Influence Monetary Policy on Economic Growth: An Evidence from Pakistan

Muhammad Kamran Bhatti, Yumna Haider, Shahid Abbas

arifrazauol@gmail.com

ARTICLE DETAILS	ABSTRACT
History Revised format: Feb 2020 Available Online: Feb 2020 **Keywords** Monetary Policy; Economic Growth; Pakistan	The study's basic goal is to examine the effect of monetary policy on economic growth in context of the Pakistan. Annual data for analysis is used from 1972 to 2018. Johanson Co-integration analysis and Granger Causality Test are applied to get the results. Outcomes of the Bi-Variate Co-integration analysis show that bi-variate co-integration relation exist between the all the variables GDP MS, GDP DI, GDP FDI, GDP LF, MS DI, MS FDI, MS LF, DI FDI, DI LF and FDI LF in the long run. Findings of Pairwise Granger Causality Tests reveals that bi-directional Granger causality is present between the Gross Domestic Product (GDP) and Money Supply (MS). The uni-directional relationship exists between the GDP and DI, FDI and GDP, LF and GDP, DI and MS. Bi-directional Granger causality between the FDI and DI exist in the economy of Pakistan. Uni-directional Granger causality is present between LF and DI, and LF and FDI.

[1] National Savings, Ministry of Finance, Pakistan

1 Introduction

Economists view monetary policy as a first line defence for economic downturns. Monetary policy is about adjusting the money supply and interest rate to sustain the economy at full-employment or potential productivity levels by impacting aggregate demand rates.

Monetary policy is the actions and activities of a central bank to regulate the supply of money. Money supply involves sources of mutual funds from loans, currency, checks and the stock market. Monetary policy raises liquidity to promote economic growth. To stop inflation, it reduces the liquidity. Central banks are utilizing interest rates, requirements for bank deposits and the amount of government bonds that banks must carry. All those resources have an effect on how much banks can lend. Loan quantity affects cash availability.

Monetary policy is one of economic growth's principal factors through its impact on economic variables. Economic prosperity in a country is important, because it reduces deprivation and increases livelihoods. Monetary policy 's increasing importance has rendered its success a concern

for most policymakers when affecting economic development. Despite the economists' lack of consensus on how monetary policy actually operates and the magnitude of its economic impact, there is a remarkably broad agreement that it has a form of economic impact (Nkoro, 2005).

Economic development is the ambition of every nation in the world and economic growth is fundamental to economic growth. Economic development of the country is measured by the gross domestic product of the country. If the country's GDP is in well condition and going to increase it means economic growth is increase. Any type of variations in GDP will effect the overall economic growth of the country. There are many factors which influence the economic growth of the country. Money supply is one of them.

Supply of money is the total amount of financial assets accessible at a given period within an economy. It can be further extended by using currency in the financial institutions' circulations and demand deposits. The State Bank of Pakistan records, reports, evaluates and publishes Money (M2) in Pakistan. Money supply is calculated differently. All are often used, and the country relies on the exact classifications. M0 and M1, also known as narrow money, usually include circulating coins and notes, and other money equivalents that are quickly convertible into cash. M2 comprises M1 plus short-term bank deposits and money market funds working 24 hours a day.

The money supply plays a vital role in the economy of the country. The economy of developing and developed countries can be affected positively or negatively by supply of money. If the money supply changes and implemented effectively that the prices of goods and services can be control.

Money supply does not affect economic development directly but it affects the economy indirectly by inflation. Money supply of economies is the primary source of inflation. The higher inflation has a negative impact on growth levels. Instead of inflation, the growth of the financial sector has affected inversely, resulting in poverty among the population.

Some economists have conflict on the effect of money supply on economic growth, but some consider that variance in the quantity of money is the most significant factor of economic growth. Regarding the classical Hicksian IS-LM model, the assumption of the stabilization of the link between money and economic growth would explain the efficiency of monetary policy. Friedman and Schwartz (1963), and Friedman 's later studies (1968), try to offer both theoretical and empirical evidence for the close association between money and income. So, money plays an important part in revenue production, and increases in profits are primarily influenced by shifts in capital stocks.

One of the commonly used approaches of Granger Causality Analysis (Granger 1969) and Johansen Maximum Likelihood Co-Integration Test (1988) to investigate the empirical association between money and income to assess the long-term relationship. Johansen 's approach imposes a strict limitation that the process variables must be in equal integration size. Additionally, it does not provide the structural break details in the time series results, and therefore has low strength. Previous research in Pakistan have concentrated mainly on the Granger Causality Analysis.

Recently scholars have tried to differentiate between the short-term relationship and the long-run relationship of money and income.

Laidler (1993) is in the view that lowering money stock by increasing interest rate would lower Gross Domestic Product (GDP). Handler (1997) argued that variations in the quantity of money supply is the most important determinant of economic growth and nations that offered more time in studying the behaviour of aggregate money supply rarely experience poor economic performance and claimed that this is also the views of some economists. Steve (1997) and Domingo (2001) contended that there may not be positive economic growth without an appropriate financial condition. Uduakobong (2014) is in the view that money supply more or less influences Economic growth.

Some researcher evidence found for developing and non-developing countries including Pakistan. According to Palesa (2014), monetary policy plays a major role in the economy's welfare through its stabilizing position. The change of monetary policy via the repo rate and money supply has a insignificant impact on South Africa's economic development. According to Dilshad, Afzal and Usmani (2016), money supply and exchange rate, have a positive impact on Pakistan's economic development. Monetary policy is the mechanism through which a country's regulatory authority, government and central bank regulate the pace of inflation, money supply, liquidity demand and interest rates in order to accomplish a series of goals that are advantageous for the economy's efficiency, stability and development (Hameed, 2010).

2 Literature Reviews

Omodero (2019) investigate the effect of money supply on economic growth of Nigeria and Ghana. The time series date is used from the period 2009-2018. The methodology is used Ordinary Least Square Regression Technique to examine the data. The result shows that money supply (M2) has negative and insignificant impact on Real GDP in Nigeria but the significant and positive impact in Ghana. Broad Money (M3) has insignificant and positive impact on Real GDP in Nigeria but significant and negative impact on Real GDP in Ghana. Private Sector credit has an insignificant and positive effect on real GDP in both Nigeria and Ghana.

Aslam and Awan (2018) examined the effect of monetary policy on Pakistan's economic growth. The time series data is used from the period of 1972 to 2013. The methodology is used multiple regression to find the result of data and used correlation technique to analysed the association between the macroeconomics variables. Different microeconomics variable used in this study including real gross domestic product, employed labour force, gross capital formation, foreign direct investment, broad money, GDP deflator and exports. We analyse the association among the monetary policy and macroeconomics variable in long run. The results show that monetary policy has expressive impact on inflation rate, money supply, employment, gross capital formation, foreign direct investment, saving and other macroeconomic variables.

Ayodeji and Oluwole (2018) explored the impact of monetary policy on Nigeria's economic development. The time series data is used from the period of 1981 to 2016. The different methodologies are used to analysed the data including, Augmented Dickey-Fuller (ADF), Unit Root test, Johansen Co-integration test, Vector Error Correction Mechanism (VECM) for the variables and Engle-Granger co-integration test for long run relationship. Different microeconomics variables used in this study using Money Supply (MS), Exchange Rate (ER), Interest Rate (IR), and Liquidity Ratio (LR). The result show that there is positive and inconsequently effect of Money Supply (MS) and Exchange Rate (ER) on economic growth on the other hand there is a negative and consequently effect of Interest Rate (IR) and Liquidity Ratio (LR) on economic growth and also the relationship among the monetary policy and economic growth exist in long run.

Galadima and Ngada (2017) examined the effect of the money supply on Nigeria's economic development. The time series data is used from the period 1981-2015. The different methodologies including Johansen co-integration approach, Vector Error Correction Model (VECM) and Pairwise Granger causality test are used to test the data. The result shows that money supply and interest rate have positive and significant impact and real exchange rate have negative but significant impact on economic growth of Nigeria. On the other hand, the lagged value of money supply has negative and significant impact but lagged value of real exchange rate has negative significant impact while lagged value of gross domestic product and lagged value of interest rate have insignificant impact on the economic growth in short run. The causality test shows two-way causality between money supply and gross domestic product, one-way causality running from real exchange rate to money supply and interest rate to money supply on the other hand, there is no causality among the real exchange rate and gross domestic product, interest rate and gross domestic product, and also interest rate and real exchange rate.

Twinoburyo and Odhiambo (2017) analysed the effect of monetary policy on economic growth of Tanzania. The time series data is used from the period of 1975 to 2013. The methodology is used Autoregressive distributed lag (ARDL), bounds-testing approach to test the data. In this study we use two independent variables Money Supply (MS) and Interest Rate (IR). The findings show that there is relationship between monetary policy and economic growth using Interest Rate (IR) in short run and there is no effect of monetary policy on economic growth in long run. There is negative relationship among the monetary policy and economic growth using Money Supply (MS).

Ahmad et al (2016) interrogated the influence of monetary policy on Pakistan's economic growth. Collecting yearly time series data from 1973 to 2012. The technique used Autoregressive Distributive Lag (ARDL) model to analysed the data. The different economic variables GDP, Money supply, inflation, interest rate and exchange rate analysed the long run and short run relationship. The results show that there is a positive impact of money supply and exchange rate on economic growth. On the other hand, inflation have positive but inconsequence and negative impact of interest rate on economic growth.

Ayub and Shah (2015) investigated the effect of monetary policy on Pakistan's GDP. The time series data is used from 2005 to 2013. The methodology is used regression and correlation to recognise the connection among the variables. The result indicates that money supply, interest rate and inflation have strongly impact on Gross Domestic Product of Pakistan. There are many unexplained factors that affect the Gross Domestic Product.

Lut and Moolio (2015) interrogated the effect of monetary policy on Cambodian's economic growth. The quarterly time series data used from the dated of 2000 to 2012. The methodology is used multiple regression model to analyse the effect of money supply and interest rate on economic growth in Cambodia. The findings display that there is a positive effect of money supply with weak strength on economic growth and there is no effect of interest rate on GDP growth of Cambodia.

Precious and Palesa (2014) observed the effect of monetary policy on South African economic growth. The time series data is used from the period of 2000 to 2010. The methodology is used Augmented Dickey-Fuller and Phillips Perron unit root tests to analyse for certainty in the data and the Johansen co-integration and the Error Correction Mechanism are used to find long-run and short-run between the variables. The results indicate that there is the relationship between the variables. Also, the basic result indicates that money supply, repo rate and exchange rate are the instruments of monetary policy that increasing growth in South Africa while the inflation is existing.

Ihsan and Anjum (2013) investigated the effect of money supply on the economic growth of Pakistan. The time series data is used from the year of 2000 to 2011. The statistical methodology Regression Model used to analysis the data. Money supply affected three independent variables interest rate, CPI also affected dependent variable GDP. The results show that the CPI and interest rate have an expressive effect on GDP and inflation rate has inexpressive effect on GDP.

Onyeiwu (2012) examined the effect of monetary policy on economic growth of Nigeria. The time series data is used for the era of 1981 to 2008. The methodology is used Ordinary Least Squares (OLS) for testing the data. The results show that money supply have positive effect on economic growth & balance of payment and negative effect on Inflation.

Waliullah and Rabbi (2011) interrogated the effect of monetary policy variables on economic development of Pakistan in long run. The time series data used from the period of 1972 to 2005. The methodology is used Unit Root Test, ARDL and ECM are applied on the data. The consequence show that the association between Money Supply (MS), Gross Domestic Product (GDP) and Consumer Price Index (CPI) are substantial in long run.

Nouri and Samimi (2011) analysed the effect of monetary policy on economic growth of Iran. The time series data is used from the year of 1974 to 2008. The method used ordinary least squares (OLS) to analysis the data. The outcomes display that the association between money supply and economic growth is positive and expressive in Iran.

Hameed and Amen (2010) examined the effect of monetary policy on gross domestic product of Pakistan. The 30 years' time series data used from the year of 1980 to 2009 for analysis. The methodology used Regression Model to investigate the data. The outcomes display that there is a small link of interest rate with GDP of a country. Rise in money supply have great effect on GDP. Definitely different unexplained factors are also influence on GDP.

3 Data and Methodology

The study practices the time series data during the 1980 to 2016 and source of data is World Bank for Pakistan. To check the stationarity of all the variables in the model, the unit root tests is applied. Phillip Perron (PP) test is used to detect whether all the variables are stationary or not, and to control the variables' orders of integration. The mathematical model of the study is,

$$GDP=f (MS, DI, FDI, LF)$$

The econometric model is,

$$GDP_t = \alpha_0 + \alpha_1 MS_t + \alpha_2 DI_t + \alpha_3 FDI_t + \alpha_4 LF_t + \varepsilon$$

Where,

GDP = Gross Domestic Product

MS = Money Supply

 DI= Domestic Investment

FDI= Foreign Direct Investment

LF = Labor Force

ε =Error Term

t =Time Series

4 Results and Discussion

Descriptive Statistics

Descriptive statistics describe the basic data structure that indicate measurable descriptions in the suitable technique and give the abstract of the data. A random variable is measured by the Mean median and mode in the central tendency (Gujarati, 2004).

Table: 1 Descriptive Statistics

	GDP	MS	DI	FDI	LF
Mean	92668.27	37618.68	15611.14	978.1995	40.67099

Median	60636.02	24641.43	10716.89	382.1	34.89044
Maximum	304951.8	144901.8	52080.1	5594.1	73.91702
Minimum	6324.884	2541.359	817.8379	0.1	19.61
Std. Dev.	88474.59	37732.46	13967.9	1349.625	16.08231
Skewness	1.146828	1.357852	1.079367	2.016332	0.579579
Kurtosis	3.012612	3.918959	3.024965	6.76192	2.093089
Observations	47	47	47	47	47

Source: Software E-View 9.0

According to the findings of the descriptive statistics 47 observations are used in the study. The dispersion of data is measured by the standard deviation. All the variables (GDP, MS, DI, FDI, LF) in the model are positively skewed and indicate, distribution of the data is progressive. Kurtosis standard value is 3, Kurtosis values of GDP and DI are equal to 3 which show data distribution is normal. But the Kurtosis values of MS and FDI are more than 3 that indicate, data distribution is Leptokurtic. So, the Kurtosis value of LF is less than 3 that indicate, data distribution is Platokurtic.

Unit Root Analysis

This test is applied to check the stationary (or non-stationary) of the variables. Two tests of unit root are used mostly Augmented Dickey Fuller (ADF) and Philip Peron (PP) Tests. But this study used the PP test to check the stationarity of the variables.

Table: 2 Unit Root Test

	PP (Level)		PP (Difference)	
Variables	t-Stat	Prob.*	t-Stat	Prob.*
GDP	0.560437	0.9992	-6.41464	0
MS	2.99273	1	-3.82745	0.024
DI	0.493443	0.999	-5.78145	0.0001
FDI	-2.7013	0.241	-4.11589	0.0117
LF	0.465214	0.9989	-6.61921	0

Source: Software E-View 9.0

Note: Significance level is 5%.

Results of the Philip Peron (PP) predicts that all the variables GDP, MS, DI, FDI and LF are stationary at first difference.

Johanson Co-Integration Analysis

Johanson Co-Integration Analysis is used to check the long-run co-integration among the variables.

Table: 3 Trace Statistics

Unrestricted Co-Integration Rank Test (Trace)					
Hypothesized		Trace		0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Probability	
None	0.590495	102.5549	69.81889	0.0000*	Co-Integrated
At most 1	0.501796	62.37871	47.85613	0.0012*	Co-Integrated
At most 2	0.360395	31.02514	29.79707	0.0359**	Co-Integrated
At most 3	0.195708	10.91444	15.49471	0.2168	No Co-integrated
At most 4	0.024447	1.113769	3.841466	0.2913	No Co-Integrated

Source: Software E-View 9.0

Note: Significance level is 1%, 5%, 10% and '*', '**', '***' respectively.

Table: 4 Max Eigenvalue

Unrestricted Co-Integration Rank Test (Maximum Eigenvalue)					
Hypothesized		Max-Eigen		0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Probability	
None	0.590495	40.17623	33.87687	0.0078*	Co-Integrated
At most 1	0.501796	31.35357	27.58434	0.0156**	Co-Integrated
At most 2	0.360395	20.11071	21.13162	0.069***	Co-Integrated
At most 3	0.195708	9.800668	14.2646	0.2253	No Co-integrated
At most 4	0.024447	1.113769	3.841466	0.2913	No Co-Integrated

Source: Software E-View 9.0

Note: Significance level is 1%, 5%, 10% and '*', '**', '***' respectively.

The outcome of multivariate co-integration analysis is presented in above tables for all the series. The results display that three series are co-integrated in long run in the both Trace Statistics and Max Eigen Value.

Bi-Variate Co-Integration Analysis

In Bi-Variate Co-Integration Analysis, relation between the two variables is checked for the long-run.

Table: 5 Bi-Variate Co-Integration Analysis

	Trace		0.05	
Variables	Eigenvalue	Statistic	Critical Value	
GDP MS	0.357248	20.93898	15.49471	Co-Integrated
	0.023046	1.049184	3.841466	

GDP DI	0.279779	20.49058	15.49471	Co-Integrated
	0.119398	5.721705	3.841466	
GDP FDI	0.378176	28.34956	15.49471	Co-Integrated
	0.143492	6.970128	3.841466	
GDP LF	0.440334	26.1675	15.49471	Co-Integrated
	0.001084	0.048805	3.841466	
MS DI	0.351119	19.58624	15.49471	Co-Integrated
	0.002739	0.123435	3.841466	
MS FDI	0.301346	26.31633	15.49471	Co-Integrated
	0.202448	10.17938	3.841466	
MS LF	0.358674	20.21983	15.49471	Co-Integrated
	0.0051	0.230077	3.841466	
DI FDI	0.367801	31.92376	15.49471	Co-Integrated
	0.221874	11.28898	3.841466	
DI LF	0.49367	31.4148	15.49471	Co-Integrated
	0.017387	0.789304	3.841466	
FDI LF	0.356329	31.82758	15.49471	Co-Integrated
	0.234107	12.00207	3.841466	

Source: Software E-View 9.0

If the trace statistics is greater than the critical value, then bi-variate Co-integration exist and also show that long run relationship present between the two variables. Outcomes of the table show that bi-variate co-integration relation exist between the all the variables GDP MS, GDP DI, GDP FDI, GDP LF, MS DI, MS FDI, MS LF, DI FDI, DI LF and FDI LF in the long run.

Table 6: Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
MS does not Granger Cause GDP	45	4.17018	0.0226
GDP does not Granger Cause MS		8.79663	0.0007
DI does not Granger Cause GDP	45	1.49518	0.2365
GDP does not Granger Cause DI		3.21615	0.0507
FDI does not Granger Cause GDP	45	2.66186	0.0822
GDP does not Granger Cause FDI		1.5698	0.2206
LF does not Granger Cause GDP	45	3.48122	0.0404
GDP does not Granger Cause LF		0.70104	0.5021
DI does not Granger Cause MS	45	3.43514	0.042
MS does not Granger Cause DI		23.3363	2.00E-07
FDI does not Granger Cause MS	45	3.93759	0.0275
MS does not Granger Cause FDI		1.68065	0.1991
LF does not Granger Cause MS	45	1.41492	0.2548

MS does not Granger Cause LF		0.96468	0.3898
FDI does not Granger Cause DI	45	11.485	0.0001
DI does not Granger Cause FDI		2.4391	0.1
LF does not Granger Cause DI	45	4.37424	0.0191
DI does not Granger Cause LF		1.24578	0.2986
LF does not Granger Cause FDI	45	3.70725	0.0333
FDI does not Granger Cause LF		0.54323	0.5851

Source: Software E-View 9.0

Note: Significance level is 1%, 5%, 10%.

The first column introduces the null hypothesis of possible rejection at different levels of significance that is 1%, 5%, 10%. But second column displays the observations that is 45, third column F statistic and fourth column show probability value. MS does not Granger Cause GDP and GDP does not Granger Cause MS with values of probability 0.0226 and 0.0007 respectively, predict MS does Granger Cause GDP and GDP does Granger Cause MS. This predict bi-directional Granger causality is present between the Gross Domestic Product (GDP) and Money Supply (MS). GDP does not Granger Cause DI with value of probability 0.0507, show GDP does Granger Cause DI. This show the uni-directional relationship exist between the GDP and DI. FDI does not Granger Cause GDP with value of probability 0.0822, indicate FDI does Granger Cause GDP. This also demonstrate the uni-directional relationship exist between the FDI and GDP. With the p.value of 0.0404, LF does not Granger Cause GDP, reveals LF does Granger Cause GDP. It presents the uni-directional granger causality between them. DI does not Granger Cause MS with value of probability 0.042, means DI does Granger Cause MS and show uni-directional granger causality between them. FDI does not Granger Cause MS with value of probability 0.0275, means FDI does Granger Cause MS. This association has uni-directional granger causality. FDI does not Granger Cause DI and DI does not Granger Cause FDI with values of probability 0.0001 and 0.1 respectively, predict FDI does Granger Cause DI and DI does Granger Cause FDI. This predict the bi-directional Granger causality between the FDI and DI in the economy of Pakistan. LF does not Granger Cause DI with value of probability 0.0191, means LF does Granger Cause DI. It has uni-directional Granger causality between LF and DI. LF does not Granger Cause FDI with value of probability 0.0333, means LF does Granger Cause FDI. It has uni-directional Granger causality between the LF and FDI.

5 Conclusion

The study's basic goal is to examine the effect of monetary policy on economic growth: An Evidence from Pakistan. Time series data over the years of 1972 to 2018 is used for the analysis of the data. Johanson Co-integration analysis and Granger Causality Test are applied to get the results. Outcomes of the Bi-Variate Co-integration analysis show that bi-variate co-integration relation exist between the all the variables GDP MS, GDP DI, GDP FDI, GDP LF, MS DI, MS FDI, MS LF, DI FDI, DI LF and FDI LF in the long run. Findings of Pairwise Granger Causality

Tests reveals that bi-directional Granger causality is present between the Gross Domestic Product (GDP) and Money Supply (MS). The uni-directional relationship exists between the GDP and DI, FDI and GDP, LF and GDP, DI and MS. Bi-directional Granger causality between the FDI and DI exist in the economy of Pakistan. Uni-directional Granger causality is present between LF and DI, and LF and FDI.

REFERENCES

Aslam, M., & Awan, A. G. (2018). Impact of Monetary policy on Economic Growth: Evidence from Pakistan. Global Journal of Management, Social Sciences and Humanities, 4(1), 89-109.

Ayodeji, A., & Oluwole, A. (2018). Impact of Monetary Policy on Economic Growth in Nigeria. Open Access Library Journal, 5(02), 1.

Ahmad, D., Afzal, A.M., & Ghani, U. (2016). Impact of Monetary Policy on Economic Growth in Pakistan: Evaluation and Analysis. Pakistan Journal of Social Sciences (PJSS), 36(1).

Ayub, S., & Maqbool, S. F. (2015). Impact of monetary policy on gross domestic product (GDP). Asian Journal of Business and Management (ISSN: 2321–2802), 3(06).

Akinola, G. W., & Adeleke, O. (2013). Savings, Gross Capital Formation and Economic Growth Nexus in Nigeria (1975-2008). IOSR Journal of Economics and Finance (IOSRJEF), 1(2), 19-25.

Ayyoub, M., Chaudhry, I. S., & Farooq, F. (2011). Does Inflation Affect Economic Growth? The case of Pakistan. Pakistan Journal of Social Sciences (PJSS), 31(1).

Acemoglu, Daron (2009). "The Solow Growth Model". Introduction to Modern Economic Growth. Princeton: Princeton University Press. pp. 26–76. ISBN 978-0-691-13292-1.

Fatemah, A., & Qayyum, A. (2018). Modeling the impact of exports on the economic growth of Pakistan. Turkish Economic Review, 5(1), 56-64.

Fisher Irving, The Purchasing Power of Money, 1911 (Duke University).

Galadima, M. D., & Ngada, M. H. Impact of Money Supply on Economic Growth in Nigeria (1981–2015).

Hameed, I. (2010). Impact of monetary policy on gross domestic product (GDP).

Hussain, S., & Malik, S. (2011). Inflation and economic growth: Evidence from Pakistan. International Journal of Economics and Finance, 3(5), 262-276.

Ihsan, I., & Anjum, S. (2013). Impact of money supply (M2) on GDP of Pakistan. Global Journal of Management and Business Research.

Jameel, S., &Naeem, M. Z. (2016). Impact of Human Capital on Economic Growth: A Panel Study. Bulletin of Business and Economics (BBE), 5(4), 231-248.

Lut, M., & Moolio, P. (2015). The Impact of Monetary Policy on Economic Growth in Cambodia. Journal of Management for Global Sustainable Development, 1(1), 40-63.

Mankiw, N. Gregory (2012). Macroeconomics (Eighth ed.). New York: Worth Publishers. ISBN 9781429240024.

Nyorekwa, E., & Odhiambo, N. M. (2018). Can monetary policy drive economic growth? Empirical evidence from Tanzania.

Nouri, M., & Samimi, A. J. (2011). The impact of monetary policy on economic growth in Iran. Middle-East Journal of Scientific Research, 9(6), 740-743.

Omodero, C. O. (2019). Effect of Money Supply on Economic Growth: A Comparative Study of Nigeria and Ghana. Int'l J. Soc. Sci. Stud., 7, 16.

Onyeiwu, C. (2012). Monetary policy and economic growth of Nigeria. Journal of Economics and Sustainable Development, 3(7), 62-70.

Precious, C., & Makhetha-Kosi, P. (2014). Impact of monetary policy on economic growth: a case study of South Africa. Mediterranean journal of social sciences, 5(15), 76.

Volckart, Oliver (1997). "Early beginnings of the quantity theory of money and their context in Polish and Prussian monetary policies, c. 1520–1550". The Economic History Review. Wiley-Blackwell. 50 (3): 430–49.

Rahman, M. M. (2018). Impact of Labour Force participation on Economic Growth in South Asian Countries.

Waliullah, W., & Rabbi, F. (2011). Effectiveness of Monetary Policy in Pakistan: Empirical Evidences Based on Bound Test Approach. International Journal of Business and Social Science, 2(1).