India's Fiscal Policy and Monetary Policy – are they complementary or competitive in nature?

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Abstract

Based on the available data, it is evident that India's fiscal policy was tight or contractionary, whereas the monetary policy was easy or expansionary in nature from the period 2013 to 2017. As per Article 112, the annual financial statement is presented before the Parliament every year, which is nothing but the fiscal policy of India. On the other side, the monetary policy is a quarterly policy which changes four times in a year. So, the roadmap set by the fiscal policymaker for the entire year needs to be supplemented by the monetary policymaker by intervening in the economy as and when required. In both policies, there were instances of conflict between fiscal policymakers versus monetary decision makers. However, both policy objectives are to achieve price stability, to promote and encourage economic growth and to ensure economic stability at full employment or potential level of output. To streamline the coordination between monetary versus fiscal policy, Section 45ZB(2)(c) of the Reserve Bank of India Act, 1934 was amended by the Finance Act, 2017, which has provided an institutionalised structure for the Monetary Policy Committee (MPC). The MPC has been entrusted with the task of inflation targeting of 4% within a band of plus or minus 2%. Both the policies are framed based on assumptions such as stability in crude oil price (petrol price), exchange rate stability and global economic growth. Therefore, the macroeconomic policies are concerned with the analysis of the behaviour of the economic system in totality, in which both policies should work in better coordination for stimulating economic growth and development.

This paper attempts to find out whether the fiscal policy and monetary policy work in isolation or unison, whether there is an institutionalised framework for better coordination between fiscal policy and monetary policy and whether India's Fiscal Policy and Monetary Policy are complementary or competitive in nature.

Keywords: *Fiscal Policy, Monetary Policy, Monetary Policy Committee (MPC), Inflation Targeting*

Introduction

Macroeconomics deals with the analysis of the behaviour of the economic system in totality. The goal of macroeconomics policymaker is to maintain equilibrium in the economic system as a whole. The fiscal policy and monetary policy take care of equilibrium, in which the country's general price level remains stable, production is at the full potential level of output, there is economic growth, the workforce is fully employed and there is economic stability at full employment or potential level of output. The fiscal policy uses taxation revenues and government spending to influence the economy (Sivramkrishna, 2016). It works via changing tax rates or via a change in government spending on real goods and services, or transfer payment. That means, the fiscal policy is a budgetary policy. The Monetary Policy, on the other hand, is concerned with the changing money supply, and accordingly, change in the rate of interest to stabilise the economy at full employment or potential output level by influencing the level of aggregate demand. The monetary authorities use direct instruments like Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR) or/and indirect instruments like Open Market Operations, Liquidity Adjustment Facility (LAF) for monitoring day-to-day liquidity in the banking system, Repo for injecting liquidity and Reverse Repo for absorbing liquidity. It means, whenever the budget is in deficit, high-powered money must be issued to finance it; similarly, when the budget is in surplus or is balanced, the high-powered money stock must decline or be constant (Christ, 1979).

Fiscal Policy versus Monetary Policy

The fiscal policy and monetary policy are executed to produce full employment level of output without hampering price stability. Both the policies aim to promote economic growth through expansionary policy, contractionary policy or a combination of both the policies. Theoretically, during the time of inflationary trend, the policy is contractionary in nature; whereas at the time of depression and recession, the effective demand is very low in the economy, and the government intervenes by increasing its expenditure to encourage demand or lowering taxes to increase disposable income. This expansionary fiscal policy ultimately improves aggregate effective demand, which leads to increase in output, employment, and price level in the goods market; it increases demand in the loanable fund market , which ultimately leads to increase in interest rates in the money market. On the other hand, when there are inflationary trends, the aggregate demand is excessive, risking further rise in inflation; policymakers should cut government spending, raise taxes, and reduce the money supply. Such policy action is an example of a contractionary fiscal policy. Figures 1.1 and 1.2 describe the impact of expansionary fiscal policy and contractionary fiscal policy in the goods market and money market.

Figure 1.1 : Expansionary Fiscal Policy[1]

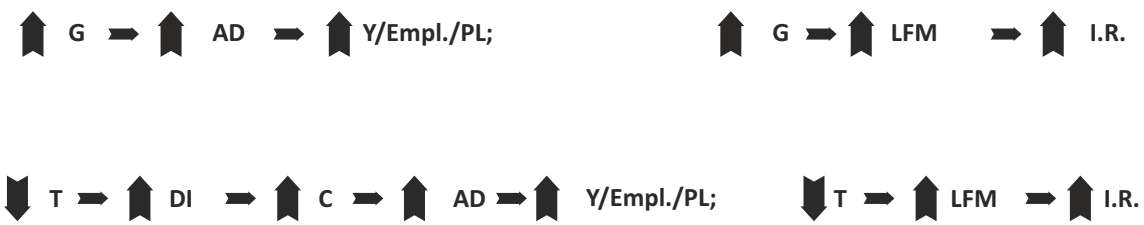
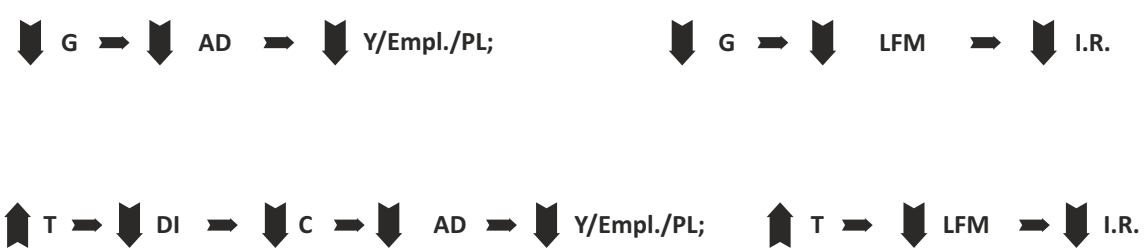


Figure 1.2 : Contractionary Fiscal Policy

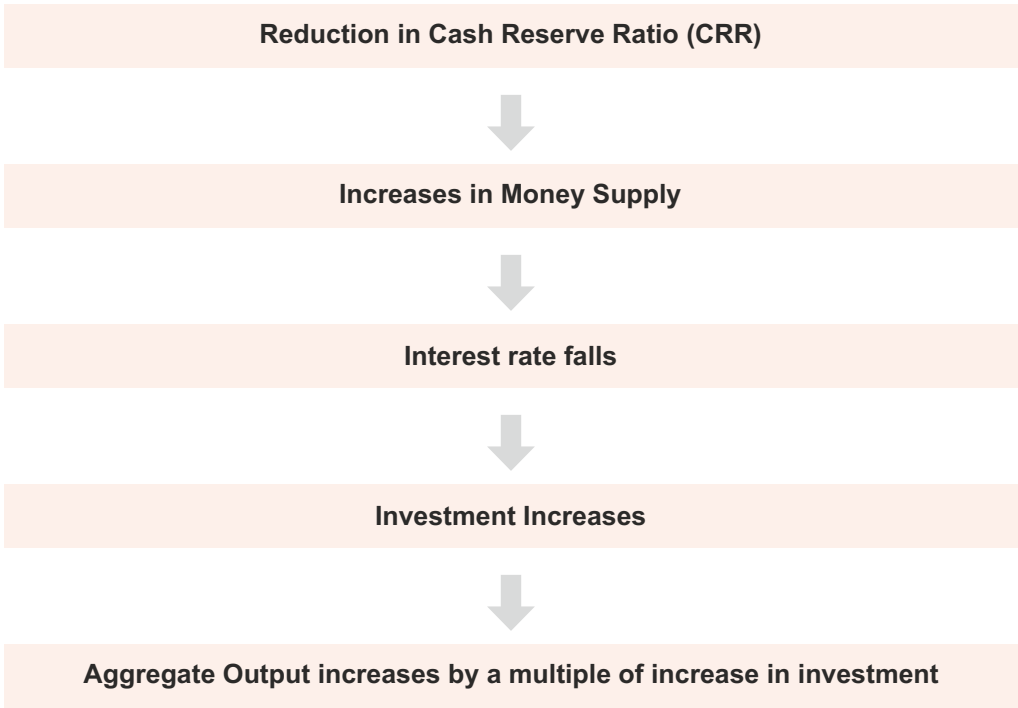


Expansionary Fiscal Policy in which the government increases taxes and reduces public expenditure. Contractionary Fiscal policy in which the government minimises taxes and increases public spending.

G = Government Expenditure, DI = Disposable Income, C= Consumption Expenditure, AD = Aggregate Demand, Y = Income, Emp = Employment, PL = Price level, T = Taxation, LFM = Loanable Fund Market, IR= Rate of Interest.

During an inflationary period, the monetary policy is contractionary[2] in nature. The monetary authority controls the money supply by increasing the key quantitative tools; for example, the Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR), repo rate, bank rate, along with measures taken to reduce money supply through qualitative instruments. These key policy rates are designed to achieve inflation targeting and interest rate targeting, so that the monetary policy is in accordance with the macroeconomic equilibrium of price stability, full employment and economic growth (Froyen, 2013). Figure 2 describes the framework of expansionary monetary policy, in which the reduction in CRR leads to a reduction in interest rate, increases aggregate demand, ultimately increases aggregate output and employment. The study by Arora (2017) emphasises that lowering interest rates is more effective in stimulating output. The bank rate, repo rate and other policy rates were inefficient in passing interest rate through lending channels. Despite the Monetary Policy Committee being set up, the monetary policy framework is not streamlined (Ratnu, 2019).

Figure 2 : Expansionary Monetary Policy[3]



However, both the policies should be designed and executed comprehensibly because the mandates and objectives of both policies are the same. For example, during inflationary pressure, if fiscal policymakers increase expenditure, it will increase fiscal deficit; it may make inflationary pressure even stronger, and ultimately pressurize the monetary policymakers to shrink money supply. It may not be an effective tool to control inflation, or it may create inflation strain rather than solving it. India's fiscal policy is based on accomplishing political benefit/agenda, which makes the job of monetary policymakers very difficult to achieve economic stability. Clearly, both the policies are not complementary to each other when both are not fulfilling their mandate. To achieve economic stability, both policies should be complementary with each other. India's current fiscal policy and monetary policy follow a stringent reform-oriented path, in which short-term hurdles have a negative impact on economic growth and economic stability. This was observed while implementing the Goods and Services Tax (GST) and other macro-prudential regulations.

Do the fiscal policy and monetary policy work in isolation?

India's fiscal and monetary policy function jointly. In India, 'Annual Financial Statement' is presented before the Parliament every year, usually on the last working day of February, in accordance with Article 112 of the Constitution of India. The Union Budget provides estimates of future revenues and expenditures for the upcoming year on an annual basis. Before preparing the fiscal policy, the policymaker calculates the sources of revenue and budgets the necessary expenditures. Generally, government expenditure is higher than government revenue; the government borrows to fill this gap, which results in government debt. Figure 3 describes how a country prepares its budget.

Figure 3: Fiscal Policy (Preparation of Upcoming Budget)

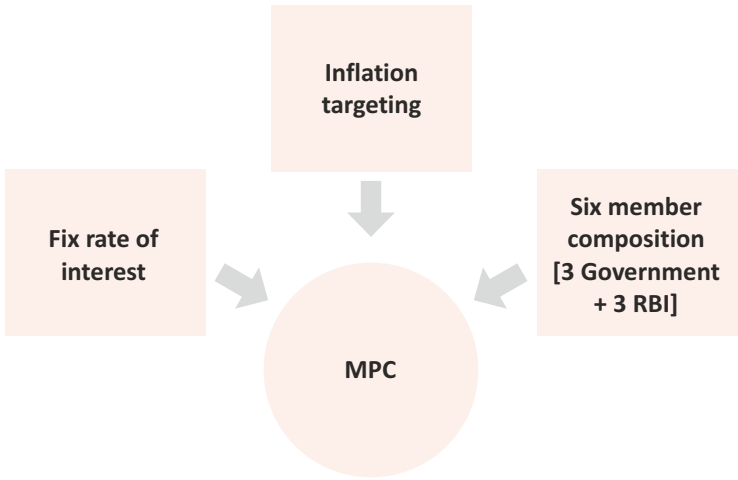
In Parliament, the budget goes through various stages of scrutiny. The budget is presented by the Finance Minister; this is followed by a general discussion after which there is an adjournment of the Houses so that the Standing Committee can scrutinize the demands for grants for a month; then there is voting on demand for grants in Lok Sabha followed by passing of appropriation bills and eventually passing of the finance bill. However, this fiscal policy has been prepared based on assumptions (externalities) such as stability in crude oil price (petrol price), exchange rate stability (including the balance of payment stability), global economic growth, and non-occurrence of any unforeseen natural disasters.

Fiscal policy is highly rigid/ sticky in nature. The policymakers do not change fiscal policy mid-year and they want to stick with the roadmap planned for the upcoming year. For example, India's fiscal policy has been tight or contractionary in nature for the last ten years. The policymakers have stood with that stickiness or rigidity despite facing problems such as the global financial crisis. Because of this approach, the job of monetary policymakers becomes tougher during the implementing year. The monetary policy is quarterly in nature, where the policymakers make sure that they are finetuning policies to maintain macroeconomic equilibrium (i.e., maintaining price stability, full employment and economic growth).

Is there an institutionalized framework for better coordination between fiscal policy and monetary policy?

As stated in RBI's Preamble, the primary objective of the monetary policy is to maintain price stability along with fulfilling the objective of economic growth (Preamble, RBI Act, 1934). Based on Section 45ZA, the Central Government and the RBI jointly decide benchmark inflation targeting based on the Consumer Price Index, once every five years; the Monetary Policy Committee (MPC) shall determine the Policy Rate required to achieve the inflation target [Section 45ZB (3)] as detailed in Figure 4. The Monetary policy is reviewed every quarter and the RBI organizes at least four meetings of the Monetary Policy Committee in a year. If RBI fails to maintain inflation target, as per section 45ZN, it must specify reasons and provide remedial actions. Also, this failure of inflation targeting will be notified by the Central Government in the Official Gazette. The research work of Cristadoro & Veronese (2011) suggests that the Reserve Bank of India would benefit from inflation targeting approach over a multiplicity of goals. The MPC will enhance transparency, communication and signaling effect of policy moves.

Figure 4 : Monetary Policy Committee (MPC)



There is no formal structure of coordination between fiscal policymakers and monetary policymakers. However, in the six-member Monetary Policy Committee, three members are nominated by the government, which does facilitate coordination between the government and RBI. Hence, both policies are supplementary in nature. On the other side, the MPC framework can hamper independence of RBI in the true sense, where the RBI functions as an agent of the government. There is a correlation between central-bank independence and macroeconomic equilibrium. Moreover, independent central banks strongly promote stability and sustainability in the macroeconomic framework (Mankiw, 2006). There is a specific inflation target of 4% (plus or minus 2%); no such specific target exists for output, growth or unemployment (Sivramkrishna, 2016).

As per Article 112 of the Constitution of India, the fiscal policy is an annual financial statement of the government's receipts and expenditures prepared by the Ministry of Finance after consulting with other ministries and the Niti Aayog. Moreover, the fiscal policymakers ensure that they take care of concerns of essential stakeholders from the agriculture sector, industry and services sector before finalizing the budget. The policymakers aim to meet expectations and requirements of the stakeholders on the basis of the economic situation. Based on Article 266 of the Constitution of India, all revenues are received, loans raised and receipts from recoveries of loans granted by the government from the consolidated fund of India. All expenditures of the Government are incurred from the consolidated fund of India. Article 267 of the Constitution authorizes the Contingency Fund to be used by the Government to meet urgent unforeseen expenditures. The money in provident funds, small savings, or special funds are part of the public account.

In India, under the aegis of the Finance Ministry, the department of economic affairs prepares the fiscal policy. The Reserve Bank of India is responsible for the monetary policy (Surbhi, 2015). In short, the fiscal policy is concerned with public revenue and public expenditure while the monetary policy is concerned with a change in the money supply and change in the rate of interest. There is the possibility of political influence in fiscal policy due to the nature of the task and election pressures (Mankiw, 2014). Moreover, the politician's primary goal is to develop confidence in their policies in voters' minds so that they are re-elected. A fiscal stimulus package before an election helps to increase aggregate demand, leading to higher economic growth and lower unemployment (Blanchard, 2006).

During a recessionary period, the fundamental problem is inadequate effective aggregate demand. The first line of monetary policy against economic downturns is increasing the money supply; the central bank reduces interest rates. This decrease in the rate of interest will decrease the cost of borrowing to finance investment projects, such as new factories and new housing. It will lead to increase in investments, finally increase aggregate demand and facilitates increase in production and employment. Fiscal policy can mitigate this recessionary pressure. The government may reduce tax rates; it increases disposable income, which increases overall consumption, finally increases the aggregate demand (Mankiw, 2014). Both the fiscal and monetary policies increase aggregate output through multiplier effects based on value of marginal propensity to consume. It further induces consumption, which accordingly increases aggregate demand.

Fiscal policy is particularly useful when the tools of monetary policy lose their effectiveness; for example, the monetary authority can cut its target interest rate to almost zero. However, the monetary authority cannot reduce interest rates to below zero. The same is the case with fiscal policy; if fiscal policymakers have already reduced tax rates to below the potential level and there is no further possibility of changing public expenditure, in such situation, fiscal policy intervention is not desirable.

Both the fiscal and monetary policy do not repair or fix the problem of unemployment, price instability or economic growth immediately. There is a time lag to create expectation effect for achieving the desired results or goals. It is often observed that increase in money supply does not reduce the rate of interest because commercial banks have not passed on the reduction in rates to retail borrowers. Also, there may be households and firms that have already borrowed up to their capacity or even more, so they are not in a position to borrow further. The same is the case of fiscal policy, where the time lag is very high since the bills need to move through proper channels, pass through Lok Sabha and Rajya Sabha and finally be signed by the president. There are instances where new reforms take years to implement and execute in the system.

There are also many instances where economic forecasting or predictability is highly inaccurate. So, there is always a systemic risk, in which the policymakers take a chance/risk to guess future economic conditions and frame policies based on practice and precedent. Though, such policy decisions are risky, there is no other way but to rely on rational guesses. Policymakers face the problem of deciding the optimal employment rate and inflation rate; a very low rate in both cases would be unviable. So, policy mix should take care of most priority objectives over least priority ones and subsequently, least priority objectives through cost-benefit analysis in fixing interest rate target and inflation target.

Are India's Fiscal Policy and Monetary Policy complementary or competitive in nature?

In macroeconomic equilibrium, policymakers want to achieve full employment, an optimal level of GDP growth and price stability; they design the policy mix (fiscal and monetary policies) in accordance with macroeconomic goals. There are various studies on the issues and challenges of fiscal and monetary policy. A few studies have revealed that the fiscal policy has a higher impact on the change in nominal income than monetary policy. Various studies have described that fiscal policy impacts were stronger, faster, and more predictable than monetary influences (Kaur, G., 1995; Reynolds, 2001). The study by Kaur, S., and Kaur, G. (2008) explores the monetary and fiscal policy interactions in the Indian economy, where both the monetary and fiscal policies are complementary and not substitutes to each other. The study of Bynoe (1994) also revealed that in Sierra Leone and Tanzania, neither the fiscal nor the monetary influences were significant in determining nominal income. However, this research provides a conceptual understanding of the policy mix, how both policies were framed from 2013 to 2017, and whether this policy mix was complementary or competitive in nature.

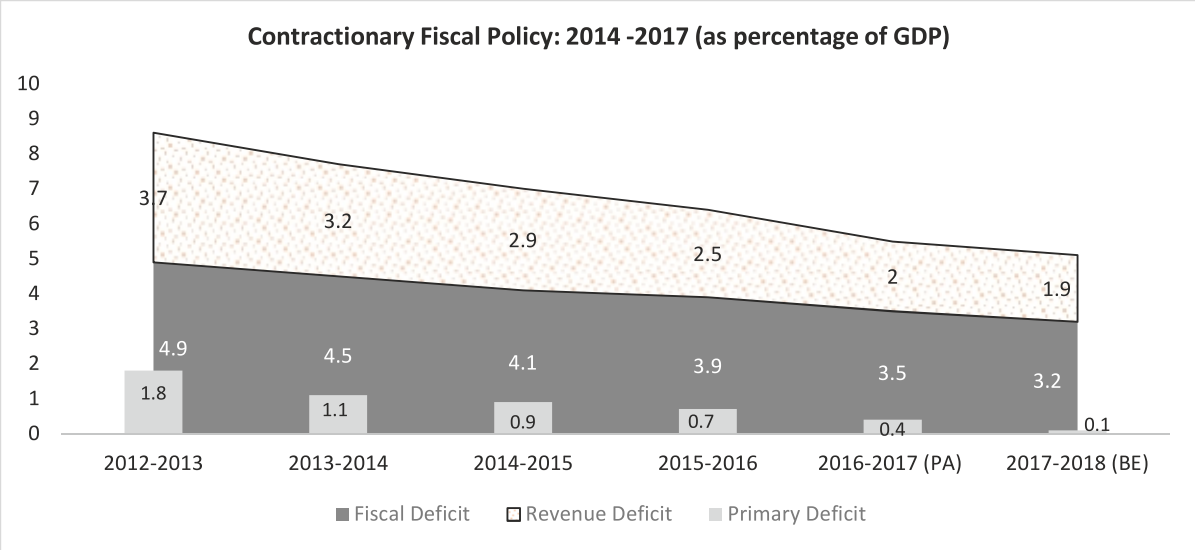
India's fiscal policy has set the roadmap of fiscal consolidation based on Fiscal Responsibility and Budget Management Act (FRBM Act). As per the amended FRBM Act, the fiscal deficit target of 3 percent of GDP was to be achieved by 2018-19. However, the Fiscal Policy was contractionary /tight in nature from 2013 to 2017, as described in Table 1 and Figure 5.

Table 1: Contractionary Fiscal Policy: 2013 -2017 (as percentage of GDP)

Fiscal Policy (as percentage of GDP)	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017 (PA)	2017-2018 (BE)
Fiscal Deficit	4.9	4.5	4.1	3.9	3.5	3.2
Revenue Deficit	3.7	3.2	2.9	2.5	2	1.9
Primary Deficit	1.8	1.1	0.9	0.7	0.4	0.1

Source: Union Budget documents and Controller General of Accounts

Figure 5 : Contractionary Fiscal Policy: 2013 -2017 (as percentage of GDP)



Source: Union Budget documents and Controller General of Accounts

As described in Table 1 and Figure 5, India's fiscal policy was contractionary/tight in nature from 2013 to 20l7. This contractionary fiscal policy has reduced flexibility to control the money supply (i.e., contractionary monetary policy). So, the monetary policymakers have only two options. First, unchanged policy rates and second, decrease policy rate (i.e., expansionary monetary policy). The study of Mishkin (2016) stated that politicians are likely to pressurize the central bank to boost output with overly expansionary monetary policy. However, it may lead to a poor outcome of high inflation with a marginal gain in economic growth.

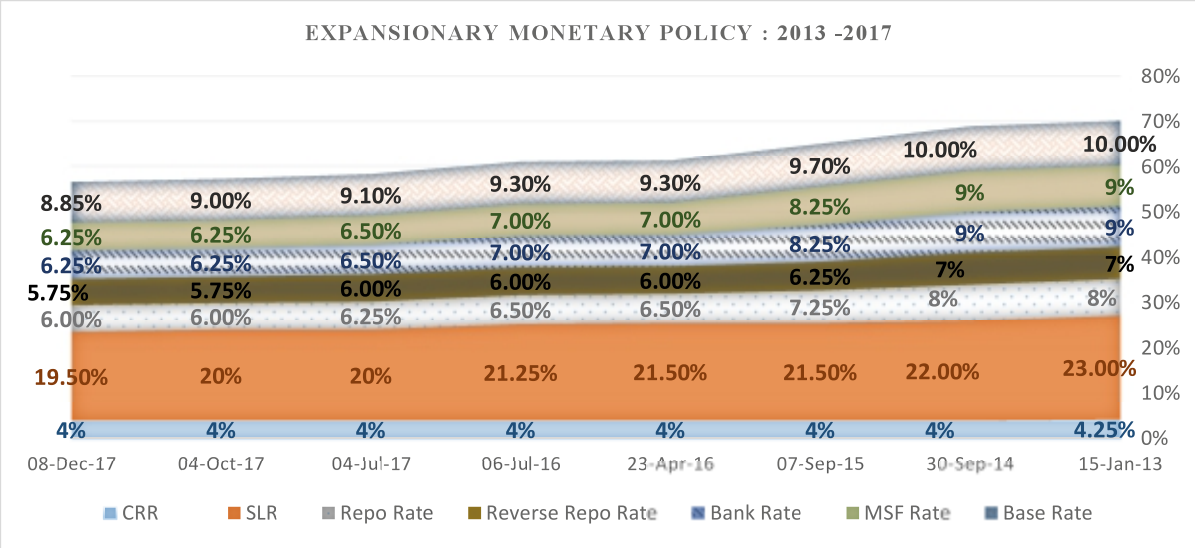
Based on this background, India's monetary policy has followed the path of expansionary/easy to supplement and complement the fiscal policy so that the economy is producing the full potential level of output and promoting potential economic growth. India's third quarter review of monetary policy 2013 reduced the Cash Reserve Ratio (CRR) of scheduled banks by 25 basis points from 4.25 percent to 4.0 percent on February 9, 2013. This decrease in the Cash Reserve Ratio (CRR) injected primary liquidity of around Rs.180 billion into the banking system. From 2013 till December 2017, the monetary policy was expansionary in nature, where the policy rate reduced CRR, SLR, Repo Rate, Reverse Repo Rate, Bank Rate, MSF Rate, Base Rate in the same period, as described in Table 2 and Figure 6.

Table 2: Change in Monetary Policy Rates: 2014 -2017 (Expansionary Monetary Policy)[5]

Monetary Policy Rates	08-Dec -17	04-Oct -17	04-Jul -17	06-Jul -16	23-Apr -16	07-Sep -15	30-Sep -14	15-Jan -13
CRR	4%	4%	4%	4%	4%	4%	4%	4.25%
SLR	19.5%	20%	20%	21.25%	21.50%	21.50%	22.00%	23.00%
Repo Rate	6.00%	6.00%	6.25%	6.50%	6.50%	7.25%	8%	8%
Reverse Repo Rate	5.75%	5.75%	6.00%	6.00%	6.00%	6.25%	7%	7%
Bank Rate	6.25%	6.25%	6.50%	7.00%	7.00%	8.25%	9%	9%
MSF Rate	6.25%	6.25%	6.50%	7.00%	7.00%	8.25%	9%	9%
Base Rate	8.85% - 9.45%	9.00%- 9.55%	9.10% - 9.60%	9.30% - 9.70%	9.30% - 9.70%	9.70% - 10.00%	10.00% - 10.25%	10.00% - 10.25%

Source: RBI

Figure 6: Change in Monetary Policy Rates: 2013-2017 (Expansionary Monetary Policy)



Source: RBI

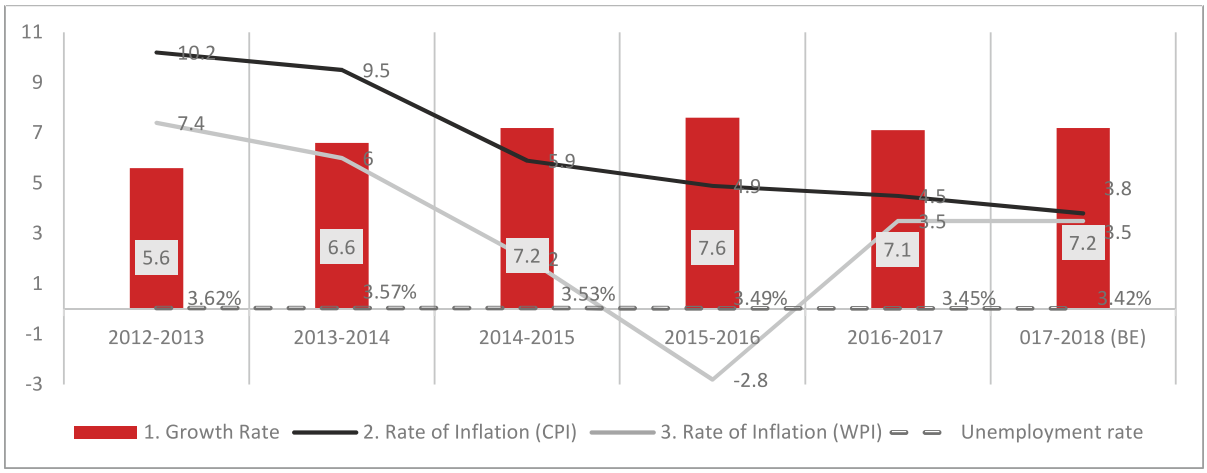
Fiscal Policy was tight or contractionary in nature from 2013 to 2017; in this case, monetary policy was easy or expansionary in nature in the same time period for stimulating economic growth and prosperity. The economic indicators, GDP growth rate has improved, and it shows that India is producing at the full potential level of GDP. The inflation rate has reduced, and it is in a band of 4 to 6 percent as suggested by the monetary policy committee. Moreover, the unemployment rate is in the band of 3 to 4%, the percentage of the total labour force as per the data. These indicators do reflect that both the fiscal policy and monetary policy are rationally coordinated with each other. India's economy was stable; the same is reflected in Table 3 and Figure 7.

Table 3: Economic Indicators to measure complementariness of both polices[6]

Economic Indicators	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018(E)
1. Growth Rate (as percentage of GDP)	5.6	6.6	7.2	7.6	7.1	6.75-7.5
2. Rate of Inflation (2014-15 onwards new methodology CPI)	10.2	9.5	5.9	4.9	4.5	3.8
3. Rate of Inflation (WPI)	7.4	6	2	-2.8	3.5	3.5
4. Unemployment rate, total (% of total labour force) (ILOSTAT database)	3.62%	3.57%	3.53%	3.49%	3.45%	3.42%

Source: Economic Survey 2016-17 and Union Budget 2017-18

Figure 7: Economic Indicators to measure complementariness of both policies



Source: Economic Survey 2016-17 and Union Budget 2017-18

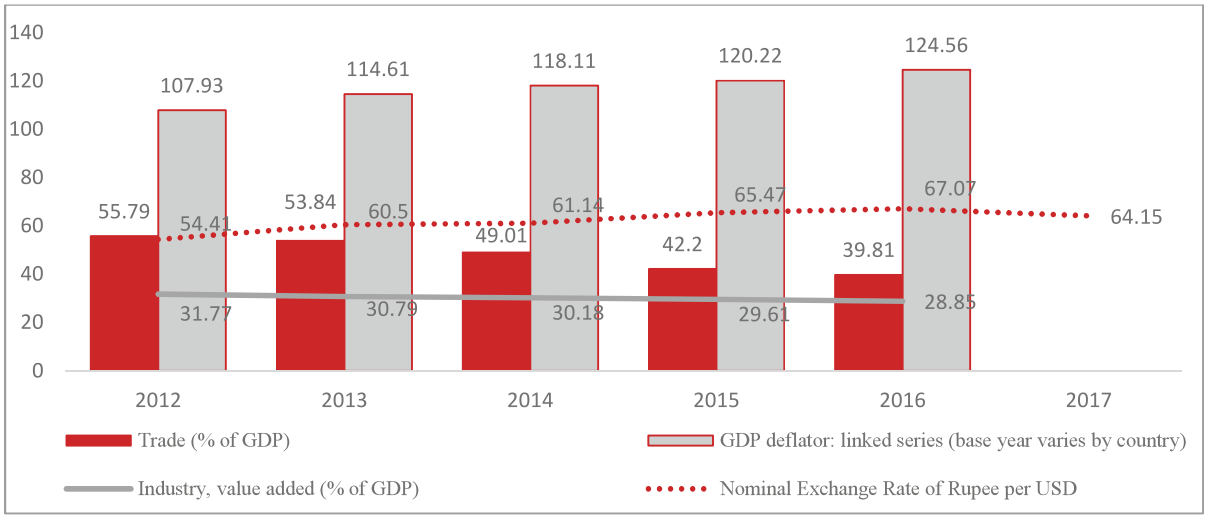
However, there are other economic indicators which are giving the wrong signal to market and macroeconomic system. These economic indicators create competitiveness in the policies mix. These indicators also reveal that the polices mix performance on price stability, GDP growth rate and employment might not be sustainable in the long run. These forthcoming economic challenges need to be fixed soon. Table 4 and Figures 8.1 and 8.2 highlight forthcoming challenges of the present policies mix.

Table 4: Economic indicators to measure competitiveness of both policies

Economic Indicators	2012	2013	2014	2015	2016	2017
Trade (% of GDP)	55.79	53.84	49.01	42.2	39.81	-
Gross fixed capital formation (% of GDP)	33.44	31.3	30.4	29.26	27.12	27.5
Gross savings (% of GDP)	34.03	33.29	33.61	32.49	30.18	28.92
Bank non-performing loans to total gross loans (%)	3.37	4.03	4.35	5.88	9.19	9.3
GDP deflator: linked series (base year varies by country)	107.93	114.61	118.11	120.22	124.56	-
Industry, value added (% of GDP)	31.77	30.79	30.18	29.61	28.85	-
Nominal Exchange Rate of Rupee per USD	54.41	60.5	61.14	65.47	67.07	64.15

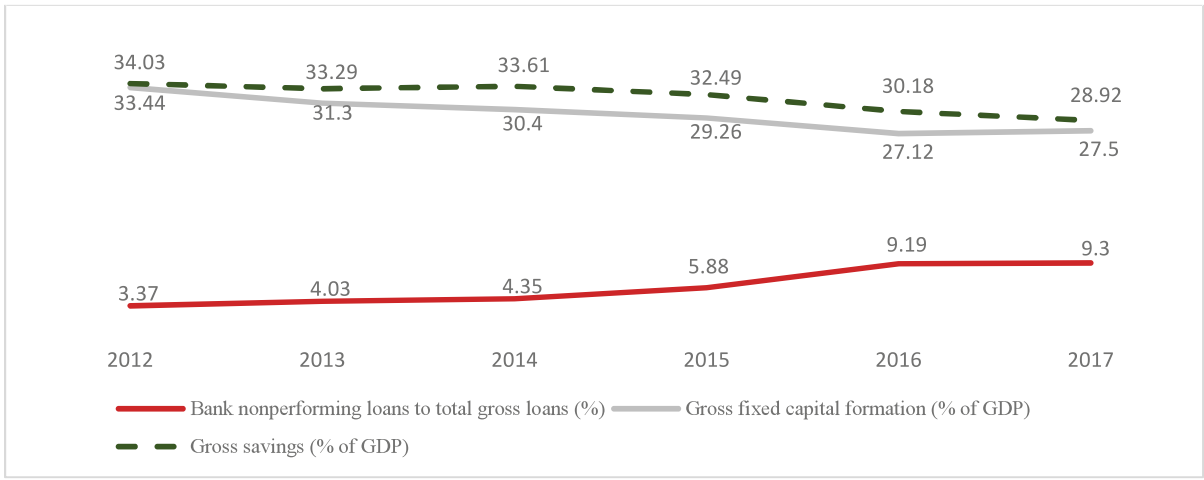
Source: Data from database: World Development Indicators

Figure 8.1: Economic indicators to measure competitiveness of both policies



Source: Data from database: World Development Indicators

Figure 8.2: Economic indicators to measure competitiveness of both policies



Source: Data from database: World Development Indicators

The study of Blanchard & Fischer (1989) suggests activist policies might destabilize the economy rather than stabilize it. Based on Table 4, Figure 8.1 and Figure 8.2, India's bank non-performing loans to total gross loans (%) and GDP deflator (base year varies by country) have increased from 2012 to 2017, which is not a good signal from the long run perspective of Indian economic development. Over and above, Trade (% of GDP), Gross fixed capital formation (% of GDP), Gross savings (% of GDP) and Industry, value added (% of GDP) have fallen from 2012 to 2017, which questions long-term sustainability issue of macroeconomic performance. This data seriously questions whether India's fiscal and monetary policies are competitive in nature. These issues and challenges need to be addressed, otherwise the polices mix performance in GDP and employment will not be sustainable in the long run.

The longer-term goal of policy mix is to improve agricultural productivity, strengthen infrastructure and boost manufacturing and services sectors to deliver up to their potential level. Also, appropriate incentives provided for improving compliance, such as selective expenditure targets for specific ministries as part of better accounting and management systems are required (Goyal, 2012). There are problems in implementing the reformist policies, where the framer of law to executors/implementers (bureaucrats and administrators) are supposed to function efficiently. However, they make an error, such as corruption or following the wrong incentive for promotion, which dilutes the ultimate goal and target of fiscal policy and monetary policy jointly (Basu, 2012; Chung, Davig, & Leeper, 2007).

Summary

India's fiscal and monetary policies' mandates and objectives are similar. The success and complementariness of both policies always depend upon the harmonious and cooperative approach of both policymakers while framing policies. This coordination has been institutionalizing recently through the monetary policy committee (MPC), and Section 45ZB(2)(c) of the Reserve Bank of India Act, 1934 has been amended by the Finance Act, 2017. However, there is a long way to go to achieve monetary discipline. On the other side, economists predict that the MPC framework will hamper the autonomy of Reserve Bank of India in the real sense. Over and above, in this framework, the RBI will work as an agent of the government rather than the principal of market efficiency. These questions will be evaluated in upcoming years based on the performance of Monetary Policy Committee in their mandate of economic stability and sustainability. From 2013 to 2017, the fiscal policy has followed the reformist approach of consolidation/ contractionary nature, where Fiscal Deficit, Revenue Deficit and Primary Deficit reduced in a phased manner with a gradual approach to target inflation in the band of 4 to 6% in the true sense. The job of monetary policymakers got tougher on inflation targeting over promoting growth. The fiscal consolidation has given minimal scope for monetary policymakers. They have reduced rates during the period 2013 to 2017, which means that the fiscal policy was tight or contractionary in nature, whereas monetary policy was easy or expansionary in nature for stimulating economic growth and prosperity. Both policies should use their tools more cautiously to smooth the ups and downs of the business cycle, over unnecessary intervention. India's policies mix needs to put efforts in improving non-performing loans to total gross loans (%), GDP deflator, Gross fixed capital formation (% of GDP), Gross savings (% of GDP) and Industry, value added (% of GDP). This will ensure that economic indicators are in accordance with macro-prudential regulations and both polices fulfill complementariness in the true sense.

Applicability and Generalizability

IS-LM model does reflect the efficacy of policy mix (fiscal and monetary policy). Where, IS represents the goods market equilibrium (Aggregate Demand = Aggregate Supply or Investment = Saving) and LM represents the money market equilibrium (Demand for Money equals to Supply of Money). The joint equilibrium of IS-LM leads to determine the country's national income with prevailing rate of interest. From section 5 of India's policy mix (2014-2017), Tables 1 and 2 reflect that the Fiscal Policy was contractionary, whereas Monetary Policy was expansionary during 2014-2017. The policy mix results in an increase in the overall GDP and decrease in base rate. So, as per Table 3, Inflation reduced and GDP increased during 2014-2017. A similar experience was of the 1990's policy mix of Clinton administration's deficit reduction, where US Budget deficit was 3.3 percent in 1991 which turned into Budget surplus of 0.8 percent in 1998; GDP growth was 0.9 percent which rose to 3.7 percent in 1998 and interest rate was 7.3 percent which reduced to 4.8 percent in 1998 (Hardes & Šehovic, 2014). So, US's Clinton-Greenspan policy mix was a combination of contractionary fiscal policy and expansionary monetary policy during 1991-1998, which is similar to India's policy mix (2014-2017) which is displayed in Figure 9.1.

Figure 9.1: IS-LM: Contractionary Fiscal Policy and Expansionary Monetary Policy [US (1991-1998) & India (2014-2017)]

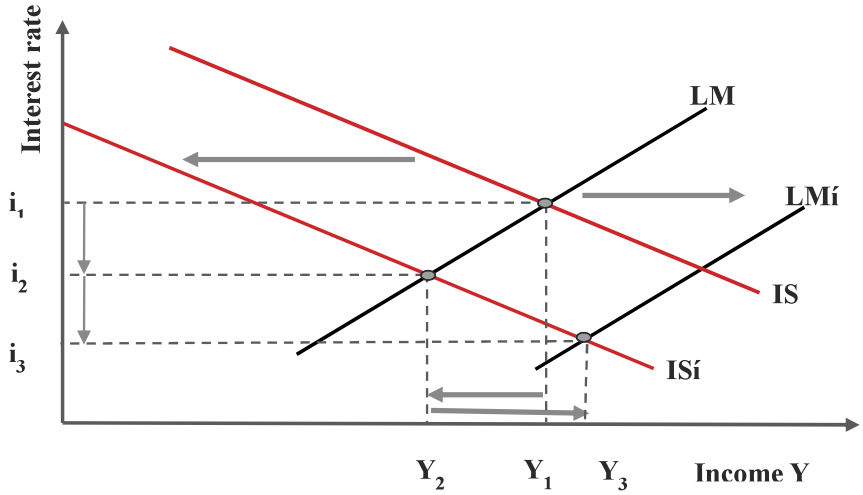


Figure 9.1 reflects that initially, IS-LM equilibrium is at interest rate i_1 and National Income Y_1. The tight Fiscal Policy shifts IS curve leftward, which decreases National Income Y_2 and reduces rate of interest i_2. To supplement fiscal consolidation, the expansionary monetary policy resulted in shift in LM curve rightward, which increased National Income Y_3 and reduced rate of interest i_3. The policy mix resulted in reduction in rate of interest which stimulated increase in private investment and increase in GDP growth rate.

Figure 9.2: IS-LM: Expansionary Fiscal Policy and Contractionary Monetary Policy

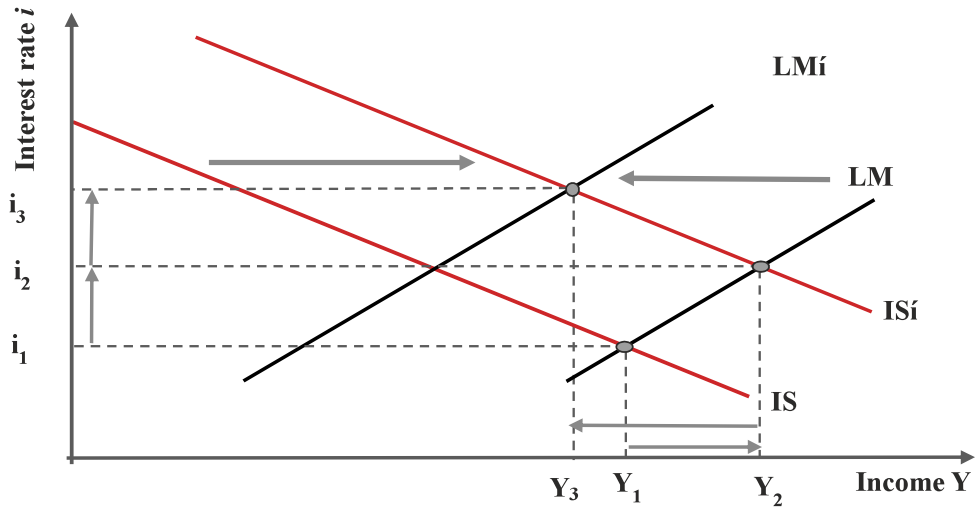


Figure 9.2 reflects IS-LM equilibrium at interest rate i_1 and National Income Y_1. The expansionary Fiscal Policy shifts IS curve rightward, which increases National Income Y_2 and increases rate of interest i_2. To control inflation, contractionary monetary policy shifts LM curve leftward, which decreases National Income Y_3 and increases rate of interest i_3. The policy mix resulted in increase in rate of interest which crowded-out private investment and ultimately moderated the GDP growth rate.

US's Clinton-Greenspan (1991-1998) and India's (2014-2018) policy mix were a combination of contractionary fiscal policy and expansionary monetary policy as displayed in Figure 6.1. However, on the contrary, the European Central Bank followed a tight monetary policy from December 2005 and expansionary fiscal policy in most European countries till the third quarter of 2008 (RBI 2013) as reflected in Figure 6.2, which can be the alternative approach of policy mix in comparison with India and US.

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  The Constitution of India.

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[1] G = Government Expenditure, DI = Disposable Income, C= Consumption Expenditure, AD = Aggregate Demand, Y = Income, Emp = Employment, PL = Price level, T = Taxation, LFM = Loanable Fund Market, IR= Rate of Interest.

[2] The policy in which the money supply is decreased along with rise in interest rates.

[3] The policy in which the money supply is increased along with minimization of interest rates.

[4] BE-Budget Estimates PA: Provisional Actuals (Unaudited)

[5] Key Economic Indicators (2017): Available at: http://www.eaindustry.nic.in/Key_Economic_Indicators/Key_Economic_Indicators.pdf (Accessed: 06-Dec-17).

[6] Growth Rate (as percentage of GDP) : Economic Survey 2016-17 and Union Budget 2017-18; Rate of Inflation (CPI) and Rate of Inflation (WPI) : Economic Survey 2016-17 and Union Budget 2017-18; Unemployment rate, total (% of total labor force) : International Labour Organization, ILOSTAT database. Data retrieved in March 2017; and Nominal Exchange Rate of Rupee per USD: Economic Survey 2016-17 and Union Budget 2017-18.

[7] Trade (% of GDP): World Bank national accounts data, and OECD National Accounts data files; Gross fixed capital formation (% of GDP): World Bank national accounts data, and OECD National Accounts data files; Gross savings (% of GDP): World Bank national accounts data, and OECD National Accounts data files; Bank nonperforming loans to total gross loans (%): International Monetary Fund, Global Financial Stability Report; GDP deflator: linked series (base year varies by country): World Bank staff estimates based on World Bank national accounts data archives, OECD National Accounts, and the IMF WEO database; Industry, value added (% of GDP): World Bank national accounts data, and OECD National Accounts data files and Nominal Exchange Rate of Rupee per USD: Source: FEDAI Indicative Market Rates (on yearly/Monthly Average Basis).

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