Impact of Monetary Policy on Indian Economy

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Abstract: Monetary policy matters for growth both in the short run & long run. This study focuses on the impact of various monetary instruments on the Indian Economy. These instruments include GDP growth, unemployment rate, inflation rate, FDI. Using these variables, it was found that the economy of a nation is totally dependent on these factors. The objective of the project is to know the effectiveness of monetary policy in India & analyze the impact of selected monetary instruments on the Indian Economy.

KEY WORDS: Monetary Policy, Monetary Instruments, GDP growth, unemployment rate, inflation rate, FDI

I.INTRODUCTION

Monetary policy as a macroeconomic tool is widely used by central banks, RBI or other regulatory committees to control the quantity & rate of money supply in an economy. A country's macroeconomic environment is affected by its monetary policy and is now regarded as one of the most important tools of economic management. So monetary policy is the tool to handle the problems of inflation rate & GDP growth.

Monetary Policy is of two types-

a) EXPANSIONARY MONETARY POLICY

b) CONTRACTIONARY MONETARY POLICY

a) Expansionary monetary policy: When an economy goes through a phase of recession accompanied by low level of GDP growth or high rate of unemployment, there is an increase in the supply of money by making credit supply available.

b) Contractionary monetary policy: When there is decrease in the supply of money to tackle the situation of inflation by raising the interest rates.

II.REVIEW OF LITERATURE

Aleem Abdul, provides a comprehensive empirical analysis of the monetary transmission mechanism in India.

Mohanty Deepak, showed that increase in policy interest has a negative impact on GDP & inflation.

Tara Pore (1993) elaborated inflation on the poor parts of society as a leavy. It is also argued that the need for monetary relaxation is advantageous to the poorest segments of society.

Partha Ray et. al (1998) explored new aspects of the monetary transmission mechanism that were launched in the liberalization climate of the early 1990s & in the context of growing financial market integration.

Reddy (2002) remarked that the automatic access of the RBI refinancing facility to banks must also be reassessed in order to achieve greater efficiency in the money market operations of the RBI through the Liquidity Adjusted Facility.

Kannan et. al (2006) attempted to build a Monetary Condition Index for India to take into account both interest rate & exchange rate networks simultaneously, when assessing the Monetary policy stance & changing condition

III.OBJECTIVE

The objective of the project work is to know about the monetary policies' impact on fiscal situations, to analyze the impact of selected monetary instruments on the Indian Economy.

Hypothesis:H_0: The variables are not having any significant effect on GDP of
Indian Economy.

H_1: The variables chosen have significant effect on GDP of
Indian Economy.

IV.THEORETICAL BACKGROUND

In the short run the relationship between GDP growth and unemployment rate is not too strong. But in the long run unemployment affects GDP growth, as unemployment rises actual GDP falls short of potential GDP. In the long run there is a negative relationship between changes in the rates of unemployment and real GDP growth.

In an economy GDP growth and inflation rate must be balanced. In general, little inflation is good but high inflation results in dissaving and thus low GDP growth.

Foreign Direct Investment (FDI) is an important factor of GDP growth, because investment itself is a component of GDP growth. FDI brings advanced technologies from developed countries. Though FDI has a number of positive impacts on GDP growth it has also some negative impacts on GDP growth. For example, in LDCs like India FDI affects domestic investment and therefore domestic production also. As a result, an increase in FDI may sometimes result in a decrease in GDP growth.

V.DATA AND METHODOLOGY

Secondary data is used here for studying the impact of monetary policy. Various resources are used from the RBI website & other journals are used for study .

Sample size: 21 observations

Methods of data collection :Secondary –based research, RBI bulletin, RBI Annual Reports, Economics Political Weekly (EPW).

Statistical tool used: STATA

## VI.DATA ANALYSIS AND INTERPRETATION

Let the model is   GDP= A +b.FDI +c. U+ d. In + e_i

A ,b, c, d=parameters, U=unemployment rate, In= inflation rate, e_i =error term

| Variable name	P value	coefficient	R^2
FDI	.014	-.09492	.277
UNEMPLOYMENT RATE	.00	-7.719419	.619
INFLATION RATE	.920	.0304711	.0005

When I take FDI as an independent variable and GDP growth as a dependent variable, the p value of the coefficient of FDI is .014 that implies the coefficient is significant. The coefficient is -.094, it has a negative impact on GDP growth. We can say that one percent point change in FDI changes GDP growth by .094 percent point in inverse manner. Here r^2= .277 that implies almost 35 percent variation of GDP growth is explained by FDI.
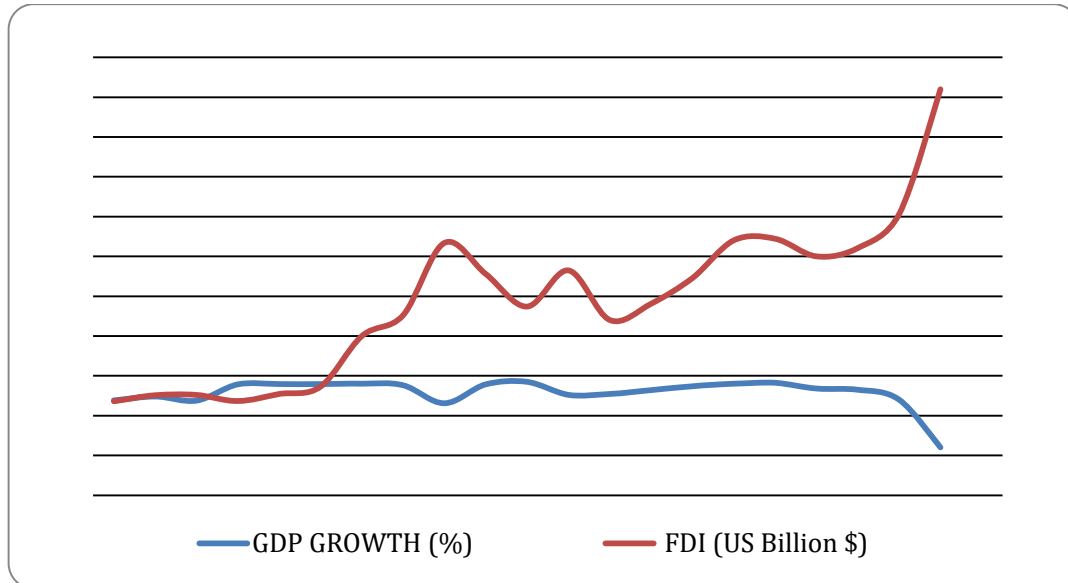
When the unemployment rate is independent and GDP growth is dependent, the p value of the coefficient of unemployment rate is 0, which implies the coefficient is significant. The coefficient is -7.719, which implies it has a negative impact on GDP growth. One percent point change in unemployment rate changes GDP growth by 7.719 percent point in inverse manner. Here r^2=.619 that implies almost 62% variation of GDP growth is explained by the unemployment rate.
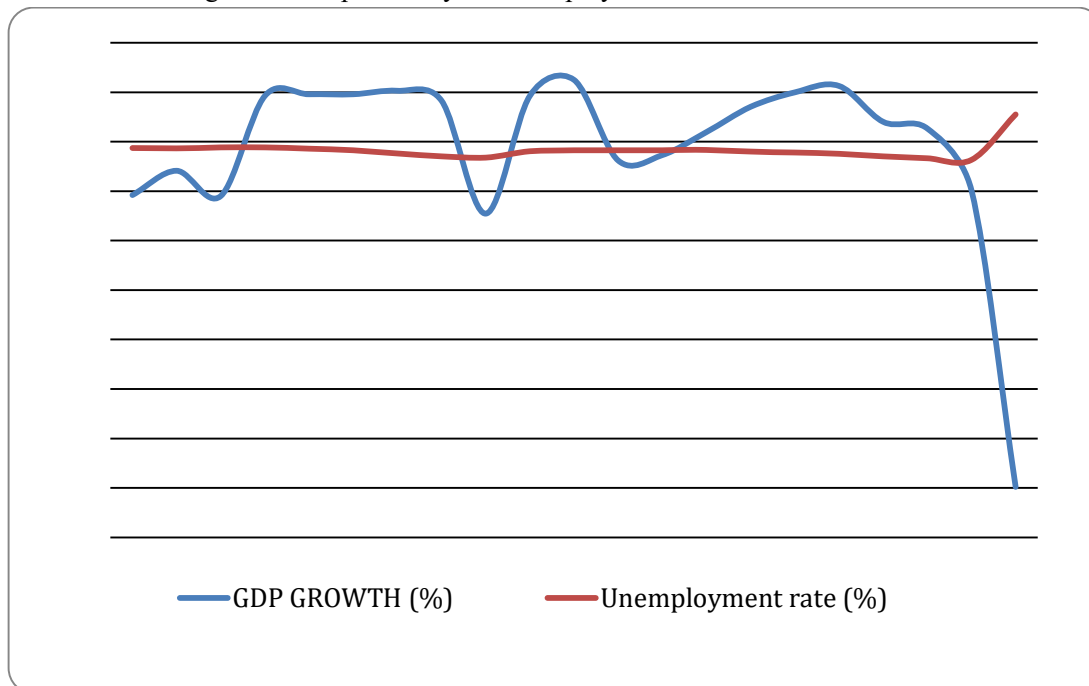
When inflation rate is independent and GDP growth is dependent p value of coefficient of inflation rate is .920,that implies the coefficient is insignificant.

Inflation(%)   GDP GROWTH (%)
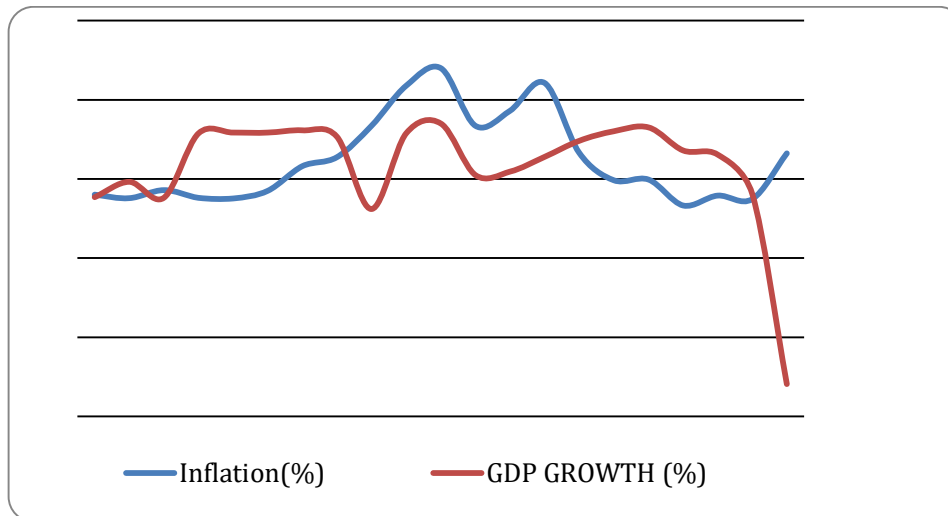
VII. EFFECTIVENESS OF MONETARY POLICY ON INDIAN ECONOMY

GDP GROWTH (%): There was a sharp increase in GDP during the period 2000-2010, as GDP growth rate increased from 3.84% in 2000 to 8.5% in 2010. During the period 2011-2019 GDP Growth rate was not so impressive. Moreover in 2020 it falls to -7.96 as a result of the pandemic situation.

° INFLATION (%): Inflation rate in India gradually rose from 2000 to 2009 & resulted in a high inflation rate in 2010 (11.99%). This was mainly due to increasing the price of necessary products. After 2014 inflation rate began to fall but it again reached a high rate in 2020, 6.62%.

°FDI (US Billion $): Inflow of Foreign Direct Investment in India has been rising since 2000. Average inflow of FDI in India during the period 2000-2020 is 29 US Billion $.

°UNEMPLOYMENT RATE (%) : Unemployment rate varied between 5% & 6% during the period 2000-2020. But there was a high rate of unemployment in 2020, 7.11%.

VIII. CONCLUSION AND POLICY PRESCRIPTION

From the above discussion I can say that on average unemployment rate and FDI have a negative impact on Indian GDP growth rate of the Indian Economy in the period 2000-2020. India experienced high unemployment in this period. Though monetary policies to create employment were taken, employment did not increase enough due to misuse of such policies, lack of knowledge or efficiency.

Government can take initiative to attract domestic investors, improve the management systems of various government policies to overcome these problems.

IX. REFERENCES:

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5.   https://m.economictimes.com

X.APPENDIX

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 ___  ____  ____  ____  ____ (R)
/__    /   ___/ /  ____/
___/  /  /___/  /  /___/   16.0   Copyright 1985-2019 StataCorp LLC
  Statistics/Data Analysis          StataCorp
                      Downloadly.ir
   MP - Parallel Edition          College Station, Texas 77845 USA
                      800-STATA-PC       http://www.stata.com
                      979-696-4600       stata@stata.com
                      979-696-4601 (fax)
```

Single-user 2-core Stata network license expires 20 Aug 2022:
    Serial number: 501609213901
      Licensed to: DOWNLOADLY.IR 085227746673
WwW.DownLoadLy.iR 085227746673

Notes:
    1. Unicode is supported; see help unicode_advice.
    2. More than 2 billion observations are allowed; see help obs_advice.
    3. Maximum number of variables is set to 5000; see help set_maxvar.

. log using "C:\Users\Kankana\Documents\project DSE DATA.smcl"
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name: <unnamed>
log: C:\Users\Kankana\Documents\project DSE DATA.smcl
log type: smcl
opened on: 9 July 2022, 13:49:50

. import excel "C:\Users\Kankana\Documents\priyanka mukherjee.xlsx", sheet("Sheet1")
firstrow
(5 vars, 21 obs)

. tsset year, yearly
time variable: year, 2000 to 2020
delta: 1 year

. reg GDP GROWTH FDIUSBillionUnemploymentrate Inflation

    Source | SS   df   MS   Number of obs =   21
-------------+---------------------------------   F(3, 17)   =   15.54
    Model | 188.844094   3 62.9480312 Prob> F   =   0.0000
  Residual | 68.8600206   17 4.05058945 R-squared   =   0.7328
```

```
-------------+---------------------------------  Adj R-squared  =   0.6856
      Total | 257.704114     20 12.8852057  Root MSE      =  2.0126
-------------------------------------------------------------------------------
GDP GROWTH |    Coef.  Std. Err.    t   P>|t|   [95% Conf. Interval]
-----------------+-----------------------------------------------------------------
FDIUSBillion|  -.0633055  .0242304   -2.61   0.018   -.1144272   -.0121839
Unemploymentrate |   -6.7855  1.290505   -5.26   0.000   -9.508228  -4.062771
      Inflation |  .1979127  .1679876    1.18   0.255   -.1565102   .5523356
         _cons |  44.75021  7.181284    6.23   0.000   29.59902   59.90139
-------------------------------------------------------------------------------
. reg GDP GROWTH FDIUSBillion
      Source |    SS       df     MS      Number of obs  =     21
-------------+---------------------------------  F(1, 19)     =    7.30
       Model | 71.5540556      1 71.5540556  Prob> F      =  0.0141
    Residual | 186.150059     19 9.79737151  R-squared    =  0.2777
-------------+---------------------------------  Adj R-squared  =  0.2396
      Total | 257.704114     20 12.8852057  Root MSE      =   3.1301


-------------------------------------------------------------------------------
GDP GROWTH |    Coef.  Std. Err.    t   P>|t|   [95% Conf. Interval]
-------------+---------------------------------------------------------------
FDIUSBillion |  -.094921  .0351237   -2.70   0.014   -.1684358   -.0214063
    _cons |  8.535351  1.225457    6.97   0.000   5.970439   11.10026
-------------------------------------------------------------------------------
. reg GDP GROWTH Unemployment Rate

      Source |    SS       df     MS      Number of obs  =     21
-------------+---------------------------------  F(1, 19)     =    30.86
       Model | 159.510403      1 159.510403  Prob> F      =  0.0000
    Residual | 98.1937116     19 5.16809008  R-squared    =  0.6190
-------------+---------------------------------  Adj R-squared  =  0.5989
      Total | 257.704114     20 12.8852057  Root MSE      =   2.2733


-------------------------------------------------------------------------------
GDP GROWTH |    Coef.  Std. Err.    t   P>|t|   [95% Conf. Interval]
-----------------+-----------------------------------------------------------------
Unemploymentrate| -7.719412  1.389488   -5.56   0.000   -10.62764  -4.811181
      _cons |  49.42245  7.870227    6.28   0.000   32.94987   65.89502
-------------------------------------------------------------------------------
. reg GDP GROWTH Inflation
    Source |    SS       df     MS      Number of obs  =     21
-------------+---------------------------------  F(1, 19)     =    0.01
       Model | .140138565      1 .140138565  Prob> F      =  0.9201
    Residual | 257.563976     19 13.5559987  R-squared    =  0.0005
```

```
-------------+--------------------------------- Adj R-squared  =  -0.0521
      Total | 257.704114      20 12.8852057  Root MSE     =   3.6818
--------------------------------------------------------------------------------
GDP GROWTH |    Coef.  Std. Err.    t   P>|t|   [95% Conf. Interval]
-------------+------------------------------------------------------------------
   Inflation | .0304711  .2996915   0.10  0.920   -.5967905   .6577326
      _cons | 5.596837  2.023962   2.77  0.012    1.360636   9.833038
--------------------------------------------------------------------------------
```

. sum GDP GROWTH

```
   Variable |    Obs     Mean   Std. Dev.    Min      Max
-------------+-------------------------------------------------------
  GDP GROWTH |    21   5.785714  3.589597    -7.96     8.5
```

. sumFDIUSBillion

```
   Variable |    Obs     Mean   Std. Dev.    Min      Max
-------------+-------------------------------------------------------
FDIUSBillion |    21   28.96762  19.92689    3.58    81.97
```

. sumUnemploymentrate

```
   Variable |    Obs     Mean   Std. Dev.    Min      Max
-------------+-------------------------------------------------------
Unemployme~e |    21   5.652857  .3658434    5.27    7.11
```

. sum Inflation

```
   Variable |    Obs     Mean   Std. Dev.    Min      Max
-------------+-------------------------------------------------------
   Inflation |    21   6.198571  2.747112    3.33     11
```