International Journal of Sciences: Basic and Applied Research (IJSBAR)

ISSN 2307-4531
(Print & Online)

http://gssrr.org/index.php?journal=JournalOfBasicAndApplied

Impact of Monetary Policy on Inflation Rate in Pakistan

Muhammad Ashraf[a*], M. AdeelAbid[b] , AqeelAshraf[c] , Aqsa Parveen[d]

[a,b]*Lecturer Department of Management Sciences, University of Gujrat Sub Campus Narowal*

[c,d]*Department of Management Sciences, University of Gujrat Sub campus Narowal*

[a]*Email: adeel.abid4143@gmail.com*

[b]*Email: Aqeelashraf92@gmail.com*

[c]*Email: Aqsaparveen222@gamil.com*

Abstract

This research paper empirically examines the relationship between the monetary policy and inflation and investigates the impact of monetary policy attributes such as Gross domestic product (GDP), Interest rate, export, Money Supply (M2), Foreign Direct investment (FDI), and inflation on the economy of Pakistan. Multiply regression ordinary least square correlation analysis is used in estimating relationship between the monetary policy and inflation and their impact on economy of Pakistan measure as the GDP, interest rate, Money supply, Export. For analysis the 20 years' data are used 1995 -2014. The result of this study may be helpful for the full employment, increase in the investment, economic development, and stability of capital market for the economy of Pakistan. This study put value to the literature by exploring relationship between the monetary policy and inflation and on the factor that have impact on the Pakistan economy.

Keywords: Monetary policy; GDP; Interest rate; Export; Inflation; Money supply Pakistan.

----

*Corresponding author.

1. Introduction

The motivation behind this review is to investigate the effect of financial arrangement on expansion in Pakistan on the base of optional information. Financial arrangement is a procedure by which an administrative specialist of the nation like government and national bank of a nation controls the rate of inflation, money supply, and rate of enthusiasm for request to accomplish an arrangement of targets that is advantageous for the quality, enhance the way of life, increment fare and speculation and soundness development of economy.

In addition, in any nation money related arrangement is utilized as an instrument through which the administration accomplishes the objectives and targets for financial development and strength. In Pakistan money related strategy is the part of State Bank of Pakistan. Money supply (M2=currency + request stores + time stores) is a critical target variable of money related strategy in Pakistan. The objective development rate of money supply is set through evaluated cash request.

From late a few years Monetary Policy of Pakistan has double goals which are steadiness in costs and boosting financial development. SBP chiefly utilize money related approach factors to accomplish fancy objectives. To control the money supply and inflation SBP may utilize contractionary or expansionary approach. Work creation (full business) and destruction of destitution are additionally significant destinations of fiscal strategy.

Money related strategy has a noteworthy association with inflation. A definitive goal of monetary approaches in any nation is to build the welfare of its populace. Financial strategy gives the crucial support to national monetary approaches in accomplishing this objective. The objectives of money related strategy are quite often various. Hypothetical and exact research has demonstrated that the fiscal arrangement can fundamentally change the course of genuine monetary action for the time being, in spite of the fact that in the long haul the effect of increment in overabundance money supply is just formation of inflation.

Higher the rate of expansion and the more sudden it is, progressively the expenses related with it. In the meantime, low expansion is useful for the economy as it achieves its potential yield. To start with, expansion can influence venture exercises in the economy by making vulnerability about the future advancement of yield and info costs and productivity. Second, expansion can apply negative impact on shopper spending by diminishing the genuine estimation of purchaser riches. Third, it can decrease the genuine estimation of government consumption, which is an imperative segment of total request, especially in creating nations. Fourth, expansion can influence financial exercises by advancing imports through increment in residential costs in respect to remote costs. Fifth, it might expand the penchant to spare by expanding shopper fears and sentiments of weakness.

Inflaion additionally impacts the total supply circumstance from numerous points of view. To start with, long haul contracts are debilitated and assets are squandered on regular arrangements. Second, showcase data turns out to be less valuable with expansion as each exchange requires new data gathering. At long last, specialists too much and unnecessarily conserve on utilization of store adjusts all together not to hold deteriorating cash and requiring more successive settlement of records.

As indicated by the most recent discoveries, "unemployment emphatically decreases subjective self-detailed prosperity, both by and by and for society overall". This examination additionally reports, "The impact on satisfaction of a one-rate point increment in unemployment is remunerated by a 1.7 rate point diminish in inflation." This implies the unemployment issue is 70 for every penny more exorbitant than the issue of expansion. Albeit no such research is accessible for our nation yet it is sensible to accept that fundamental mental conduct of subjects in both created and immature nations is comparative. It is just the financial structure that is distinctive A quantitative review on determinants of expansion in Pakistan demonstrates that "a one for each penny lasting increment in genuine yield diminishes the CPI by 0.71 for every penny and the GDP deflator by one for each penny following a slack of one year.

High expansion for the most part brought on by high financing costs. The best view for low financing cost is the low expansion in the steady condition. Current concentration of state bank of Pakistan is on hostile to expansion strategy which will guarantee the relentless development over the long haul.

Inflation is a standout amongst the most vital macroeconomic factors in any economy for deciding the money related and financial approaches of the administration. It is measured by E-views. Utilizing the information from 1995 to 2014, we watched that inflation development in Pakistan has been cyclic. There are numerous conclusions in regards to the correct explanations behind expansion. A few analysts imagine that horticultural bottlenecks and progressive adjust of installment shortages are in charge of inflation. Another gathering believes that expansionary fiscal arrangement is the fundamental driver of inflation in Pakistan. Whatever the explanations behind inflation and its effect on the economy of Pakistan, this paper tries to decide the effects of financial arrangement on expansion.

Whatever is left of the paper organized as take after: Section two gives the survey of important writing, while segment three shows the procedure of the review. The outcomes and exchange are displayed in area four, and segment five harps on the conclusion and suggestion.

Variables

Under this review depiction of factors are as per the following:

Dependent variable:

1.1Inflation rate

Inflation is defined as the constant increase in the general level of prices for goods and services. Inflation is considered as the important component of macroeconomic indicator. Distribution of wealth and income both are affected by the inflation. In Pakistan excess money supply increase inflation both are positively associated with each other and the finding is that excess growth in money supply is the main contributor to rise in inflation.

Independent variable:

1.2 Interest rate

The rate is paid by the borrower (indebted individuals) that they acquire from lenders. It is ordinarily communicated in rate and issued on yearly, semi-every year and quarterly premise.

1.3 GDP

Total national output (GDP) is one of the pointers which are utilized to decide the strength of the nation's economy. It is the aggregate market estimation of all the completed merchandise and ventures created inside the nation.

1.4 Money supply M2

The sum of course of cash or presence is in a nation. The more the money supply in the economy the more prominent the swelling rate in a nation. Money supply in Pakistan recorded announced and investigate by the State Bank of Pakistan.

1.5 Export

A fare is an element of global exchange whereby products delivered in one nation are dispatched to another nation for future deal or exchange. The offer of such merchandise adds to the delivering country's gross yield. In the event that utilized for exchange, fares are traded for different items or administrations in different nations.

1.6 Foreign Direct Investment (FDI)

Remote direct venture (FDI) is a speculation made by an organization or individual in one nation in business interests in another nation, as either building up business operations or getting business resources in the other nation, for example, proprietorship or controlling enthusiasm for an outside organization. Remote direct ventures are recognized from portfolio interests in which a speculator just buys values of outside based organizations. The key element of remote direct speculation is that it is a venture made that builds up either compelling control of, or if nothing else considerable impact over, the basic leadership of an outside business.

1.7 Problem statement

Expansion is doubtlessly influenced by financial approach of a nation. A distinctive factor identified with financial strategy has been examined so as to decide the effect of GDP, money supply and loan cost on expansion of the state.

1.8 Research questions

1. What monetary policy impact on inflation rate of the country?

1.9 Objective of this study

Some critical targets of this review are as per the following;

***General Objective*:**

The general target of this review checks the effect of money related approach on expansion rate in Pakistan.

***Specific objectives*:**

- To analyze the effect of fiscal strategy on expansion.
- To research variance of inflation and its effect on GDP.
- To measure the connection between loan fee and expansion.
- To break down the connection amongst FDI and expansion.
- To investigate change of M2 and its effect on expansion.
- To create variance of fare and its effect on expansion.

1.10 Scope of study

This review will endeavor and decides how the fiscal arrangement changes impact through the expansion, GDP, of Pakistan. Inflation is the most essential looked into point in the propel period. Still it has critical ramifications for the economy of Pakistan. The point here obviously characterize the money related arrangement have the immediate connection with the expansion. Then again, money related strategy wonder additionally impacts the general economy of the Pakistan.

1.11. Limitations

This paper is linked according to Pakistan view point. In this paper explain all issues that are handle the scenario of Pakistan.

2. Literature review

Different reviews have been created on the issue of expansion and financial arrangement. The greater part of this exploration work has been done globally. We have fundamentally inspected some of these vital experimental reviews to create destinations with regards to Pakistan and, further, to investigate it to make some imperative determinations and approach suggestions.

This review was accounted by [1] have broken down the connection between the short and long run loan cost in the Germany by utilizing SVAR procedure and he found in this examination a positive relationship after free market activity stun and negative connection after a fiscal strategy stuns.

This review was exhibited by [2] have dissected the connection between the money related approach and the expansion by utilizing the VAR model and they found that the financial arrangement has a noteworthy connection with the inflation.

This review was introduced by [3] have measured the connection between the money supply and inflation by utilizing auto relapse demonstrate, consequences of this review demonstrates that the fiscal arrangement has a huge association with expansion.

This review was directed by [4] has inspected the impacts of money related arrangement on the conversion scale by utilizing board information, and they establishes that the fiscal approach negatively affects the swapping scale.

Reference [5] have directed this review to check the effect of fiscal arrangement on the total national output by utilizing the relapse and co-connection strategies and he establishes that GDP is significantly influenced by money supply, premium and expansion rate.

A study was led by [6] has analyzed the financial strategy factors and GDP and they found that there is a critical relationship among fiscal arrangement conversion scale and money supply by utilizing Least Squared technique and they likewise expressed that there is a unimportant connection between money related approach and unsteadiness of cost.

Reference [7] has investigated in this review the long-run and short run relationship of financial strategy and monetary development in Pakistan by utilizing co-joining and causality examinations. The finding of this review demonstrates that the variable of monetary profundity, genuine swapping scale are essentially impact the GDP of Pakistan and they additionally found that the cash development inflationary affects the economy of Pakistan.

This review was conveyed by [8] have dissected the connection between the money related arrangement and the unemployment, the aftereffect of this review demonstrates that the fiscal strategy has a noteworthy association with unemployment.

Reference [9] have examined in this review the connection between the money related strategy and the unemployment by utilizing the unit root test and they found that the financial approach don't join with the entire unemployment in Malaysia.

This review was produced by [10] has inspected the impact of financial approach on inflation. The factors which are utilized as a part of this review incorporates financing cost, conversion scale, cash supply, and inflation after effects of this review demonstrates that money supply and expansion has a positive relationship yet the loan fee and expansion has a negative connection.

Reference [11] have dissected in this review the connection between money supply and GDP in Pakistan by utilizing relapse and causality examinations and he establishes that the high rate of expansion has an unfavorable impact on the economy of Pakistan.

Reference [12] have investigated in this review the impacts of money related approach on financial development in Kenya by utilizing VAR model and they found in this review financial development does not react to the fiscal strategy stuns.

This review was created by [13] has inspected the causal connection between the inflation rate, financial arrangement, unemployment and macroeconomic factors by utilizing relapse strategy and finding of this review demonstrates that the expansion rate, unemployment and macroeconomic factors significantly affects the money related approach.

This review was conveyed by [14] have Explored the impacts of financial strategy on monetary development in the South African by utilizing the Johansen co-coordination and Error Correction Mechanism systems and they found in this review the money related arrangement positively affects GDP while an expansion is contrarily impact.

Reference [15] have led this review by utilizing duplicate relapse model and standard minimum squares estimation methods and they found that the money supply, loan fee and swapping scale has noteworthy effect on inflation.

Authors in reference [14] have assessed in his review the connection between financial approach and financial development in the South Africa by utilizing co mix procedure, finding of this review demonstrates that money supply, and conversion standard are inconsequential money related strategy instruments which drive development in South Africa while inflation is huge and furthermore prescribed that fiscal strategies ought to be utilized to make a good speculation atmosphere.

This review was found by [16] has inspected the effect of financial strategy with the loan fee by utilizing relapse display, aftereffects of this review demonstrates that the fiscal arrangement impact the short Run and long run loan fees.

This review was conveyed by Onwachukwu in 2014 has inspected the effect of financial strategy on inflation in Nigeria by utilizing the customary slightest square technique and the aftereffect of this review demonstrates that there is a critical relationship of money related arrangement with expansion in Nigeria.

Reference [17] have researched in this review the connection between the fiscal strategy and conversion scale, and they found that the financial arrangement has a positive and noteworthy effect on the swapping scale while the GDP, expansion has a negative effect.

Reference [18] have broke down in this review the relationship of the financial approach with unemployment by utilizing the VAR methods and he found that the fiscal strategy significantly affects the unemployment.

This review was created by [19] has investigated the connection between the unemployment and the financial strategy in Nigeria by utilizing (VAR) and relapse technique and the aftereffect of this review demonstrates that the fiscal approach has a positive connection with the unemployment.

A review was conveyed by [20] has analyzed the issue that face the Nigeria of drowsy financial development, loan cost and exorbitant increment in money supply by utilizing co-connection and co-mix methods and they establishes that the presence of co-combination vector has a long run connection between money related arrangement ,expansion, and monetary development of Nigeria.

3. Data and Methodology

This area comprises of information and procedure to evaluate the impact of money related arrangement on swelling rate.

3.1 Data

The reason for this review is to look at the effect of fiscal strategy on inflation on the base of time arrangement information. To dissect the consequence of this review recent years optional information are utilized which day and age has 1995 to 2014, information for this review are taken from various locales like Pakistan Economic Survey, Ministry of Finance, (SBP) and World Bank and so on. In this review inflation rate is utilized as needy variable while Money supply (M2), Interest rate, Gross household item (GDP), Export, FDI are taken as logical factors.

3.2 Data collection

The information has been gathered for this review from the official site like state bank of Pakistan, service of Finance and World Bank.

3.3 Methodology

A Normal Least square (OLS) different relapse, connection and ARDL procedure has been utilized to decide the Results and dissect the relationship of fiscal and inflation.

3.4 Hypothesis

Speculation has an imperative part in research which clarifies the issue and used to settle the issue in research modular. The accompanying theory produced for research modular on the premise of writing survey.

Ho= There is no effect of financial approach on the expansion.

H1= There is noteworthy effect of financial approach on the expansion.

Ho= There is no effect of loan fee on the expansion.

H2= There is noteworthy effect of loan fee on the expansion.

Ho= There is no effect of GDP on the expansion.

H3= There is noteworthy effect of GDP on the expansion.

Ho= There is no effect of M2 on the expansion.

H4= There is noteworthy effect of M2 on the expansion.

Ho= There is effect of fare on the expansion.

H5= There is noteworthy effect of fare on the expansion.

Ho= There is no effect of FDI on the expansion.

H6= There is noteworthy effect of FDI on the expansion.

3.5 Research design

The review configuration is direct to gauge the needy and free factors. In this review expansion rate is utilized as reliant variable while financial strategy, Money supply (M2), Interest rate, Gross residential item (GDP), Export, FDI are taken as free factors.

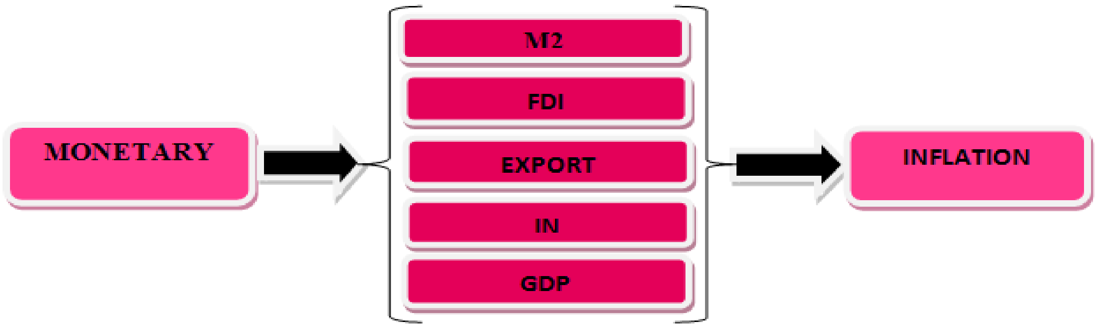

Figure 1

3.6 Research Model

This review examining the effect of money related approach on inflation on the base of time arrangement information. The time arrangement information structure characterized through the various relapse conditions as;

Regression Equations: $Y=\partial+ ßX+ \varepsilon$**(A)**

Six regression models have been developed to analyze the relationship of monetary policy and inflation, which are as follow

$$INF=\partial+ß_1GDP+ß_2IN+ß_3EXP+ß_4M2+ß_5FDI+\varepsilon 1$$

In above model;

Inflation rate represent as a dependent variable and the independent variable is monetary policy. So economic performance is measured by the GDP, interest rate, Money supply (M2) , FDI, and export.

Where:

Table 4

Variable	**Notations**
Gross Domestic product	GDP
Interest Rate	IN
Export	EXP
Money supply	M2
Foreign Direct Investment	FDI
Inflation Rate	INF

Through those variables we shall measure the economic performance of Pakistan.

3.7 Theoretical Framework

In beneath model money related arrangement speaks to as an autonomous variable and which is isolated into taking after sub factors (GDP, financing cost, send out, M2, FDI). In this paper we are checking the monetary execution of Pakistan.

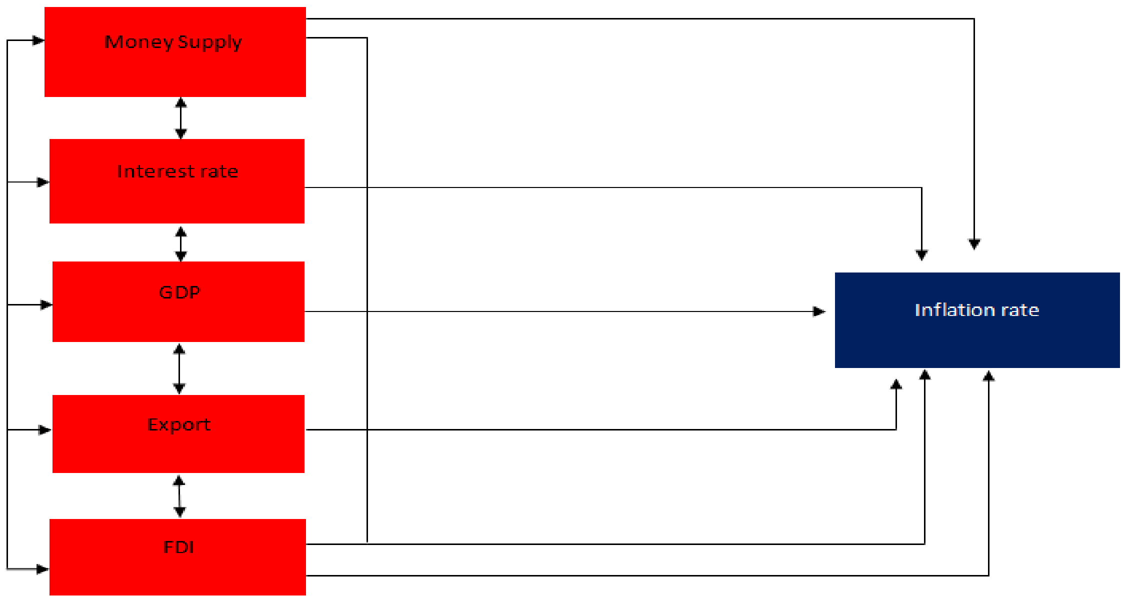

Figure 2

4. Data Analysis

Table 1 shows the summary of statistics used in this study. It is shown in the table that inflation has great mean value of 8.72 with 4.38 value of S.D while FDI has the maximum mean value of 1685.06 with 1604.91 of S.D. The averages of M2, IN, GDP and EXPO are 3856. , 6.84, 3.89 and 4.08, respectively.

Table 1: Summary of Statistics Used In Descriptive

	Mean	**Max**	**Min**	**SD**
IF	8.7254	20.2861	2.9141	4.3898
M2	3856.	1017499	812998.0	2896486.
IN	6.8479	10.4691	4.4650	1.6459
FDI	1685.068	5590.000	308.0000	1604.912
GDP	3.8939	7.6600	1.0140	1.8137
EXPO	4.0825	28.3700	-15.0000	10.1820

Source: Authors' Calculations Using E-Views software

The extent to which the relationship between two variables existing is called correlation. There may be positive or negative correlation. The correlation results are presented in table-2. The results are calculated using e-views software. The results show that IN and EXPO is negatively correlated with INF. While as M2, FDI and GDP are positively correlated with INF.

Table 2: Results of Correlation

	INF	**M2**	**IN**	**FDI**	**GDP**	**EXPO**
INF	1					
M2	0.2673	1				
IN	-0.6304	-0.6339	1			
FDI	0.4969	0.2713	-0.3293	1		
GDP	0.0696	-0.0803	-0.1765	0.5288	1	
EXPO	-0.2095	-0.0369	0.1427	0.0631	0.2002	1

Source: Authors' Calculations Using E-Views software

INF is taken as dependent variable while as monetary policy variables are independent variables. In this data the Least Squares method is used. Included observations are 20 and the data is taken from 1995-2014.

Table 3: Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	25.8286	5.7840	4.4654	0.0005
M2	-5.96E-07	3.14E-07	-1.7482	0.1023
IN	-2.0023	0.5979	-3.3485	0.0048
FDI	0.0015	0.0005	2.7314	0.0162
GDP	-0.9078	0.5038	-1.8016	0.0932
EXPO	-0.0332	0.0728	-0.4564	0.6551
R-squared	0.636325			
F-statistic	4.899185			
Prob(F-statistic)	0.008444			

Source: Authors' Calculations Using E-Views software

Table shows the interest rate has the significant and negative impact on inflation. From the value (-2.00) show that increase rate of interest have the significant and negative effect on inflation in this Ho is rejecting. Foreign direct investment (FDI) has positive and significant impact on inflation. From the value (0.0015) show that FDI have significant and positive effect on inflation in which Ho is accepting. Money supply and inflation is negative correlated which is show from value (-5.96).GDP and inflation has negative and significant impact which is show from the value (-0.90) GDP has the negative and significant impact on inflation in this Ho is rejecting. Export (expo) and inflation negative correlated which is show from value (-0.032). Now explain the R-Square its means how many variation occurs in dependent variables due to independent variables. R-Square value o.636325 its means 63.63% dependent variable(inflation) vary from independent variable (M2,IN,FDI,GDP,EXPO) OR Not-Statistic means independent variables have the joint effect on dependent variable it check through probolilty if probolity value is less than from F- statistics value its means have the joint effect.(prob 0.84 ,F-Statistic 489.999) its means joint effect .

5. Conclusion

It is clear from this review Monetary strategy received in Pakistan relies on the instruments of fiscal approach like Interest rate, Money supply (M2), Export, GDP and so on. This review obviously evaluates the impacts of financial strategy instruments inside the institutional system for Inflation rate. It is found from this audit cash related technique has apparent and furthermore honest to goodness impacts on budgetary execution of Pakistan. This review additionally assesses that the execution of money related approach in a creating nation like Pakistan has supplementary difficulties which are absent in the created nations like treat of cash substitution and financial strength.

Finish up this paper the variable of the paper general has the critical effect .FDI has positive and noteworthy effect on expansion. While Money supply (M2),Interest rate, Foreign Direct Investment (FDI),GDP,Export (Expo) has the negative and significant impact on inflation-Square 63.63% its means dependent variable (Inflation) 63.63% vary from the independent variable (M2,IN,EXPO,FDI,GDP).

References

[1] G. Peersman, "Monetary policy and long term interest rates in Germany," Economics Letters, vol. 77, pp. 271-277, 2002.

[2] R. A. Buckle, K. Kunhong, and N. McClellan, "Impact of Monetary Policy on New Zealand Business Cycles and Inflation Variability," New Zealand Treasury2003.

[3] M. Muço, P. Sanfey, and A. Taci, "Inflation, exchange rates and the role of monetary policy in Albania," European Bank for Reconstruction and Development, Gusht, 2004.

[4] N. Işık, M. Acar, and H. B. Işık, "Openness and the effects of monetary policy on the exchange rates: an empirical analysis," Journal of Economic Integration, pp. 52-67, 2005.

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

[6] D. Amassoma and P. Nwosa, "An appraisal of monetary policy and Its effect on macro economic stabilization in Nigeria," Journal of Emerging trends in Economics and Management Sciences, vol. 2, pp. 232-237, 2011.

[7] S. Chaudhry, Y. Qamber, and F. Farooq, "Monetary policy, inflation and economic growth in Pakistan: Exploring the co-integration and causality relationships," Pakistan Journal of Commerce Society Science, vol. 6, pp. 332-347, 2012.

[8] E. Stockhammer and S. Sturn, "The impact of monetary policy on unemployment hysteresis," Applied Economics, vol. 44, pp. 2743-2756, 2012.

[9] I. Yussof and M. Kogid, "Monetary shock and unstable unemployment in Malaysia: a dynamic interaction approach," International Journal of Emerging Sciences, vol. 2, pp. 247-259, 2012.

[10] G. Ahiabor, "The effects of monetary policy on inflation in Ghana," 2013.

[11] S. A. Ihsan, "Impact of money supply (M2) on GDP of Pakistan," Global Journal of Management And Business Research, vol. 13, 2013.

[12] C. K. Kamaan and E. M. Nyamongo, "The Effect of Monetary Policy on Economic Growth in Kenya," International Journal of Business Commerce, 2014.

[13] Z. Cioran, "Monetary Policy, Inflation and the Causal Relation between the Inflation Rate and Some of

the Macroeconomic Variables," Procedia Economics and Finance, vol. 16, pp. 391-401, 2014.

[14] C. Precious and P. Makhetha-Kosi, "Impact of Monetary Policy on Economic Growth: A Case Study of South Africa," Mediterranean Journal of Social Sciences, vol. 5, p. 76, 2014.

[15] T. O. Apere and T. M. Karimo, "Monetary Policy Effectiveness, Output Growth and Inflation in Nigeria," International Journal, vol. 3, 2014.

[16] I. Kelilume, "Effects of the monetary policy rate on interest rates in Nigeria," 2014.

[17] A. Khordehfrosh Dilmaghani and A. M. Tehranchian, "The Impact of Monetary Policies on the Exchange Rate: A GMM Approach," Iranian Economic Review, vol. 19, pp. 177-191, 2015.

[18] T. Sunde, "The effects of monetary policy on unemployment in Namibia," Journal of Economic and Social Thought, vol. 2, p. 256, 2015.

[19] S. N. Essien, G. A. Manya, M. O. Arigo, K. J. Bassey, S. F. Ogunyinka, D. G. Ojegwo, et al., "Monetary Policy and Unemployment in Nigeria: Is there a Dynamic Relationship?," Cbn Journal Of Applied Statistics, vol. 7, 2016.

[20] I. L. Ehikioy and I. Mohammed, "MONETARY POLICY, INFLATION AND ECONOMIC GROWTH IN NIGERIA: EXPLORING THE CO-INTEGRATION AND CAUSALITY RELATIONSHIP," Global Journal of Research in Business & Management, vol. 4, pp. 236-245, 2016.