth of economy?
- iii. What is impact of personal remittances on economic growth?
- iv. What is impact of real interest rate upon economic growth?

1.3 Statement of the Problem:

On one hand the management of the economy is based on proper decision making, on the other hand, is based on business and economic factors as established by data analysis that offers sometimes unidirectional or bidirectional indications for economic development and crisis resolution.

The research was conducted using qualitative methodology. The researchers used case study method as a research design to understand the political participation of women. We opted patriarchal framework to analyze their experiences. We employed purposive sampling technique to select the respondents from rural areas of Gujranwala, Punjab. The respondents were selected on the basis of their participation in last two general elections. The researchers developed the interview guide to collect the data. Data were collected by conducting in-depth face-to-face interviews until data saturation was reached. The data were collected from 30 participants. Ethical considerations, such as informed consent and participant confidentiality, were observed. Interviews were recorded, transcribed, translated, and thematic analysis was conducted.

2. Literature Review

The analysis of basic parameters is brought about by improved capital accretion or investment rate proficiency as well as higher values for the income and consumption levels. The second presumption, known as the demand-following perspective, asserts that developments in the real sector are reflected in financial progress (Sehrawat & Giri, 2016). This indicates that money has a big impact on economic expansion. Finance is merely a byproduct of economic expansion. They studied the relationship between the MI and democracy and how both affect economic growth in quasi-democracies as opposed to Pakistan's quasi-dictatorship, which lasted from 1975 to 20119 (Hunja et al. 2021).

(Arouri et al. 2014) examined how Iran's misery index was affected by economic expansion and sound governance. They came to the conclusion that the MI and economic growth are negatively correlated.

Additionally, there is a favorable correlation between the MI and effective governance. According to (Tariq, 2020) there was a positive correlation between the rise in crime in the USA between 1960 and 2005 and the misery index (Adrangi & Macri, 2019). used macroeconomic variables to examine the impact of the misery index on US presidential performance and came to the conclusion that the index significantly affects US presidential performance. In conclusion, we find that a country's growth is more significantly impacted by the misery index. The contribution of

worker remittances to emerging economies has been demonstrated recently. Numerous empirical studies have examined how remittance transfers affect households' living standards and shown a significant positive influence on reducing poverty. Regarding the implications of the connection between remittances and economic growth, there is a lack of consensus in the empirical research. In particular, nothing is known about how remittances contribute to financial development. A small number of experts assert that remittances delivered through appropriate networks boost the impact of patterns of development and encourage the growth of the financial sector. Irfan (2011) worked on the financial aid on income inequality in case of Pakistan. For his paper, he employed two different kinds of data: one is qualitative part and other is quantitative part in which both are essential parts for further working. He looked into how remittances affected the fight against poverty using the Ordinary Least Squares (OLS) methodology. In Pakistan, the author discovered a negative correlation between remittances and poverty. (Karlsson & Mansson, 2015) study discovered a connection for the different economic and financial variables. They discovered that remittances are pro-cyclical, meaning that they opted in falling fall for domestic economy during recessions and to rise during stable transitional periods. They discovered that raising remittances to the home nation is significantly influenced by improvements in the financial system. (Lupu, 2023) used annual data for examination the effect of exports on Turkey's economic growth. He discovered that while remittance inflows to Turkey are beneficial, they are negatively correlated with economic growth. The author also discovered that while Turkey used to receive a higher percentage of migrant remittances, in recent years, the majority of Turkish migrants employed in Western Europe have been unable to do so because of severe financial constraints imposed by their host nation. (Rosalia, 2013) looked at how remittances affected poverty and economic progress.

Annual data from 1973 to 2007 was used. The effect of earnings on poverty and economic development was investigated using the ARDL approach. According to this study, remittances have a maximum impact of output and poverty, suggesting that they tend to reduce poverty in the country. (Masaud, 2012) have examined the connection between GDP, the impact of remittances in different regional countries. For the analysis of annual data individually, they came to the conclusion that in Pakistan and other trading partner, there is a connection of base of the banking sector, while in India, the relationship is between remittances and the development of the financial and external sector for growth and development.

Remittances appear to have a favorable influence, Sri Lanka, and India, according to a study by (Song, 2012). Using yearly data spanning 25 years, they found that foreign earnings have a beneficial impact on development of Bangladesh. Remittances and economic growth do not significantly correlate for analysis of India. In Sri Lanka's instance, remittances and economic growth are correlated in both directions. The induction of foreign earnings to the home utilized for fundamental necessities including basic needs, living standard and easiness of life according to the results of a Vector Auto Regressive (VAR) approach. Remittances have an indirect effect through the receiving household's investments and savings. In previous decades it was seen the development of new trade theory, which was primarily concerned with examining the connection between global commerce and economic expansion. The two perspectives on trade benefits are the static view, which examines the growth of trade at a particular point in time, and the dynamic view, where the economists in actual try to analyze the connection for trade openness and economic growth for the tools, that how exchange works upon the facility of exchange of goods and services. By lowering the barrier to import substitution, trade openness can lead to opportunities for technical advancement and input allocation, which in turn impacts economic development.

It showed that nations with more trade openness are better able to captivate technological advancements made in leading nations, and that this ability allows them to grow more quickly than nations with lesser trade openness. (De, 1995) discovered a strong and positive correlation for economic development and output after examining panel data from different leading nations between 1970 and 1982. (Fishkin, 1996) also looked at the positive correlation between economic development, various metrics, and trade openness for a sample of 51 developing nations. (Beker, 2006) looked at how trade affected the GDP growth of 62 developed and developing nations between 1970 and 1990.

The writer discovered a strong correlation between exports and development. Using a time series approach, (Botew & Jawad, 2019) investigated the connection for Bangladesh's development, foreign direct investment (FDI), capital creation, and trade openness from 1986 to 2008. They discovered that FDI and capital formation significantly and favorably affect economic growth. In contrast, trade openness has a pronouncedly detrimental but diminishing impact on the economy's growth rate. Similarly, annual spanning 1982–2014, (Sehrawat & Giri, 2017) investigated the effects of the development of trade and output of financial sector. The findings indicated that trade liberalization and the financial development index (FDI) had a lasting impact on India's economic expansion. Using the Granger Causality test as well, the study discovered that neither trade openness nor the financial development index (FDI) have a unidirectional or bidirectional causal relationship with economic growth in the Indian economy. According to (Konstantaras et al. 2018), supporting Prebisch-Singer's empirical hypothesis. Nonetheless, research on Pakistan's experience with trade openness indicates that trade liberalization and economic growth are positively correlated (Jawad, 2014).

3. Data and Methodology

The data collected for this study ranges from 2000 to 2024 that covers structure of finance, the index used by misery and the main sources of data are SBP, IMF and WDI. The misery index, which gauges a nation's economic health, combines the unemployment rate with the consumer price index (inflation rate).

3.1. Model Specification:

The main target of this model specification is examination of financial development and economic development by employing misery index and the growth model suggested by (Sehrawat & Giri, 2017).

$$\ln \text{GDP}_t = \ln \text{FDI}_t, \ln \text{REMIT}_t, \ln \text{MI}_t, \ln \text{OP}_t, \ln \text{RIR}_t$$

Whereas,

GDP = Gross Domestic Product

FDI = Financial Development Index

REMIT = Personal Remittances

MI = Misery Index

OP = Trade Openness

RIR = Real Interest Rate

With a_0 as a constant, β_s for the long-run unknown parameters, and ϵ_t for the error term, all variables are transformed into natural logarithms. Equation mentioned above illustrates how several factors affect economic growth over the long run.

3.2. Methodology:

Time series data are employed in this investigation. The unit root problem is present in the macroeconomic time series analysis. We employed the ADF stationarity test to verify the data's stationarity. Additionally, the short- and long-term relationships were tested using the ARDL limits testing approach for methods of co-integration. The unidirectional and bidirectional linkage between the variables were examined using the paired causality test.

The empirical short- and long-term association between variables was examined using the ARDL limits testing approach to co-integration methodology. This approach is very new and offers a number of appealing characteristics, such as "no restrictions" on the order of integration. To capture the structural shocks, recent research has employed the Markov Switching ARDL approach (Tsagkanos *et al.* 2019). The first benefit of using basic linear ARDL in this study is that it can be applied when the variables have different orders of integration, such as I(0) or I(1). This is because all of the variables in ARDL do not have to have the same order of integration.

4. Results and Discussion:

The following table 01 is indicating the descriptive statistics of all variables. Each variable is normally distributed while few of the variables have lowest mean and median and some of them possessing highest value for the same.

Table 1: Descriptive Statistics of Variables

	GDP	REMIT	FDI	MI	OP	RIR
Mean	5.923	3.821	2.17×10^{-15}	15.723	29.561	9.821
Median	7.911	4.421	0.012	13.321	30.219	7.432
Maximum	6.342	6.432	2.312	42.561	35.543	11.432
Minimum	5.884	2.321	-1.912	6.041	21.321	1.932
S.D	0.321	1.721	1.721	9.321	4.563	1.832
Skewness	0.213	0.0321	-0.421	-0.321	-0.312	-0.542
Kurtosis	1.523	2.13	1.321	2.541	2.512	2.023
Observation	24	24	24	24	24	24

Table 2: Correlation Matrix

	GDP	REMIT	FDI	MI	OP	RIR
GDP	1					
REMIT	0.812	1				
FDI	0.532	0.261	1			
MI	-0.032	-0.076	-0.031	1		
OP	-0.531	-0.332	-0.321	0.641	1	
RIR	0.062	-0.132	-0.044	0.531	0.421	1

This table tells about the correlation matrix where economic development and is directly related to financial development, the level of remittances, the interest rate and negatively related to remaining ones.

4.1. Unit Root Test

In order to evaluate the list of variables the second order of integration is followed on the basis of

Table 3: *ADF and stationarity level as following results are shown*

Variables	At level	At 1 st difference	Order of Integration
GDP	-2.812 (0.1521)	-2.712 (0.0012)	I (I)
REMIT	-0.832 (0.612)	-3.412 (0.0001)	I (I)
FDI	-1.821 (0.213)	-3.211 (0.0002)	I (I)
MI	-0.921 (0.124)	-5.312 (0.0000)	I (I)
OP	-1.521 (0.521)	-6.213 (0.0003)	I (I)
RIR	-1.721 (0.188)	-3.213 (0.0001)	I (I)

4.2. ARDL Bound Testing Co-integration:

We employed an ARDL bounds examination for analyzing the connection among variables that may verify the stationarity of data.

Table 4: *Autoregressive distributed lag (ARDL) results of co-integration*

Variables	AIC	F-Statistic	Results
F (GDP) = (GDP/FDI, REMIT, MI, OP, RIR)	2	4.9122	Present
F(FDI) = (FDI/ GDP, REMIT, MI, OP, RIR)	2	5.212	Present
F(REMIT) = (REMIT/FDI, GDP, MI, OP, RIR)	2	5.951	Present
F(MI) = (MI/GDP, FDI, REMIT, OP, RIR)	2	1.542	Absent
F(OP) = (OP/GDP, FDI, REMIT, MI, RIR)	2	7.213	Present
F(RIR) = (RIR/GDP, FDI, REMIT, MI, RIR)	2	4.921	Present
Critical bound values of F-statistics	Lower I(0)	Upper I(1)	F-test probability
10%	2.12	3.12	5.412 Co-integration
5%	2.41	3.81	
2.5%	2.82	3.52	
1%	3.41	4.12	

The study's long-term co-integration between the FDI, misery index, remittances, openness, and growth exits the model, as confirmed by the F-statistic.

Table 5: Long-Run Estimated Co-efficient using ARDL model (1,0,0,1,2,2)

Variable	Co-efficient	t-statistic	p-value***
FDI	-0.000712	7.12212	0.0000**
MI	-0.003211	-2.9123	0.0012
RIR	-0.01243	-1.4332	0.2123
OP	0.00221	0.47521	0.7712
REMIT	0.0921	5.73421	0.0000
C	7.7402	42.4781	0.0000
Diagnostic Tests		F-statistic	p-value
Heteroskedasticity		1.612	0.1133
Serial correlation		3.123	0.266
Ramsey Reset Test		1.912	0.213
Normality		0.156	0.812

Note: the * and *** are level of significance at 5% and 1% respectively.

Table 6: Short-Run Results by Using ARDL Model

Variable	Co-efficient	t-statistic	p-value
D(MI)	-0.000676	-2.41221	0.0123
D(RIR)	-0.002221	-2.37121	0.0343
D(OP)	0.003212	2.472311	0.0546
D(REMIT)	0.004321	-4.1243	0.0987
D(REMIT(-1))	-0.01243	-3.2131	0.0001
D(FDI)	-0.00161	-3.3971	0.0122
D(FDI(-1))	-0.00817	-4.3421	0.2131
ECM(-1)	-0.35221	-2.5661	0.0123

Diagnostic Tests

$R^2 = 0.812$, Adjusted $R^2 = 0.712$, F-statistic= 3.123 Prob. Of F-statistic=0.002, DW= 2.221

Both openness and the real interest rate are statistically insignificant. As in previous research, a variety of diagnostic tests were utilized to assess the stability of the model (Qamruzzaman and Wei 2017). There is no association between the variables, according to the autocorrelation test results. The typicality of the Jarque-Bera normalcy test verified the data distribution. The Ramsey reset verified that the model's functional form is unaffected by missing variables. The model's lack of heteroscedasticity was verified using the heteroskedasticity test. Lastly, the model's capacity to explain the variance was validated by the Adjusted R square.

5. Conclusion and Policy Recommendations

The financial structure, misery index, and economic growth of Pakistan's economy are all objectively examined in this paper. Although financial development has been thoroughly examined from a variety of angles and using a variety of methodologies in empirical literature, certain problems remain, so this study has attempted to address those in order to close the research gap. To illustrate the effect on Pakistan's economic growth, the study suggested a new financial development and suffering index. Economic growth is the study's dependent variable; the real interest rate, trade openness, and remittances are its control factors; and the financial development index and misery index are its independent variables. The data was collected between 1989 and 2017, and the primary technique for the data estimations was the use of ARDL to a coo-integration strategy. The empirical findings demonstrate the three ARDL steps: The lag-values utilized for the bound test were first obtained using the ADF test. The boundaries test revealed whether or not there is a lasting link. Our findings indicate that there is a sustained correlation between the variables. According to the short-run estimate, FDI has a negative link with GDP at initial lag but has no relationship with growth in the short term. According to the level value, remittances are positive and show a strong relationship with GDP at the 10% level, indicating that they contribute to GDP.

Remittances, on the other hand, have a negative lag value and are strongly correlated with GDP.

Several policy recommendations are made by this study. First and foremost, the government must strengthen the financial structure reform, which will raise GDP and foreign remittances and strengthen Pakistan's economy. In addition, the government requires a policy to lower unemployment and inflation, which is one of macroeconomic policy's main goals.

Additional limitations of this study include the fact that it only looks at Pakistan and that the data only goes back to 1989 because earlier years' data were not available. Pakistan does not have access to certain FDI factors, such as market capitalization statistics. The panel data scenario can be used to expand this study to multiple countries in the future.

References

- Al-Awad, M., & Harb, N. (2005). Financial development and economic growth in the Middle East. *Applied Financial Economics*, 15(15), 1041-1051. <https://doi.org/10.1080/09603100500120639>
- Arif, A., & Arif, U. (2023). Institutional Approach to the Budget Deficit: An Empirical Analysis. *SAGE Open*, 13(2), 1-9. <https://doi.org/10.1177/21582440231171297>
- Ayana, I. D., Demissie, W. M., & Sore, A. G. (2023). Effect of government revenue on economic growth of sub-Saharan Africa: Does institutional quality matter? *Plos one*, 18(11).
- Ali, H., & Bhutta, Z. M. (2018). Financial development and economic growth nexus in Pakistan: An analysis of bound testing approach. *Sukkur IBA Journal of Economics and Finance*, 2(1), 10-35.
- Atif, R. M., Jadoon, A., Zaman, K., Ismail, A., & Seemab, R. (2010). Trade liberalization, financial development and economic growth: Evidence from Pakistan (1980–2009). *Journal of International Academic Research*, 10(2), 30-37.
- Becker, M. C., & Knudsen, T. (2002). Schumpeter 1911: farsighted visions on economic development. *American Journal of Economics and Sociology*, 61(2), 387-403. <https://doi.org/10.1111/1536-7150.00166>
- Beckmann, G., Wingberg, J., & Hasund, A. (1983). Computer-assisted cephalometry using the Bergen technic. *Fortschritte der Kieferorthopadie*, 44(5), 359-369. <https://doi.org/10.1007/bf01994542>
- Botev, J., Égert, B., & Jawadi, F. (2019). The nonlinear relationship between economic growth and financial development: Evidence from developing, emerging and advanced economies. *International Economics*, 160(12), 3-13. <https://doi.org/10.1016/j.inteco.2019.06.004>
- Brownbridge, M., & Kirkpatrick, C. (2000). Financial regulation in developing countries. *The Journal of Development Studies*, 37(1), 1-24. <https://doi.org/10.1080/713600056>
- Buffie, E. F. (1984). Financial repression, the new structuralists, and stabilization policy in semiindustrialized economies. *Journal of Development Economics*, 14(3), 305-322. [https://doi.org/10.1016/0304-3878\(84\)90061-0](https://doi.org/10.1016/0304-3878(84)90061-0)
- Cazachevici, A., Havranek, T., & Horvath, R. (2020). Remittances and economic growth: A metaanalysis. *World Development*, 134(10), 105021. <https://doi.org/10.1016/j.worlddev.2020.105021>
- Chaudhury, S., Nanda, N., & Tyagi, B. (2020). Impact of FDI on economic growth in South Asia: does nature of FDI matters? *Review of Market Integration*, 12(1-2), 51-69. <https://doi.org/10.1177/0974929220969679>
- Choong, C.-K., & Chan, S.-G. (2011). Financial development and economic growth: A review. *African Journal of Business Management*, 5(6), 2017-2027.
- Chowdhury, E. K., Dhar, B. K., & Gazi, M. A. I. (2023). Impact of remittance on economic progress: evidence from low-income Asian Frontier countries. *Journal of the Knowledge Economy*, 14(1), 382-407.
- De, G. J., & Guidotti, P. (1995). Financial development and economic growth. *World Development*, 23(3), 433-448. [https://doi.org/10.1016/0305-750X\(94\)00132-I](https://doi.org/10.1016/0305-750X(94)00132-I)

- Demirgüç-Kunt, A., & Levine, R. (2001). Financial structure and economic growth: Perspectives and lessons. Doi: <https://doi.org/10.7551/mitpress/3001.003.0003>
- Dritsakis, N., & Adamopoulos, A. (2004). Financial development and economic growth in Greece: An empirical investigation with Granger causality analysis. *International Economic Journal*, 18(4), 547-559. <https://doi.org/10.1080/1016873042000299981>
- Ehsan, S., Nazir, M. S., Nurunnabi, M., Raza Khan, Q., Tahir, S., & Ahmed, I. (2018). A multimethod approach to assess and measure corporate social responsibility disclosure and practices in a developing economy. *Sustainability*, 10(8), 2955. <https://doi.org/10.3390/su10082955>
- Ekanayake, E., & Thaver, R. (2021). The nexus between financial development and economic growth: Panel data evidence from developing countries. *Journal of Risk and Financial Management*, 14(10), 489. <https://doi.org/10.3390/jrfm14100489>
- Fishkin, J., Keniston, K., & McKinnon, C. (1973). Moral reasoning and political ideology. *Journal of Personality and Social Psychology*, 27(1), 109-119. <https://doi.org/10.1037/h0034434>
- Haider, M. A., Raza, Q., Jameel, S., & Pervaiz, K. (2019). A comparative study of operational efficiency of Pakistani and Malaysian Islamic banks: Data envelopment analysis approach. *Asian Economic and Financial Review*, 9(5), 559.
- Hunjra, A. I., Arunachalam, M., & Hanif, M. (2021). Financial development-economic growth nexus: theoretical underpinnings, empirical evidence, and critical reflections. *Economic Growth and Financial Development. Effects of Capital Flight in Emerging Economies*, 155-178. https://doi.org/10.1007/978-3-030-79003-5_13
- Hussain, F., & Ejaz, M. (2022). Effectiveness of the Exchange Rate Channel in Monetary Policy Transmission in Pakistan. *The Pakistan Development Review*, 61(1), 45-67. <https://www.jstor.org/stable/27262030>
- Hussain, I., Hayat, U., Alam, M.S., & Khan, U. (2023). A dynamic analysis of the twin-deficit hypothesis: The case of a developing country. *Asia-Pacific Financial Markets*, 31, 25-52.
- Ismail, R. (2011). Assessing economic growth and fiscal policy in Indonesia. *Journal of Economics and Business*, 14(1), 53-71.
- Islam, M. S. (2022). Do personal remittances influence economic growth in South Asia? A panel analysis. *Review of Development Economics*, 26(1), 242-258. <https://doi.org/10.1111/rode.12842>
- Jadoon, I. K., & Hasnu, S. A. F. (2009). Collaboration dichotomies in knowledge management success. *Journal of Knowledge Management Practice*, 10(4).
- Jafri, M. A. H., Liu, H., Usman, A., & Khan, Q. R. (2021). Re-evaluating the asymmetric conventional energy and renewable energy consumption-economic growth nexus for Pakistan. *Environmental Science and Pollution Research*, 28(3), 37435-37447.
- Jalil, A., & Ma, Y. (2008). Financial development and economic growth: Time series evidence from Pakistan and China. *Journal of economic cooperation*, 29(2), 29-68.
- Karlsson, H., & Mansson, K. (2015). Revisiting the nexus of the financial Development and economic growth–Wavelet approach with a focus on Asian economies. Paper presented at the Research Network Debate, Swedish Entrepreneurship Forum, Stockholm.

- Khan, A., Ahmed, M., & Bibi, S. (2019). Financial development and economic growth nexus for Pakistan: a revisit using maximum entropy bootstrap approach. *Empirical Economics*, 57, 1157-1169.
- Khan, M. S., & Senhadji, A. S. (2000). FT IMF Working Paper.
- Khan, Q. R., Xinshu, M., Qamri, G. M., & Nawaz, A. (2023). From COVID to conflict: Understanding the deriving forces of environment and implications for natural resources. *Resources Policy*, 83(6).
- Khattak, S. I., & Khan, W. A. (2023). Chinese Overseas Foreign Direct Investment–International Foreign Portfolio Investment–Financial Sector Development Nexus in the Belt and Road Initiative Economies: A Regional Analysis Based on Third-Generation Techniques. *Journal of the Knowledge Economy* 15, 3014-3038.
- King, R. G., & Levine, R. (1993). Financial intermediation and economic development. *Capital markets and financial intermediation*, 156-189
- Levine, R. (1997). Financial development and economic growth: views and agenda. *Journal of economic literature*, 35(2), 688-726.
- Lipovina-Božović, M., & SMOLOVIĆ, J. C. (2016). Evidence on Economic Growth and Financial Development in Montenegro. *Management (18544223)*, 11(4).
- Lucas Jr, R. E. (1988). On the mechanics of economic development. *Journal of monetary economics*, 22(1), 3-42. [https://doi.org/10.1016/0304-3932\(88\)90168-7](https://doi.org/10.1016/0304-3932(88)90168-7)
- Lupu, D., & Nuță, F. M. (2023). The impact of public education spending on economic growth in Central and Eastern Europe. An ARDL approach with structural break. *Economic research Ekonomska istraživanja*, 36(1), 1261-1278. doi=10.1080/1331677X.2022.2086147
- Mahembe, E., & Odhiambo, N. (2014). Foreign direct investment and economic growth: A theoretical framework. *Journal of Governance and Regulation*, 3(2).
- Masoud, N., & Hardaker, G. (2012). The impact of financial development on economic growth: Empirical analysis of emerging market countries. *Studies in economics and finance*, 29(3), 148-173. <https://doi.org/10.1108/10867371211246830>
- Mavrotas, G., & Son, S.-I. (2008). Financial development and economic growth: further evidence from panel data models. In *Domestic Resource Mobilization and Financial Development* 39-69: Springer.
- Ndou, E., Gumata, N., & Moletsane, T. (2024). Exchange rate and GDP nexus in South Africa: the disconnect after the 2008 global recession. *SN Business & Economics*, 4(2), 2-27
- Olorogun, L. A., Salami, M. A., & Bekun, F. V. (2022). Revisiting the Nexus between FDI, financial development and economic growth: Empirical evidence from Nigeria. *Journal of Public Affairs*, 22(3), 1-10. <https://doi.org/10.1002/pa.2561>
- Omran, M., & Bolbol, A. (2003). Foreign direct investment, financial development, and economic growth: evidence from the Arab countries. *Review of Middle East Economics and Finance*, 1(3), 37-55. <https://doi.org/10.2202/1475-3693.1014>
- Onifade, S. T., Çevik, S., Erdoğan, S., Asongu, S., & Bekun, F. V. (2020). An empirical retrospect of the impacts of government expenditures on economic growth: new evidence from the Nigerian economy. *Journal of Economic Structures*, 9(1), 6, 1-13.

- Poku, K., Opoku, E., & Agyeiwaa Ennin, P. (2022). The influence of government expenditure on economic growth in Ghana: An Ardl approach. *Cogent Economics & Finance*, 10(1), 1-16. <https://doi.org/10.1080/23322039.2022.2160036>
- Qamri, G. M., Sheng, B., Adeel-Farooq, R. M., & Alam, G. M. (2022). The criticality of FDI in Environmental Degradation through financial development and economic growth: Implications for promoting the green sector. *Resources Policy*, 78(9), 102765. <https://doi.org/10.1016/j.resourpol.2022.102765>
- Rahman, A., Khan, M. A., & Charfeddine, L. (2020). Financial development–economic growth nexus in Pakistan: new evidence from the Markov switching model. *Cogent Economics & Finance*, 8(1), 1716446. <https://doi.org/10.1080/23322039.2020.1716446>
- Ram, R. (1999). Financial development and economic growth: Additional evidence. *The Journal of Development Studies*, 35(4), 164-174. <https://doi.org/10.1080/00220389908422585>
- Robinson, J. (1952). The model of an expanding economy. *The Economic Journal*, 62(245), 42-53. <https://doi.org/10.2307/2227172>
- Rosalia, M.-R. G. (2013). Impact of Financial Development on Economic growth.
- Sehrawat, M., & Giri, A. (2016). Panel data analysis of financial development, economic growth and rural-urban income inequality: Evidence from SAARC countries. *International Journal of Social Economics*, 43(10), 998-1015. <https://doi.org/10.1108/IJSE-10-2014-0211>
- Sertoglu, K., Ugural, S., & Bekun, F. V. (2017). The contribution of agricultural sector on economic growth of Nigeria. *International Journal of Economics and Financial Issues*, 7(1), 547-552.
- Sghaier, I. M., & Abida, Z. (2013). Foreign direct investment, financial development and economic growth: Empirical evidence from North African countries. *Journal of International and Global Economic Studies*, 6(1), 1-13.
- Shah, A. M., Yan, X., Khan, S., Khurram, W., & Khan, Q. R. (2021). A multi-modal approach to predict the strength of doctor–patient relationships. *Multimedia Tools and Applications*, 80(8), 23207-23240.
- Shahbaz, M., & Mafizur Rahman, M. (2014). Exports, financial development and economic growth in Pakistan. *International Journal of Development Issues*, 13(2), 155-170. <https://doi.org/10.1108/IJDI-09-2013-0065>
- Shahbaz, M., Shahbaz Shabbir, M., & Sabihuddin Butt, M. (2013). Effect of financial development on agricultural growth in Pakistan: New extensions from bounds test to level relationships and Granger causality tests. *International Journal of Social Economics*, 40(8), 707-728. <https://doi.org/10.1108/IJSE-01-2012-0002>
- Shan, J. (2005). Does financial development ‘lead ‘economic growth? A vector auto-regression appraisal. *Applied Economics*, 37(12), 1353-1367. <https://doi.org/10.1080/00036840500118762>
- Shan, J. Z., Morris, A. G., & Sun, F. (2001). Financial development and economic growth: An egg- and-chicken problem? *Review of international Economics*, 9(3), 443-454. <https://doi.org/10.1111/1467-9396.00291>
- Shapoval, A. (2022). The Contribution of Large Recurrent Sunspot Groups to Solar Activity: Empirical Evidence. *Universe*, 8(3), 180. [10.3390/universe8030180](https://doi.org/10.3390/universe8030180)

- Song, C.-Q., Chang, C.-P., & Gong, Q. (2021). Economic growth, corruption, and financial development: Global evidence. *Economic Modelling*, 94, 822-830. <https://doi.org/10.1016/j.econmod.2020.02.022>
- 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.
- Syah, A., & Pratama, K. (2022). The Role of Economic Factors on the Economic Growth: Evidence from the Indonesian Economy. *Cuadernos de Economía*, 45(129), 40-47. <https://doi.org/10.32826/cude.v1i129.80>
- Tariq, R., Khan, M. A., & Rahman, A. (2020). How does financial development impact economic growth in Pakistan? New evidence from threshold model. *The Journal of Asian Finance, Economics and Business*, 7(8), 161-173. <https://doi.org/10.13106/jafeb.2020.vol7.no8.161>
- Wang, X., Xu, Z., Qin, Y., & Skare, M. (2022). Foreign direct investment and economic growth: a dynamic study of measurement approaches and results. *Economic research-Ekonomska istraživanja*, 35(1), 1011-1034.
- Yusuf, M., Malarvizhi, C., Mazumder, M. N. H., & Su, Z. (2014). Corruption, poverty, and economic growth relationship in the Nigerian economy. *The Journal of Developing Areas*, 95-107.
- Zahoor, Z., Khan, I., & Hou, F. (2022). Clean energy investment and financial development as determinants of environment and sustainable economic growth: evidence from China. *Environmental Science and Pollution Research*, 29(9), 1-11.
- Zhang, D., Mohsin, M., Rasheed, A. K., Chang, Y., & Taghizadeh-Hesary, F. (2021). Public spending and green economic growth in BRI region: mediating role of green finance. *Energy Policy*, 153, 112256.