

Evaluating the Role of Fiscal and Monetary Policies in Economic Stabilization: Empirical Evidence from Pakistan

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ARTICLE INFO			ABSTRACT
Article History:			<i>Fiscal and monetary policies are fundamental to ensuring macroeconomic stability. An overly expansionary fiscal approach can diminish the effectiveness of monetary controls. Crafting an optimal mix of fiscal and monetary strategies is therefore essential, particularly under country-specific economic conditions. This study investigates the impact of fiscal and monetary policy instruments on Pakistan's economic stability using data from 1980 to 2024. The study employs the Vector Autoregressive (VAR) model, Impulse Response Functions (IRF) and Variance Decomposition (VDC) to analyze the relationships. Results show that money supply initially exerts a negative impact on GDP but turns positive in the medium to long run. Fiscal policy, however, demonstrates stronger and more consistent influence on economic growth. Thus, fiscal instruments appear to be more effective than monetary measures in the context of Pakistan.</i>
Received:	May	15, 2025	
Revised:	June	28, 2025	
Accepted:	July	02, 2025	
Available Online:	July	08, 2025	
Keywords:			
Fiscal Policy, Monetary Policy, Gross Domestic Product, Government Expenditure, Broad Money Supply, Macroeconomic Stability			
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Introduction

Developing nations increasingly recognize the importance of sound macroeconomic policies in achieving sustained growth. These policies aim to create a stable environment that fosters economic advancement across all sectors. Among them, fiscal and monetary policies play pivotal roles (Abeysekera, 2024). The efficacy of these strategies largely depends on their coordination. When managed independently without alignment, they may result in suboptimal outcomes and sluggish economic development. Since these policy tools are typically governed by different authorities, designing a cohesive and sustainable policy framework becomes imperative.

Governments strive to enhance the quality of life through effective economic governance, often implemented through fiscal or monetary policy interventions (Cacciatore & Ghironi, 2021). Fiscal measures include public expenditure and taxation, while monetary policy involves controlling the money supply, interest rates, and exchange rates (Mankiw, 2007). Inadequately designed or conflicting policies can foster uncertainty, discouraging investment and hindering growth (Nkamba, Niyimbanira & Nishimwe-Niyimbanira, 2023; Pastor & Veronesi, 2012). Prior studies by Lucas (1972), Tillmann, Kim and Park, (2019), and Cacciatore and Ghironi (2021) also highlight how inconsistent policy frameworks can adversely impact economic expansion.

Fiscal and monetary policies serve as essential components of a nation's economic management system, designed to address fluctuations and promote stability. The core objective of monetary policy is to regulate the money supply and control inflation, thereby supporting economic expansion. Central banks play a crucial role in implementing this policy by managing interest rates, currency valuation, and liquidity in the economy. According to Aghion, Caroli, and Garcia-Penalosa (1999), monetary policy significantly affects aggregate demand and overall economic performance. In contrast, fiscal policy is primarily concerned with the government's revenue and expenditure patterns. Through budgeting, the state allocates funds for public services, infrastructure, and development initiatives. Particularly in welfare-focused programs, government spending becomes a key instrument because such large-scale financing is generally beyond the reach of private sector investment. Fiscal measures are thus essential in addressing socio-economic needs and boosting national output (Nwankwo, Ikeora & Ogini, 2022).

Monetary Policy in Pakistan

In Pakistan, the formulation and implementation of monetary policy fall under the purview of the State Bank of Pakistan (SBP). Established in 1948 and legally empowered through the SBP Act of 1956, the central bank is responsible for regulating the credit and monetary system in alignment with national development goals (Sims, 1980). This legal framework grants the SBP authority to deploy a variety of monetary instruments tailored to current economic conditions. One of the SBP's primary responsibilities is maintaining price stability, particularly in relation to inflation. The institution monitors fiscal strategies issued by the federal government to ensure coherence between monetary policy and inflation control. Furthermore, the SBP is charged with safeguarding the country's internal and external payment systems, promoting financial soundness. As Mishkin (1996) and Utama (2020) observes, macroeconomic stability depends heavily on effective inflation management and financial discipline. To enhance transparency and public confidence, the SBP issues eight monetary policy statements annually, each detailing the economic rationale behind key policy moves.

Fiscal Policy in Pakistan

Fiscal discipline has remained a persistent challenge in Pakistan. Since its inception, the country has grappled with chronic budget deficits, often resorting to heavy borrowing and debt accumulation to finance public spending. These measures, though common, have long-term implications for sustainable development. As highlighted by Chaudhary and Shabbir (2005), fiscal uncertainty undermines economic performance by fostering volatility.

Low tax revenues further restrict fiscal space, slowing investment and stalling growth in both the short and long term (Atif, Shahab & Mahmood, 2012). Moreover, fluctuations in government expenditure—especially when not planned or targeted—have historically hindered Pakistan's

fiscal policy effectiveness (Miranda-Agrippino & Rey, 2020; Adeeb, Saeed & Ali, 2013). Such unpredictability in spending not only weakens growth prospects but also burdens future generations with increased tax liabilities. These fiscal vulnerabilities are not unique to Pakistan and are often observed in other developing nations (Demirtas, 2023; Kneller, Bleaney & Gemmell, 1999).

A nation's overall economic trajectory is significantly shaped by the interplay between its fiscal and monetary strategies. Numerous studies emphasize the importance of harmonizing these policies to achieve macroeconomic goals effectively. Monetary policy affects fiscal operations both directly and indirectly (Selim & Hassan, 2019; Bernanke, 2020; Afonso, Alves & Balhote, 2019; Sharma, Padhi & Dhal, 2023). Fluctuations in interest rates influence debt servicing costs, which can alter government expenditure patterns. Likewise, high inflation levels increase public spending by raising the wage bill for civil servants and the cost of services, making it harder to maintain fiscal discipline.

Additionally, when monetary measures are used to smooth out economic cycles, they reduce volatility, enabling fiscal authorities to plan and implement development initiatives more efficiently. Conversely, when monetary policy fails to control macroeconomic imbalances, fiscal tools are often activated as a counterbalance to stabilize growth (Jawaid, et.al., 2010; Rakic & Radenovic, 2013; Ha, 2021). Fiscal actions can also influence the outcomes of monetary policy. For instance, when governments pursue expansionary fiscal policies—such as increasing spending without matching revenue—it can overheat the economy, thereby undermining the effectiveness of contractionary monetary measures. In such cases, maintaining price stability becomes more challenging, and central banks may have to adopt more aggressive interest rate hikes (Elliott, Meisenzahl, & Peydro, 2024).

Unplanned fiscal expenditures and inefficient tax systems constrain the flexibility of monetary policy and dampen its potential effects. In such an environment, monetary tightening alone cannot correct the imbalances created by fiscal excess. Ultimately, coordination between the two policy arms is crucial. Authorities managing these policies must communicate and align their strategies to enhance their collective impact on economic stability and growth. The longstanding debate between Keynesians and Monetarists further underscores the complexity of determining which policy is more effective. However, real-world evidence suggests that the choice between fiscal and monetary tools should be based on prevailing economic conditions and tailored to achieve the most beneficial outcomes in a given context (Rakic & Radenovic, 2013; Jawaid, et. al., 2010).

Empirical Literature Review

Numerous empirical studies have explored the comparative effectiveness of fiscal and monetary policies in driving economic growth. The significance of fiscal policy was notably emphasized during the Keynesian era, where increased government spending and tax reductions were viewed as mechanisms to boost household income and consumer demand. This approach has found support in several empirical investigations, which have established a positive relationship between public expenditure and national output (Selim & Hassan, 2019; Bernanke, 2020; Afonso, Alves & Balhote, 2019; Sharma, Padhi & Dhal, 2023; Mountford & Uhlig, 2009).

A foundational study by Andersen and Jordan (1968) examined the U.S. economy using quarterly data to determine the relative influence of fiscal and monetary actions. They used government expenditure to represent fiscal policy and money supply for monetary policy. Their findings

indicated that monetary policy exerted a more immediate and pronounced impact on economic activity, thereby favoring monetary tools for stabilizing the economy. In a related study, Keran (1969) analyzed eight advanced economies, investigating how variations in institutional structures and policy objectives influenced outcomes. His results suggested that changes in the money supply were more strongly linked with economic performance compared to shifts in government spending.

However, the evidence is not universally consistent. Teigen (1975) studied three Scandinavian countries Denmark, Finland, and Norway and found that in all three cases, fiscal spending had a greater effect on gross domestic product than monetary expansion. These findings contradicted the results observed in U.S.-based studies. Further insight comes from research focused on developing economies, such as Nigeria during its economic downturn. Olaloye and Ikhide (1995) applied an enhanced version of the St. Louis equation to analyze the effectiveness of fiscal and monetary strategies using time-series data from 1986 to 1991. Their findings revealed that fiscal policy had a greater impact during recessionary periods, emphasizing the role of government expenditure in reviving depressed economies.

Research Methodology

To analyze the effectiveness of fiscal and monetary policy tools in Pakistan, this study utilized annual time-series data covering the period from 1980 to 2024. The data were sourced from official publications of the Government of Pakistan, including national economic surveys and statistical reports (Government of Pakistan, 2024). Government expenditure served as the proxy for fiscal policy, while the broad money supply (M2) represented monetary policy.

The methodological approach employed in this research is based on the Vector Autoregression (VAR) framework, which allows for examining dynamic interrelationships among multiple macroeconomic variables over time. This model is particularly suitable for identifying both the direction and magnitude of influence among variables without imposing strict theoretical restrictions.

The general functional relationship is expressed as:

$$\text{GDP} = f(\text{GE}, \text{M2}) \quad (1)$$

Where GDP is Gross Domestic Product (used as a proxy for economic growth), GE is Government Expenditure and M2 is Broad Money Supply respectively.

For econometric analysis, the model is transformed into logarithmic form to stabilize variance and linearize exponential growth patterns:

$$\ln \text{GDP} = f(\ln \text{GE}, \ln \text{M2}) \quad (2)$$

The econometric specification becomes:

$$\text{GDP}_t = \beta_0 + \beta_1 \text{GE}_t + \beta_2 \text{M2}_t + \varepsilon_t \quad (3)$$

$$\ln \text{GDP}_t = \beta_0 + \beta_1 \ln \text{GE}_t + \beta_2 \ln \text{M2}_t + \varepsilon_t \quad (4)$$

Where $\ln GDP_t$ is Natural logarithm of GDP at time t , $\ln GE_t$ is Natural logarithm of government expenditure at time t , $\ln M2_t$ is Natural logarithm of money supply at time t and ε_t is Error term representing other influencing factors not included in the model.

Before applying the VAR model, stationarity of the data series was tested using the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests. Ensuring stationarity is critical to avoid spurious regression results and to validate the time series properties of the data. The critical values for these tests were drawn from MacKinnon (2010). Based on the results, all variables—GDP, government expenditure (GE), and money supply (M2)—were found to be non-stationary at level but became stationary after first differencing. This confirmed that the series were integrated of order one, $I(1)$, and hence suitable for VAR modeling.

Vector Autoregressive (VAR) Model

The VAR model is a powerful statistical tool used in macroeconomic research to capture the interdependencies among multiple time-series variables without requiring strong theoretical assumptions about causal relationships. Each variable in the VAR system is treated as endogenous and modeled as a function of its own past values as well as the lagged values of all other variables in the system. The primary objectives of using a VAR model in this study are impulse response function (IRF) to analyze the dynamic effect of a shock in one variable on the current and future values of other variables and variance decomposition (VD) to determine the proportion of forecast error variance of a variable that can be attributed to shocks in each variable in the system.

In this research, the VAR model was applied to three key variables: GDP (as a proxy for economic output), GE (government expenditure), and M2 (money supply). The model was estimated using the optimal lag length determined by standard information criteria, and then used for further analysis through IRF and VD techniques.

Empirical Analysis

Unit Root Test

To ensure the validity of the VAR model estimation, it was necessary to examine whether the time-series data were stationary. Both the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests were applied, incorporating both intercept and trend components. The null hypothesis for these tests assumes the presence of a unit root, indicating non-stationarity.

The results indicated that all three variables—log-transformed GDP ($\ln GDP$), government expenditure ($\ln GE$), and money supply ($\ln M2$)—were non-stationary in levels. However, upon taking the first differences, each series was found to be stationary. This implies that the variables are integrated of order one, $I(1)$, and thus appropriate for VAR modeling.

Table 1: Stationarity Test

Variables	Intercept	Trend and Intercept	Unit Root	Intercept	Trend and Intercept	Unit Root
LGDP	-0.465	-2.204		-0.545	-2.214	
	-0.872	-0.457		-0.860	-0.458	
LGDP(I)	-0.533	4.815	(I)	0.633	4.833	(I)

	0.000	0.000		0.000	-0.000	
LGE	0.473	-1.836		0.554	-1.891	
	-0.989	-0.674		-0.992	-0.646	
LGE(I)	-0.479	2.725	(I)	-0.558	2.924	(I)
	0.000	0.000		0.000	0.000	
M2	0.834	-2.475		0.377	-2.475	
	-1.005	-0.355		-0.992	-0.013	
M2(I)	-0.829	6.963	(I)	-0.380	190.424	(I)
	-0.003	-0.000		-0.002	-0.001	

Vector Autoregression (VAR)

The Vector Autoregression (VAR) technique was utilized to assess the dynamic relationship between the selected macroeconomic variables. The results showed that the current value of GDP is significantly influenced by its own previous values. In contrast, past values of government expenditure and money supply had weaker and statistically insignificant effects on GDP.

When analyzing government expenditure as the dependent variable, the model showed it was largely driven by its own past behavior. The lagged values of GDP and M2 had a limited influence, implying a strong internal momentum within fiscal spending patterns. A similar trend was observed for money supply, which was primarily shaped by its own lags and showed negligible responsiveness to changes in fiscal or output variables.

Table 2: Estimation of VAR

Variables	LnGDP	LnGE	LnM2
LnGDP(-1)	0.8250	0.0741	0.3486
	-0.0935	-0.1142	-0.2092
	-8.8250	-0.6490	-1.6660
LnGE(-1)	0.0504	0.7466	-0.3940
	-0.0678	-0.0678	-0.0678
	-0.7440	-11.0030	5.8070
LNM2(-1)	-0.0024	0.0659	0.9386
	-0.0098	-0.0161	-0.0450
	0.2490	-4.0800	-20.8550
C	0.2565	-0.410	-0.8682
	-0.0695	-0.1265	-0.3867
	-3.6880	3.2430	2.2450
R-Square	0.9858	0.9638	0.9838
Adj. R-Square	0.9856	0.9615	0.9835
Sum Sq. equation	0.1186	1.0773	0.2222
S.E equation	0.0516	0.1722	0.0733
F-Statistic	5661.45	435.965	2768.72
Log Likelihood	50.0029	11.8633	39.512
Akaike AIC	-2.5687	-0.4498	-1.9859
Schwarz SC	-2.3927	0.2738	-1.8099
Mean Dependent	15.6767	15.0607	14.087

S.D. Dependent	1.39810	1.12947	1.3090
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Variance Decomposition of GDP, Money Supply and Government Expenditure

The variance decomposition results illustrate how much of the forecast error variance of GDP can be attributed to its own shocks versus those from GE and M2. In the initial period, GDP variance was entirely explained by its own history. However, over time, the contribution from both government spending and money supply increased steadily. By the tenth year, GDP was still largely influenced by its own past values, but the effects of GE and M2 had become more prominent, reflecting their long-term impact on economic performance.

Table: 3 Variance Decomposition of ln GDP of M2

Period	Standard Error	lnGDP	lnGE	lnM2
1	0.052	99.988	-	-
2	0.077	99.519	0.012	0.012
3	0.097	98.703	0.439	0.822
4	0.113	97.753	0.727	1.484
5	0.126	96.802	0.982	2.180
6	0.139	95.923	1.183	2.857
7	0.150	95.152	1.329	3.482
8	0.160	94.499	1.425	4.039
9	0.169	93.961	1.479	4.524
10	0.178	93.526	1.501	4.937

Table 4: Variance Decomposition

Period	Standard Error	lnGDP	lnGE	lnM2
1	0.182	6.084	-0.002	93.911
2	0.255	3.666	1.421	94.905
3	0.307	2.541	3.535	93.916
4	0.347	2.330	5.646	92.017
5	0.377	2.756	7.459	89.778
6	0.400	3.630	8.878	87.485
7	0.418	4.815	9.903	85.274
8	0.431	6.213	10.576	83.204
9	0.442	7.742	10.960	81.291
10	0.449	9.340	11.120	79.532

The analysis of M2 variance decomposition in table 4 revealed that its fluctuations were heavily dependent on its own prior values in the short run. Initially, over 93% of its variance was self-explanatory. However, as time progressed, the influence of GDP and government spending gradually increased, though M2 remained the most self-determined among the variables. By the tenth year, its dependence on internal shocks had decreased, making room for a growing, albeit moderate, influence from fiscal and output variables.

Government expenditure exhibited strong endogenous behavior, with the vast majority of its short-run variation driven by its own previous values. Over time, however, the impact of GDP on government spending became more significant. By the fifth year, GDP accounted for nearly a quarter of the variance in GE, and this influence continued to grow. In contrast, the effect of money supply on GE showed erratic behavior, suggesting a more volatile and less systematic relationship.

Table 5: Variance Decomposition of lnGE

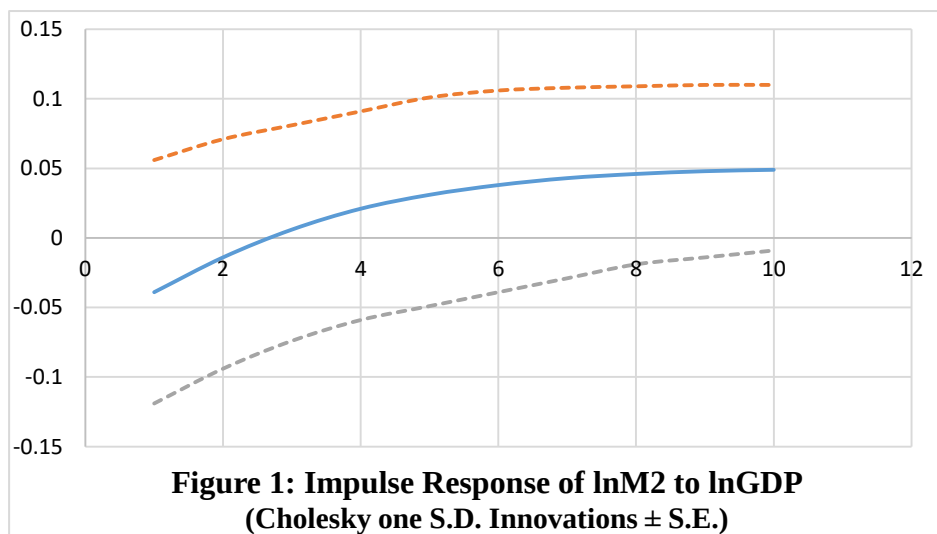
Period	Standard Error	lnGDP	lnGE	lnM2
1	0.039	4.191	87.235	8.434
2	0.061	7.338	86.547	5.975
3	0.074	11.649	83.389	4.822

4	0.083	16.895	78.246	4.719
5	0.091	22.673	71.966	5.220
6	0.100	28.572	65.393	5.894
7	0.108	34.283	59.117	6.460
8	0.117	39.618	53.445	6.793
9	0.125	44.504	48.473	6.882
10	0.134	48.907	44.180	6.773

Impulse Responses of GDP to Shocks in Money Supply and Government Expenditure

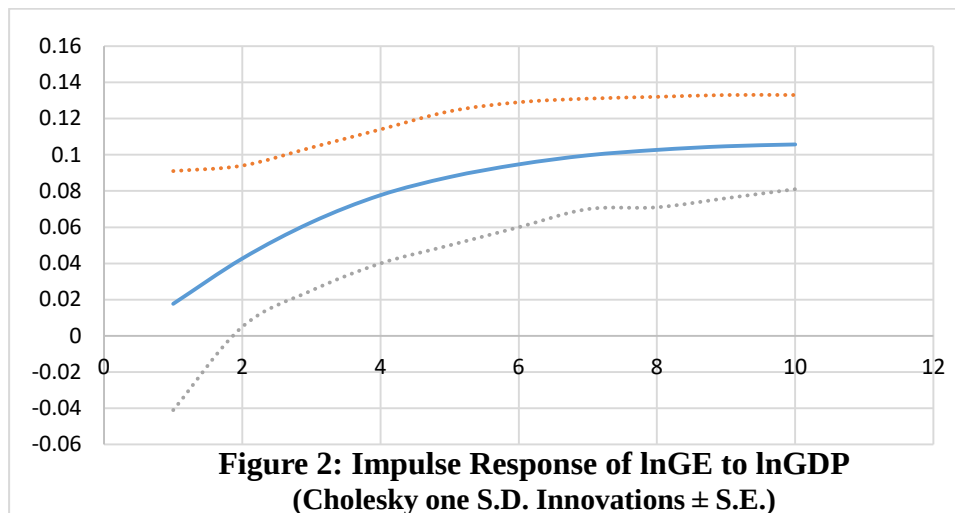
The impulse response analysis was used to examine how economic output (GDP) reacts to unexpected changes or shocks in the money supply. In this context, money supply (lnM2) was treated as the impulse variable, while GDP (lnGDP) was the response variable. The results revealed that a sudden increase in money supply initially had a slightly negative impact on GDP, suggesting a possible adjustment period in the economy.

However, starting from the third year onward, the response shifted to positive and continued to rise over time. This upward trend indicates that expansionary monetary policy in Pakistan tends to generate favorable outcomes for economic growth in the medium to long term. The delayed response is consistent with monetary policy transmission lags observed in other developing economies.



In a similar fashion, the impulse response of GDP to an unexpected increase in government expenditure was analyzed. Here, government spending (lnGE) served as the impulse variable, while GDP remained the response variable. The analysis demonstrated a consistently positive impact of fiscal expansion on economic output, both in the short and long run.

The response curve showed a sharp and immediate rise, indicating that fiscal policy instruments, such as increased public spending, have a more direct and faster influence on economic activity in Pakistan. The sustained upward movement over time further confirmed the long-lasting benefits of strategic fiscal interventions.



Conclusion

This study explored the effectiveness of fiscal and monetary policies in promoting macroeconomic stability and growth in Pakistan. Utilizing government expenditure and money supply as representative instruments of fiscal and monetary policy, respectively, the research applied a Vector Autoregressive (VAR) model supported by Impulse Response Functions (IRF) and Variance Decomposition (VD) techniques to analyze the dynamic relationships among variables. The findings from the impulse response analysis revealed that the money supply initially had a dampening effect on GDP, but its influence turned positive and intensified after the third year, indicating that expansionary monetary measures are more effective in the medium to long term. In contrast, government expenditure had a consistently positive impact on GDP from the outset, reflecting its stronger short-run effectiveness and sustained long-term influence.

Variance decomposition results further supported these conclusions, showing that fiscal policy contributed more steadily and significantly to variations in economic output over time. While monetary policy also played a growing role, its impact remained more gradual and delayed. Based on these insights, the study concludes that in the context of Pakistan's economy, fiscal policy has demonstrated relatively greater effectiveness in driving economic growth than monetary policy. However, optimal outcomes are likely when both policies are implemented in a coordinated and complementary manner.

Policy Recommendations

For better macroeconomic outcomes, the Ministry of Finance and the State Bank of Pakistan should work in tandem, ensuring their fiscal and monetary strategies are aligned. Government expenditure should focus more on development projects and infrastructure that yield long-term economic benefits rather than non-productive outlays. The central bank should continue to refine its policy tools to improve the speed and efficiency of monetary policy impacts, particularly in controlling inflation and stimulating investment. To support sustainable fiscal expansion, the government must work on increasing tax revenues through improved compliance and policy reforms, thereby reducing reliance on debt. Policymakers should factor in the time lag of both fiscal and monetary tools, especially when responding to economic shocks, to avoid delayed or counterproductive results.

Author Contribution. **ZZ**: writing original draft review, editing, resources, and supervision. **MY**: writing review and editing. **RA**: conceptualization, data curation, formal analysis, investigation, methodology, software, writing review and editing. **MA**: Corresponding Author, data curation, mathematical modeling and editing.

References

1. Abeysekera, I. (2024). The influence of fiscal, monetary, and public policies on sustainable development in Sri Lanka. *Sustainability*, 16(2), 580.
2. Adeeb, B., Saeed, S., & Ali, F. (2013). *Do Fiscal, monetary and trade policies matter for growth? Empirical evidence from Pakistan (Doctoral dissertation, Dissertation, Mohammad Ali Jinnah University, Islamabad)*.
3. Afonso, A., Alves, J., & Balhote, R. (2019). Interactions between monetary and fiscal policies. *Journal of applied Economics*, 22(1), 132-151.
4. Aghion, P., Caroli, E., & García-Peñalosa, C. (1999). Inequality and Economic Growth: The Perspective of the New Growth Theories. *Journal of Economic Literature*, 37(4), 1615–1660.
5. Andersen, L. C., & Jordan, J. L. (1968). Monetary and Fiscal Actions: A Test of Their Relative Importance in Economic Stabilization. *Review*, 50, 11–24.
6. Atif, M., Shahab, S., & Mahmood, M. T. (2012). The nexus between economic growth, investment and taxes: Empirical evidence from Pakistan. *Academic Research International*, 3(2), 530-537.
7. Bernanke, B. S. (2020). The new tools of monetary policy. *American Economic Review*, 110(4), 943-983.
8. Cacciatore, M., & Ghironi, F. (2021). Trade, unemployment, and monetary policy. *Journal of International Economics*, 132, 103488.
9. Chaudhary, M. A., & Shabbir, G. (2005). Macroeconomic impacts of budget deficit on Pakistan's foreign sector. *Pakistan Economic and Social Review*, 185-198.
10. Demirtas, T. (2023). The growth effect of the expansionary monetary and fiscal policies applied in the periods when the economies shrank: Developed and developing countries cases. *Eurasian Journal of Social Sciences*, 11(3/4), 95-114.
11. Elliott, D., Meisenzahl, R. R., & Peydro, J. L. (2024). Nonbank lenders as global shock absorbers: evidence from US monetary policy spillovers. *Journal of International Economics*, 103908.
12. Government of Pakistan (2024). *Economic Survey of Pakistan (Various issues)*. Finance Division, Islamabad.
13. Government of Pakistan (2024). National Accounts, Pakistan Bureau of Statistics, Ministry of Planning, Development and Special Initiative, Islamabad.
14. Ha, J. (2021). Financial market spillovers of US monetary policy shocks. *Review of International Economics*, 29(5), 1221-1274.
15. Jawaid, S. T., Arif, I., & Naeemullah, S. M. (2010). Comparative analysis of monetary and fiscal policy: A case study of Pakistan. *Nice Research Journal*, 3(1), 58-67.
16. Keran, M. W. (1969). Monetary and Fiscal Influences on Economic Activity—The Historical Evidence. *Review*, 51, 5–24.
17. Kneller, R., Bleaney, M. F., & Gemmell, N. (1999). Fiscal policy and growth: evidence from OECD countries. *Journal of Public Economics*, 74(2), 171–190.

18. Lucas, R. E. (1972). Expectations and the neutrality of money. *Journal of Economic Theory*, 4(2), 103–124.
19. Mankiw, N. G. (Ed.). (2007). *Monetary policy*. National Bureau of Economics Research Studies in Business Cycles, Vol – 29, University of Chicago Press, Chicago and London.
20. Miranda-Agrippino, S., & Rey, H. (2020). US monetary policy and the global financial cycle. *The Review of Economic Studies*, 87 (6), 2754-2776.
21. Mishkin, F. S. (1996). *Understanding financial crises: a developing country perspective*. Working Paper Series, National Bureau of Economic Research, Massachusetts.
22. Mountford, A., & Uhlig, H. (2009). What are the effects of fiscal policy shocks? *Journal of Applied Econometrics*, 24(6), 960–992.
23. Nkamba, X., Niyimbanira, F., & Nishimwe-Niyimbanira, R. (2023). Effect of Monetary Policy on Unemployment in South Africa: An Econometric Approach. *Journal of Public Administration*, 58(3-1), 903-920.
24. Nwankwo, V. A., Ikeora, J. J. E., & Ogini, P. (2022). Monetary policy and manufacturing sector output in Nigeria. *International Journal of Innovative Social Sciences & Humanities Research*, 10(1), 36-50.
25. Olaloye, A. O., & Ikhiede, S. I. (1995). Economic sustainability and the role of fiscal and monetary policies in a depressed economy: The case of Nigeria. *Sustainable Development*, 3(2), 89–100.
26. Pastor, L., & Veronesi, P. (2012). Uncertainty about Government Policy and Stock Prices. *The Journal of Finance*, 67(4), 1219–1264.
27. Rakic, B., & Radenkovic, T. (2013). The Effectiveness of Monetary and Fiscal Policy in Serbia. *Industrija*, 41(2).
28. Selim, M., & Hassan, M. K. (2019). Interest-free monetary policy and its impact on inflation and unemployment rates. *ISRA International Journal of Islamic Finance*, 11(1), 46-61.
29. Sharma, S., Padhi, I., & Dhal, S. (2023). Monetary-fiscal coordination: when, why and how?. *Studies in Economics and Finance*, 40(4), 661-686.
30. Teigen, R. L. (1975). Monetary and Fiscal Influences on Economic Activity: Evidence from Denmark, Finland and Norway. *The Swedish Journal of Economics*, 77(2), 149.
31. Tillmann, P., Kim, G. Y., & Park, H. (2019). The spillover effects of US monetary policy on emerging market economies. *International Journal of Finance & Economics*, 24 (3), 1313-1332.
32. Utama, C. (2020). The effect of twin-shock on monetary and fiscal policies in Indonesia. *Jurnal Ekonomi Malaysia*, 54(2), 137-147.