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Effectiveness of Monetary and Fiscal Policies in the Direction of Output Growth of a Country under Pandemic Stress: A Simultaneous Equations Model under the Estimation of Two-Stage Least Squares (2SLS) and Ordinary Least Squares (OLS) Method

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Abstract:- The proper policy handling might not able to attain the target since some of recessions, e.g., pandemic-led crises, the variables shocks of the economics. At the level of this situation, the Central bank implements the monetary policy to choose increase the exogenous expenditure and level of money supply consecutively for booster level economic growth, whether the monetary policy is relatively more effective than fiscal policy in altering real output growth of a country or both stand for relatively effective in the direction of output growth of a country. The dispute with reference to the relationship between the monetary policy and fiscal policy is centered on the inflationary penalty of the shortfall financing by the fiscal authority. The latest variables socks of economics as well as the pandemic-led crises, central banks around the world predicted just about a general dilemma in relation to increase rates to face the or decrease rates to sustain the economic movement. Whether the prices hang about fundamentally unaffected, the aggregate demand has also been hold a significantly negative attitude by the outbreak COVID-19 pandemic. To empirically investigate the effects of economics shocks associated COVID-19 pandemic, the paper considers the effectiveness of the monetary policy and fiscal policy that linked to the adjustment mechanism of different economic variables. To examine the effects of economics shock associated COVID-19 pandemic towards the effectiveness of Monetary Policy and Fiscal Policy in the direction of output growth of a Country, this paper uses the Simultaneous equations model under the estimation of two-stage least squares (2SLS) and ordinary least squares method (OLS).

Keywords:- *IS-LM Framework, Pandemic. Economics Variables Shocks, Simultaneous Equations model, output growth of a country.*

I. INTRODUCTION

There are two most widely recognized tools named *monetary* and fiscal policy which influence a nation's economic activity, the Direction of output growth of a Country, and bring into play to regulate economic activity over time, i.e., directed toward influencing the quantity of money and credit in an economy; decisions about taxation and spending; redistribute income and wealth. Also, they can be used to step up growth when an economy starts to slow or to moderate growth and activity when an economy starts to overheat. The purpose of this paper is to measure the effectiveness of monetary and fiscal policy to the direction output growth of a Country under the stress of COVID-19 pandemic.The concept of economic, the IS curve represents a fiscal policy and the LM curve monetary policy. Though the IS–LM model provides an intuitively rich framework, it possess other characteristics that are troublesome to many theorists (David C. et al, 2005) because of the IS–LM model is a static model. With no reference to time, the IS–LM model restricts in important ways the behavior of some of the variables within the model (ibid, 2005). According to IS-LM framework, government may increase investment and employment; output and income through the implementation of fiscal spreading out policies. The similar target moreover be able to happen to monetary sector. The level of Money supply and government consumption expenditure make use of a substitute for monetary and fiscal policies whereas GDP growth at constant prices that use as alternate for real output growth. Empirically, this study demonstrate with the intention of mutually the monetary and fiscal policies have momentous and optimistic impact on the real output enlargement of a country through changeable degree, and GDP expansion in post Covid probable to go away negative. The outcomes of the study demonstrate that monetary policy has relatively stronger impact than that of fiscal policy in altering output growth of a country during the COVID-19 pandemic.Therefore, the result of the study identify that the Covid-19 pandemic has affected on Effectiveness of Monetary Policy and Fiscal Policy greatly. They are influenced bydifferent economic variables to the adjustment mechanism.

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II. LITERATURE REVIEW

There are numerous studies to facilitate look into the efficiency of monetary and fiscal policy under the stress of COVID-19 pandemic. In the literature, most of the studies argue that fiscal policy is more effective than monetary policy during the crisis and therefore fiscal expansion can reduce output loss or output cost (IMF report, 2008a and 2008b).

A lot has changed in macroeconomic policy since the COVID-19 pandemic began. It raises a number of series issues on policy effectiveness as well as the financial crises and economic shocks in demand and supply side. Song et al.(2021)empirically investigated the time-varying effect of Economic Policy Uncertainty(EPU), the paper considered the shock of the monetary policy implemented by China's central bank on different economic variables including interest rate, output gap, and inflationary gap using the latent threshold time-varying parameter vector autoregressive model (LT-TVP-VAR Model) using the Data about January 2015to April 2021.

Easterly and Revelo (1993), argue persuasively that government activities influence the direction of economic output growth. Kirchner et al.(2010) investigated changes in the macroeconomic impact of government spending shocks using time-varying structural VAR techniques. The results show that the short-run effectiveness of government spending in stabilizing real GDP and private consumption has increased until the end-1980s but it has decreased thereafter. Hang Zhou et al. (2021) explore the COVID-19 crisis, expansionary fiscal policies, unconventional monetary policies led to an appreciation of local currencies, and the conventional expansionary monetary policies had the opposite effect, indicating that the traditional effect of monetary policy on the exchange rate. They realize the reality that the tax and spending measures adopted during financial distress periods can have long-term implications for economic efficiency and productivity growth when the crisis is over (Gali, Lopez-Salido, and Valles, 2005; Ghosh et al., 2009; Rogoff and Reinhart, 2009). if you go over the effectiveness of Monetary Policy and Fiscal Policy in the Direction of output growth of a Country under the stress of COVID-19 pandemicis, that is one of the most consequence issue in the literature regarding optimal macroeconomic policy mix, i.e. optimal synchronization between monetary and fiscal policy over thetime of COVID-19 pandemic.

We make an effort to cover this gap in studies through the looking at the effectiveness of monetary and fiscal policy to the direction of output growth of a Country under the stress of COVID-19 pandemicand what kind of macroeconomics direction to getting the output growth of a country should be used in order to relieve the economic collapse.

III. THEORETICAL BACKGROUND

The Keynes believes that the national income determines by the level of aggregate demand for consumption and investment goods equal aggregate output. The overall effect on the equilibrium interest rate will depend partly on the extent to which the increasing public debt can provide the private sector with a safe asset for holding precautionary savings **(Gavin Goy, 2020).** During COVID19, Autonomous Spending has decreased which has led to a decreased Aggregate Demand, and it is seen that the decrease in Aggregate Demand leads to a decrease in Income and a decrease (leftward shift) in the IS Curve at the same interest rate (Ashwin Goyal,2020). That's why, the IS Curve shifts downwards and leftwards.

Assume that the consumption is a measure of income and is positively related to:

C= a + by, whereas > 0, 0 < b <1

It can be assumed that this function is stable and expenditure determines the level of income. For a concept to be effective in the long run, it must be stable in order to achieve equilibrium.

It shows the user expenditure is determined by the amount of revenue and the rate of increase or decrease in revenue. This concept is not stable in the long run as income and consumption patterns change. Assume that the investment is partly independent and partly negatively correlated with interest rates.

I = J + iR where J > 2, i > 0

This function refers that an converse relationship between the interest rate and the value of planned investment (I); the direct relationship between the interest rate(R) and the value of planned investment; the indirect relationship between taxes (T) and government spending (G); the direct relationship between taxes and government spending. The multiplier effect is present due to induced increase in consumption caused by rising government spending, with investment remaining fixed. Thus

$$\frac{Md}{P} = d + mY - iR, \text{it might be possible to get R as a function of Y}$$

R = Pd –M + m.Y, where **d, m, I** are constant terms

Additionally, the LM curve lies at the center of all combination of interest rates and real income when the money market is in equilibrium and the demand for money equals the supply of money. Assume that the money supply is determined exogenously by the country.

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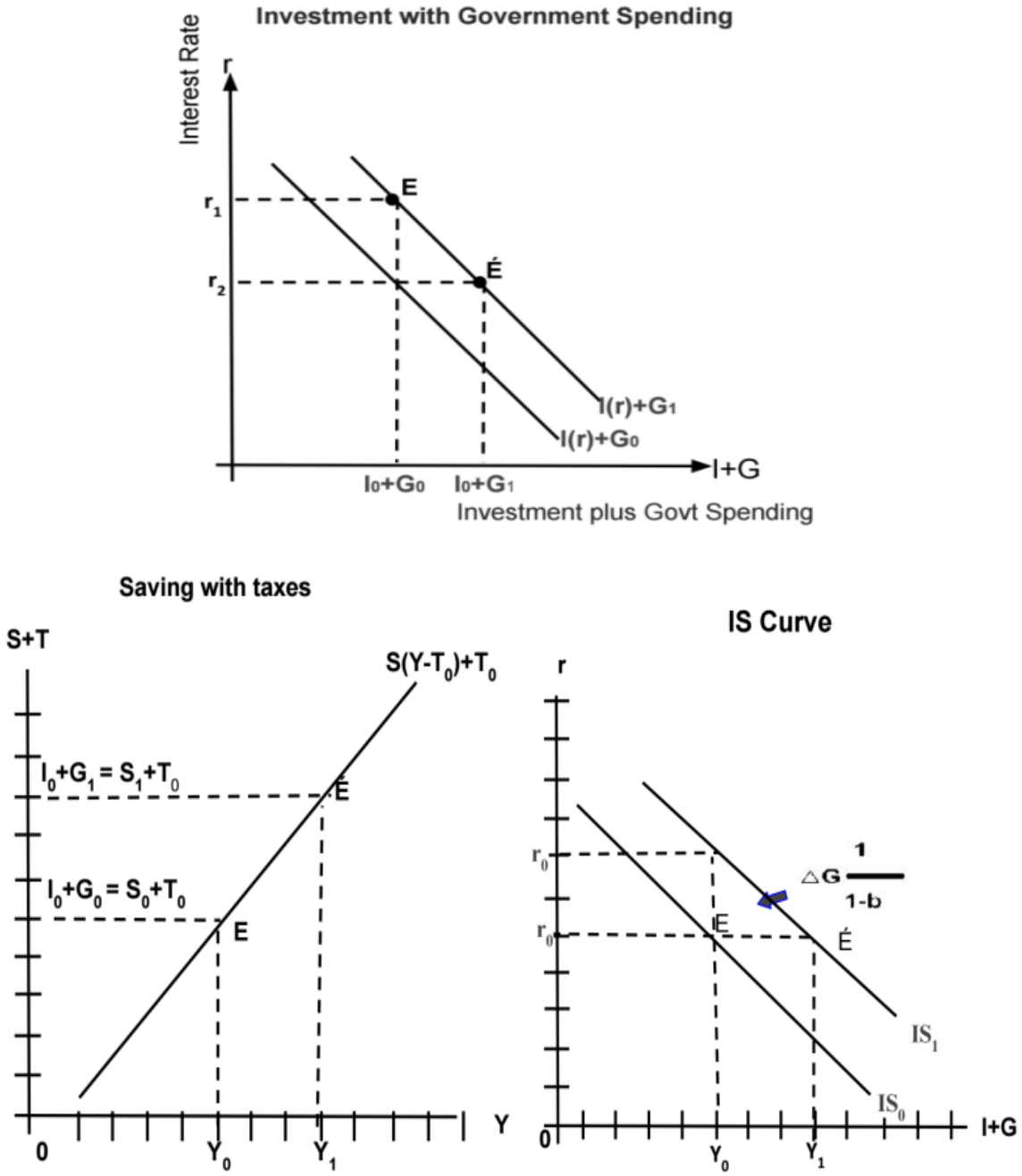

Fig. 1: Effects of Change in Government Spending (ΔG)

Source: Self Generated, concept collected by the shared articles of Diptimai Karma kar

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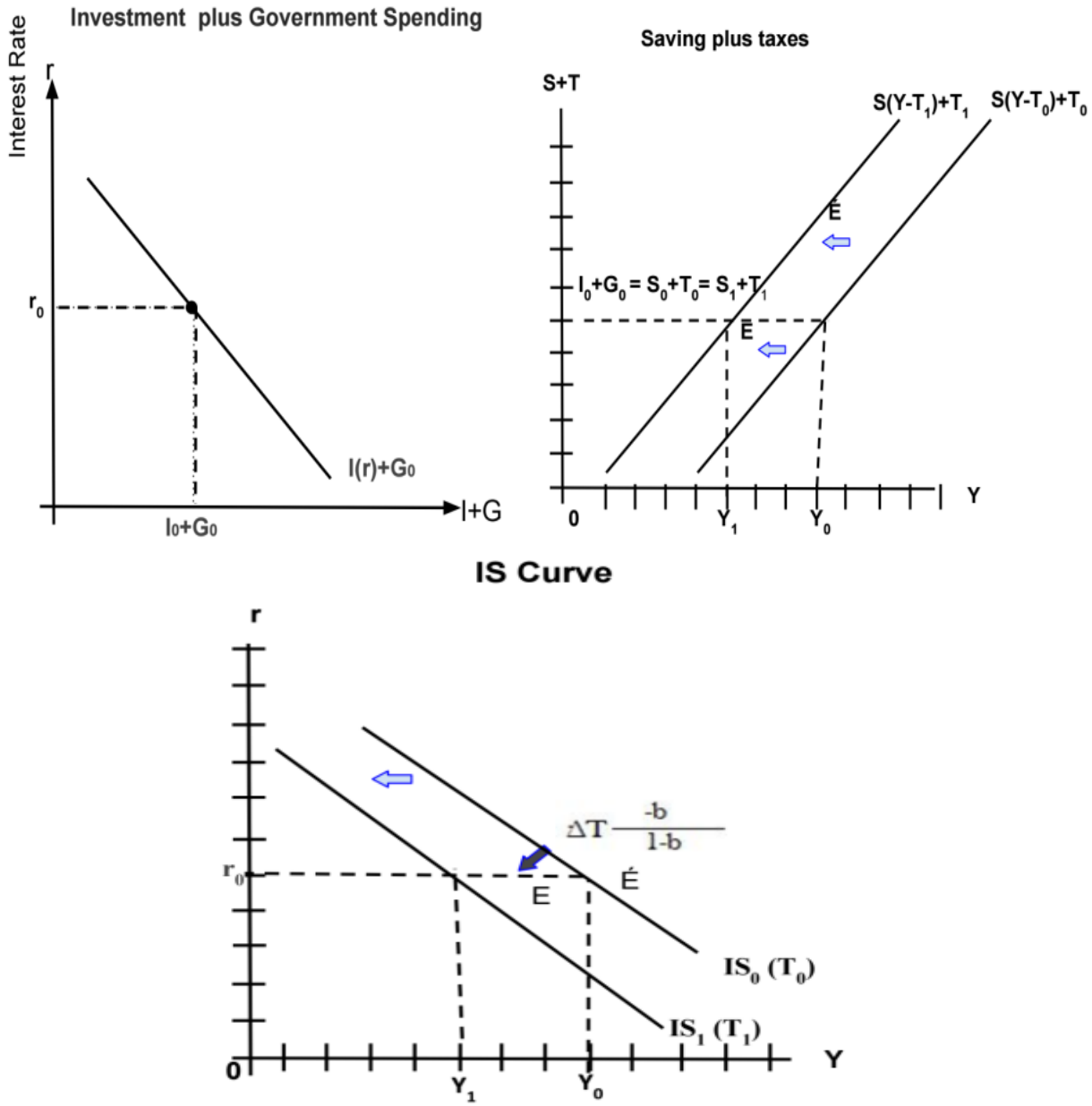

Fig. 2: Effects of Change in taxes **(**ΔT)

Source: Self Generated, concept collected by the shared articles of Diptimai Karma kar

The tax multiplier shows the change in equilibrium income per unit change in taxes for a given level of investment. Thus the fiscal policy variables affect the position of the IS curve. But changes in **ΔG** or **ΔT** do not alter the slope of the IS curve.

Now question is - how is the economic perception of IS-LM curve during the stress of COVID-19 pandemic impacts demand more than supply, and it brings the goods and money market in equilibrium. In this case IS Curve has shifted **leftwards**, decrease in autonomous spending shifts the IS curve to the left and the LM Curve has remained up shifted**.** Shocks and stress rose dramatically in the Government Spending

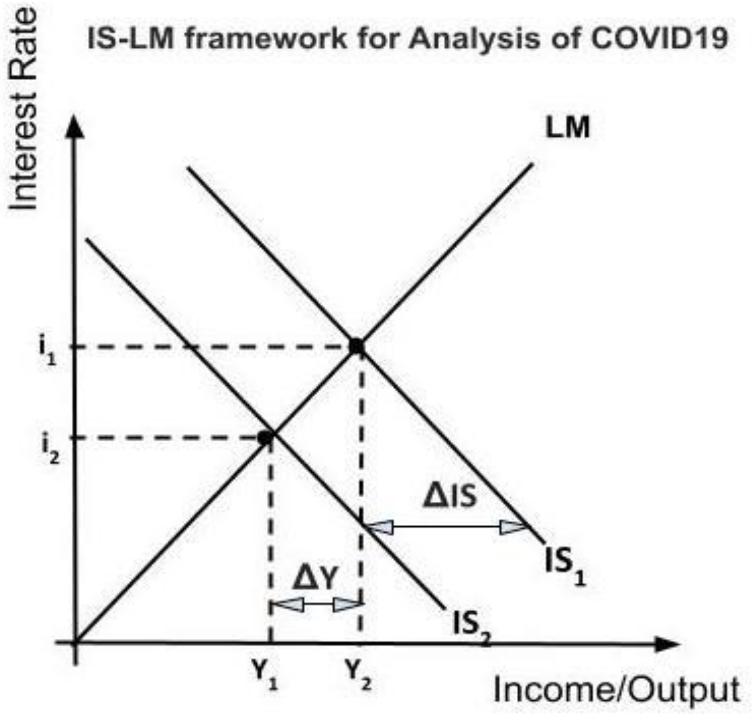

Fig. 3: The IS-LM framework for Analysis of COVID19

Source: (Self Generated, Concept Collected of Ashwin Goyal, 2020)

The policy response to the pandemic is a remarkable showcase for the power of monetary and fiscal policy interaction to boost confidence, stabilize aggregate demand and avoid a persistent destabilization of medium to long-term inflation expectations. a reduction of distortionary public revenues compensated by a reduction of unproductive public expenditures, a reduction of budget deficit compensated by a reduction of the unproductive public expenditures, a reduction of the budget deficit compensated by a corresponding increase in the nondistortionary public revenues.

From the above theoretical background, we are able to outline the settle of effectiveness monetary and fiscal policies as well as the economics activities and output growth of a country various techniques, methodology and variable have been used. Such as , interest rate inflation rate exchange rate, money supply, public revenues, expenditure, government investment, budget surplus and deficit, real GDP, GDP growth rate, nominal income, Policy Variables (endogenous and exogenous) Shocks, e.g., interest rate, real government expenditure, demand and supply shocks, e.g.,consumption, investment, labor supply and total factor productivity;

In this paper, we have used some of above mentioned variables, methodologies and a formula of Simultaneous equations model under the estimation of two-stage least squares **(2SLS)** and ordinary least squares **(OLS)** method in order to resolve the existing gap of effectiveness monetary and fiscal policy to the direction of output growth of a country under the stress of pandemic.

IV. FORMULATION OF GENERAL MODEL

In accordance with the IS-LM framework illustrated above, the model could be structured as follows:

$CN_t = \beta_0 + \beta_1 Y_t + \beta_2 CN_{t-1} + \varepsilon_{1t}$ ……………..(1)

$I_t = \beta_3 + \beta_4 (Y_t - Y_{t-1}) + \beta_5 Y_t + \beta_6 R_{t-1} + \varepsilon_{2t}$ ……..(2)

$R_t = \beta_7 + \beta_8 Y_t + \beta_9 (Y_t - Y_{t-1}) + \beta_{10}(M_t - M_{t-1}) + \beta_{11}(R_{t-1} - R_{t-2}) + \varepsilon_3 t$ …………(3)

$Y_t = CS_t + I_t + G_t$ ………………………………………………………(4)

Where

- **CN** is real personal consumption
- **I** is real private investment
- **G** is real government expenditure
- **Y** is real GDP less net exports
- **R** is the interest rate on three-month treasury bills
- **M** is the real money supply, narrowly defined (M1), and the C(i) are the unknown coefficients.

A. The specification of the model

Three stochastic equations and one identity make up the macro model. The model has a more dynamic structure than a typical model, and many of the variables appear in lagged or differenced form.

In order to get actual output of the analysis, we can use following notation those container be written:

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cn = c(1) + c(2)*y +c(3)*cn(-1)

i =c(4) +c(5)*(y(-1) –y(-2)) + c(6)*y + c(7)*r(-4)

r = c(8) + c(9)*y + c(10)*(y-y (-1)) +c(11)*(m-m (-1)) +c(12)*(r (-1) + r (-2))

y = cn + i + g

B. Data sources and Description

All the data are sourced from Bureau of Economic Analysis, Federal Reserve Bank of St. Louis Statistics Database(Units: Billions of Chained 2012 Dollars, Seasonally Adjusted Annual Rate, U.S. Bureau of Economic Analysis, retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org, December 23, 2021). The sample data has taken a quarterly time series from 1985:4 to 2021:3 respectively, in this model. Out of this 1991:1 to 2010:2 will be used for estimating regression line and from 2010:3 to 2021:3 would be used for forecasting using the EViews Programming. In order to improve output smoothness, The paper builds a Simultaneous equations model under the estimation of two-stage least squares **(2SLS)** and ordinary least squares method **(OLS)**with four endogenous variables**(CS, I, Y, R)** and seven predetermine variables**, e.g.**,**CN(-1),((Y(-1)-Y(-2)),((Y-Y(-1)), G, (M-M(-1)), ((R(-1)+R(-2)), R(-4)**

Table 1: Descriptive Statistics

Descriptive Statistics shown as follows:

	CN	I	R	Y	G	M
Mean	9213.884	2224.119	3.052427	11697.05	2258.101	1075.158
Median	9503.141	2251.775	2.984435	12055.82	2351.653	706.4000
Maximum	13732.41	3609.693	8.546557	16146.99	2704.066	7198.600
Minimum	5183.741	1120.880	0.014754	7163.187	1684.932	562.6333
Std. Dev.	2492.492	752.3701	2.505312	2664.796	300.0096	1194.138
Skewness	-0.041420	0.047119	0.263780	-0.129729	-0.245799	4.326433
Kurtosis	1.714904	1.863878	1.806569	1.761353	1.615421	21.06190
Jarque-Bera	9.950009	7.797929	10.21559	9.609395	12.95236	2406.626
Probability	0.006908	0.020263	0.006049	0.008191	0.001540	0.000000
Sum	1326799.	320273.2	439.5495	1684376.	325166.5	154822.7
Sum Sq. Dev.	8.88E+08	80946685	897.5519	1.02E+09	12870820	2.04E+08
Observations	144	144	144	144	144	144

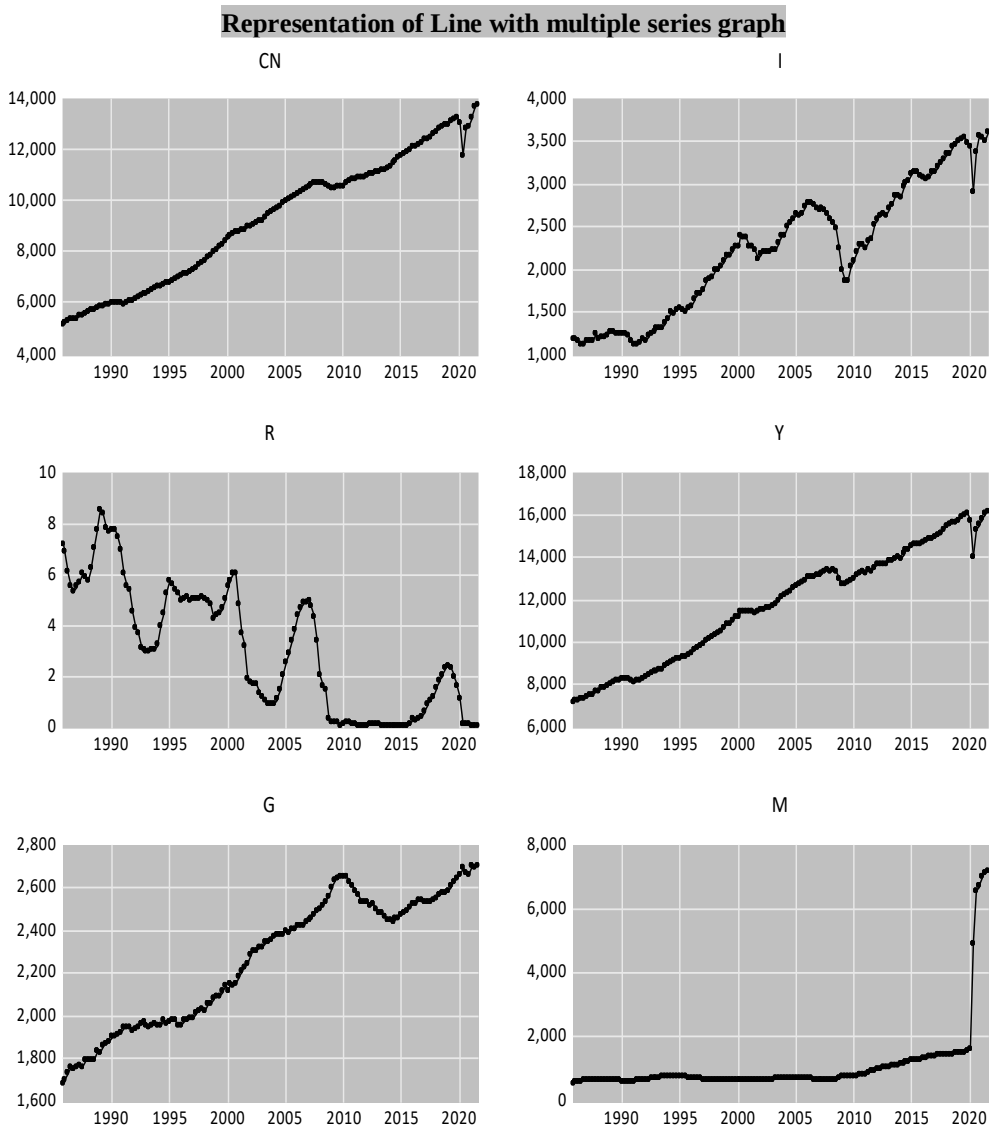

Fig. 4: Line with multiple series graph

C. Model : Identification, Estimation and Interpretation of the Result

➢ *Identification Test*

Since the problems of simultaneous equation is the identification problem. We need to know the type of the identification in order to choose the appropriate estimation method; otherwise, the estimator might face with the problems of bias and inconsistent. The way to check the identification problem might classify into two categories. The first is the "Order Condition", and the second is the "Rank Condition". The first one is the necessary condition, but not sufficient. The second one is sufficient and also necessary. However, for the large simultaneous equation model, apply the rank condition is a formidable task. While Harvey notes that the order condition is usually sufficient to ensure identifiability. Thus, this paper has checked the identification under the order condition.

The order condition of identifiability states that in a complete system of M simultaneous equation, the number of pre determined variables excluded from the equation must not be less than the number of endogenous variables included in that equation less 1. As per the 'order condition' of identifiability, a mathematical formula is the following (Gujarati, 2003 p. 748):-

If **K-k = m-1**, the equation is only just identified

If **K-k>m-1**, the equation is over identified.

Where,

- K is the model's total number of predetermined variables which includes the constant term.
- k is the total number of predetermined variables in a particular equation.
- M is the system's total number of endogenous variables, and
- m is the total number of endogenous variables in a particular equation.

In our model contains three stochastic equations, one identity, four endogenous variables and seven predetermined variables by the follow of order condition which state that K-k ≥ m-1, The results are shown below;

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Table 2: Model stochastic equations

Equation	K-k	m-1	Identified	Estimation
(1)	6	1	Overidentified	2SLS
(2)	5	1	Overidentified	2SLS
(3)	?	?	Exact identified	OLS

However, the interest rate appears as an explanatory variable only in the investment equation, then, it need not worry about inconsistency in the OLS estimation of the coefficient of the interest rate equation.

In short, seeing as two out of three equations are over identified - equation (1) and (2)), then, the first two equation will be estimated under two-stage least squares (2SLS). However, the third equation will be estimated under OLS method.

➢ *Model Estimation*

I apply the two stage least square method in model (1) and model (2) because we can see model (1) and model (2) are over identified. So the outputs of these models are show below:

Table 3: Model Estimation

Dependent Variable: CN
Method: Two-Stage Least Squares
Date: 01/06/22 Time: 00:11
Sample: 1991Q1 2010Q2
Included observations: 78
Instrument specification: CN(-1) (Y(-1)-Y(-2)) (Y-Y(-1)) G (M-M(-1)) (R(-1)+R(-2)) R(-4)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-245.3594	55.19623	-4.445220	0.0000
Y	0.164265	0.024779	6.629067	0.0000
CN(-1)	0.822068	0.026428	31.10636	0.0000

R-squared	0.999517	Mean dependent var	8538.325
Adjusted R-squared	0.999505	S.D. dependent var	1594.436
S.E. of regression	35.49054	Sum squared resid	94468.37
Durbin-Watson stat	1.647536	J-statistic	21.40161
Instrument rank	7	Prob(J-statistic)	0.000264

Dependent Variable: I
Method: Two-Stage Least Squares
Date: 01/06/22 Time: 00:32
Sample: 1991Q1 2010Q2
Included observations: 78
Instrument specification: CN(-1) (Y(-1)-Y(-2)) (Y-Y(-1)) G (M-M(-1)) (R(-1)+R(-2)) R(-4)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1700.731	173.6356	-9.794826	0.0000
Y(-1)-Y(-2)	1.292712	0.206922	6.247334	0.0000
Y	0.312525	0.012728	24.55491	0.0000
R(-4)	50.93767	11.70389	4.352200	0.0000

R-squared	0.905768	Mean dependent var	2029.056
Adjusted R-squared	0.901948	S.D. dependent var	497.4188
S.E. of regression	155.7580	Sum squared resid	1795281.
Durbin-Watson stat	0.605026	J-statistic	23.91457
Instrument rank	7	Prob(J-statistic)	0.000026

/.

I = -1700.73060626622 + 1.29271164125522*(Y(- 1) - Y(- 2)) + 0.312525010385242*Y + 50.9376663934062*R(- 4)
@INNOV I 155.758007836918

Simultaneously, I apply the least squares method in model (3) because model (3) is exactly identified. So the output of the model (3) is show below:

Table 4: Model Estimation

Dependent Variable: R
Method: Least Squares
Date: 01/06/22 Time: 00:48
Sample: 1991Q1 2010Q2
Included observations: 78

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.215546	0.648820	1.873472	0.0650
Y	-7.04E-05	4.52E-05	-1.558277	0.1235
Y-Y(-1)	0.001181	0.000845	1.398265	0.1663
M-M(-1)	-0.027396	0.006982	-3.923722	0.0002
R(-1)+R(-2)	0.419043	0.023223	18.04407	0.0000

R-squared	0.919911	Mean dependent var	3.490588
Adjusted R-squared	0.915522	S.D. dependent var	1.809302
S.E. of regression	0.525874	Akaike info criterion	1.614445
Sum squared resid	20.18767	Schwarz criterion	1.765516
Log likelihood	-57.96337	Hannan-Quinn criter.	1.674922
F-statistic	209.6212	Durbin-Watson stat	0.618689
Prob(F-statistic)	0.000000		

According the above layout of the EViews, it may summarize that the result of estimation are:

$$CN = -245.359404978376 + 0.164264853543977Y_t + 0.822067592195414*CN(-1) \quad \textbf{(1)}$$

@INNOV CN 35.4905377656218

t-stat (-4.44) (6.62) (31.10) Durbin h Statistic- 1.91
R^{2-}= 0.99 S.E. = 35.49 DW- 1.64

$$I = -1700.73060626622 + 1.29271164125522(Y_t(-1) - Y(-2)) + 0.312525010385242Y_t + 50.9376663934062R(-4) \quad \textbf{(2)}$$

@INNOV I 155.758007836918

t-stat (-9.79) (6.24) (24.55) (4.35)
R^{2-} - 0.90 S.E. = 155.75 DW- 0.60

$$R = 1.21554610180419 - 7.04334475510199e\text{-}05Y_t + 0.00118105821064659(Y_t - Y_t(-1)) - 0.0273958688687061(M_t - M_t(-1)) + 0.419042559269143(R_t(-1) + R_t(-2)) \quad \textbf{(3)}$$

@INNOV R 0.525873945222663

t-stat (1.87) (-1.55) (1.39)
(-3.92) (18.04)
R^2 = 0.91 S.E. = 0.52 DW= 0.61

$$\mathbf{Y_t = CS_t + I_t + G_t} \quad \textbf{(4)}$$

➢ *The Interpretation of the result*

According the result from equation, even though the current consumption should depend on the income by the theory, however, this case, the consumption is just determined by lag consumption itself. In view of this fact, the equation (1) is the autoregressive equation, then, the Durbin h statistic is constructed. From the h statistic, it implies that there is no autocorrelation problem in this model.In this level, the investment behavior follows as the theory state. It depends on the income level and also has a negatively related with the interest rate. For the interest rate determinant, it can be explained by the current income, the rate of change rate of income, and the rate of change rate of money supply. However, it does not have any related with its lag value. Moreover, it might able to see the historical simulation of consumption, investment, interest rate, and income from the diagram as follow:

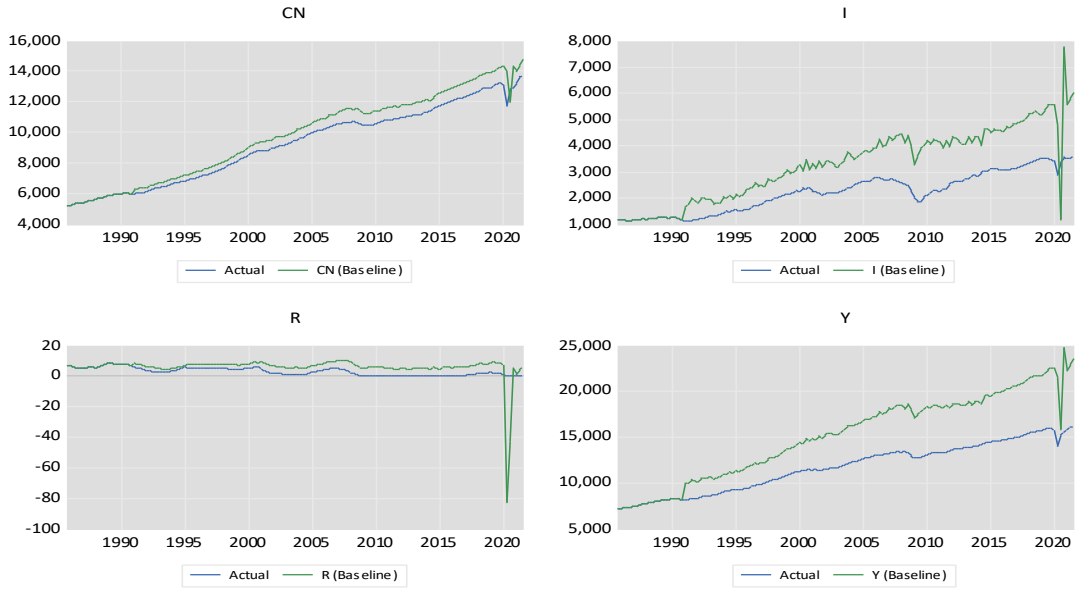

Fig. 5: Endogenous graph

D. Model: Forecasting, Evaluation, Analysis and Interpretation

➢ *Forecasting*

After getting the estimated result, then it might want to test the goodness of fit of model in the prediction. Consequently, we make the forecasting by using the date **2010q3 to 2021q3**.The result is show as:

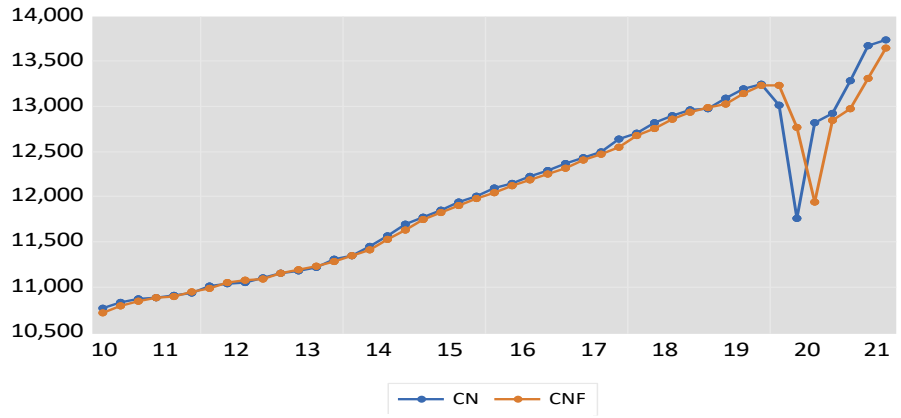

Fig. 6: Forecasting graph

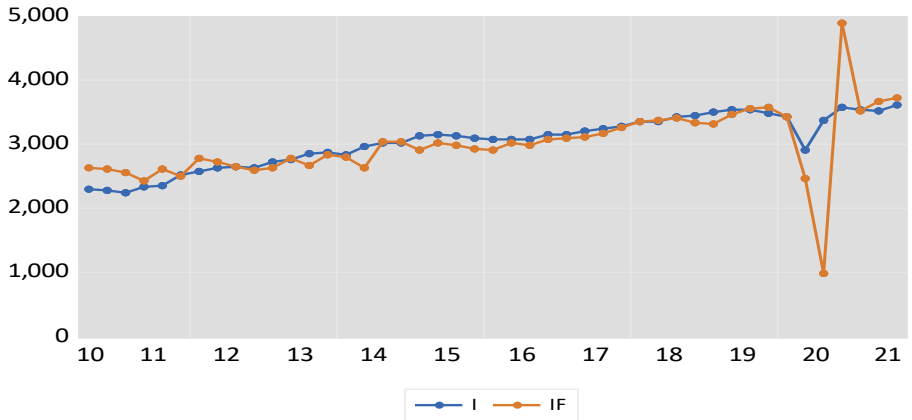

Fig. 7: Forecasting Evaluation graph

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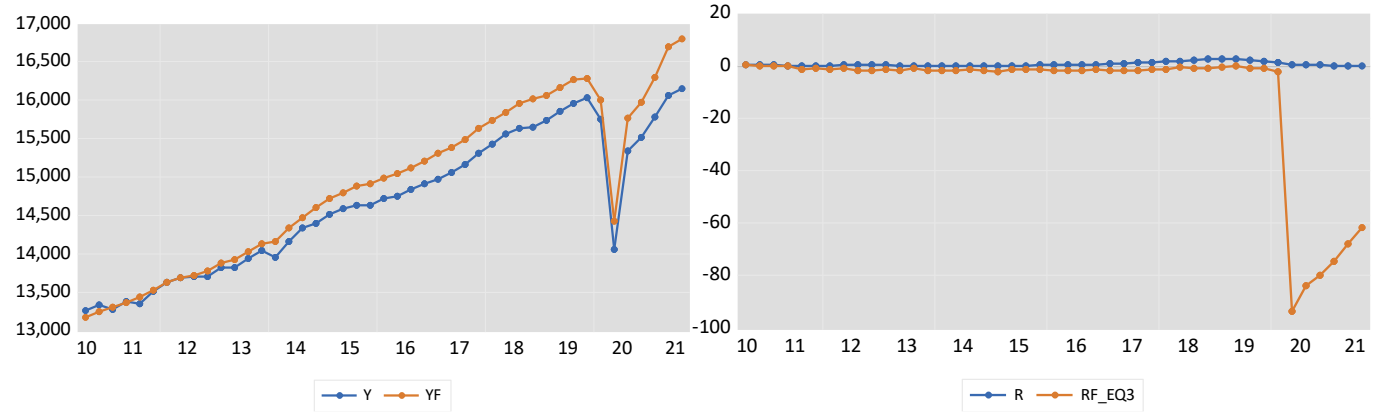

Fig. 8: Empirical analysis graph

According the above graph, the simulation model may able to forecast the movement of the economic variables. Nevertheless, it seems that the power of the prediction is not quite good. Thus, we might want to confirm the goodness of the model by calculating for the root mean square error, mean absolute error, mean absolute percent error and Theil Inequality Coefficient in order to evaluate the goodness of model. The result shows as follows;

➢ *Forecasting Evaluation*

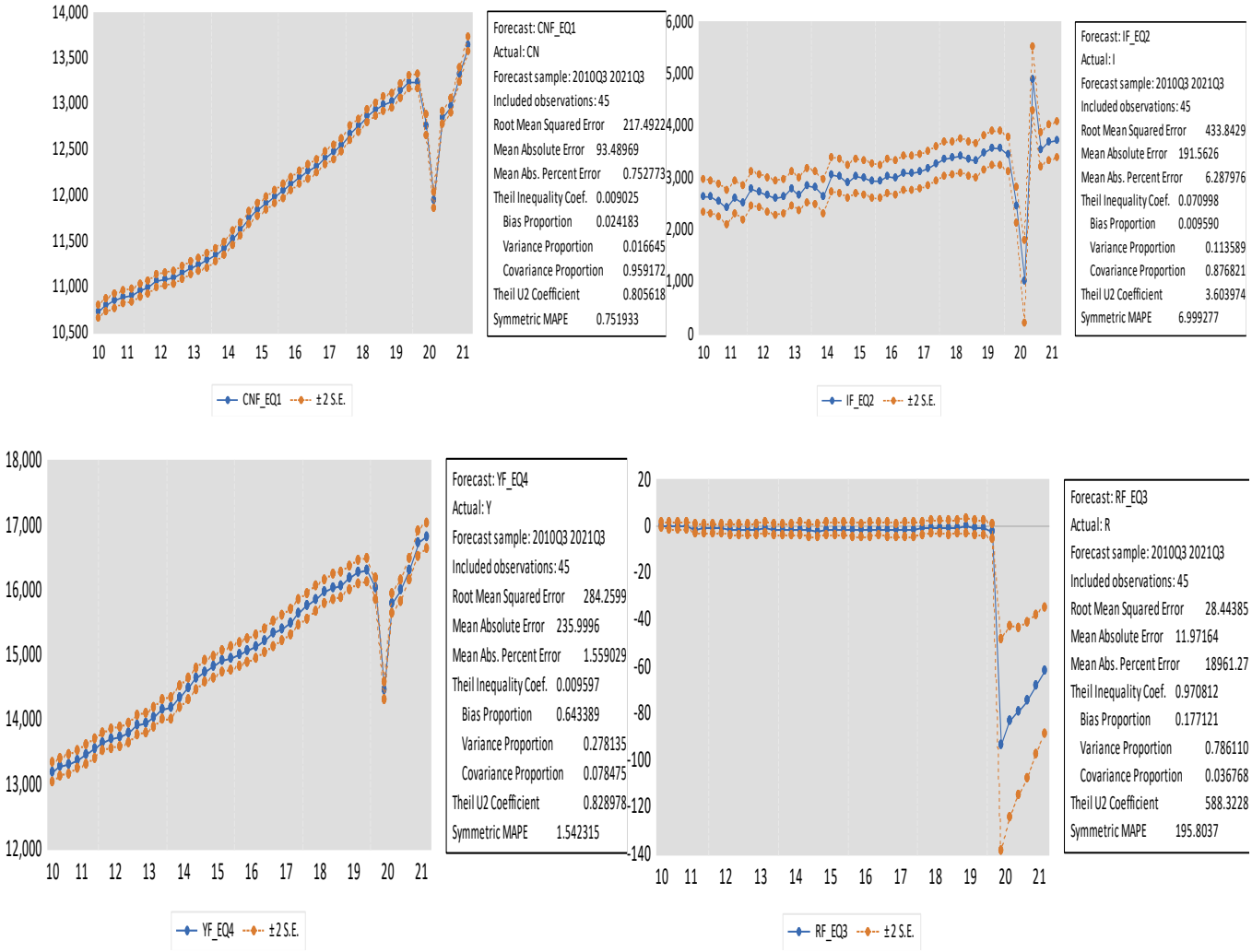

Fig. 9: Forecasting Evaluation

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From the above information, most of the indicators show that the model is quite fit to actual data. Especially, the Theil inequality coefficient is quite low. It approaches to zero. Moreover, overall, the model is good for forecast.

➢ *Policy Analysis*

Supposed that the government increase the exogenous expenditure by 2 percent (Scenario: 1), while also increase the money supply for1.5 percent (Scenario: 2).

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- Scenario 1: Variability of Exogenous variable (G) Impacts

The empirical analysis and our observation show that, the economic variables severally hit by the Covid-19 and the output growth of the **economy** likely to go negative. To get rid of this situation we need to necessary an adjusted mechanism to the policy stimulus. The government expenditure is regarded as an exogenous force that changes aggregate output (Loizides &Vamvoukas, 2005). Keynesian school of thought suggests that a proactive fiscal policy is an important instrument available to governments to stimulate economic activity and economic growth (Shahuda, 2015). The Keynesian hypothesis, suggests that any kinds of public expenditures, even of a recurrent nature, can contribute positively to economic growth (Al Gifari Hasnul, 2015). Therefore, in order to get the result of policy variables analysis, we have changed the last few years' dataset of 'G' in terms of increased the government exogenous expenditure 2 %. Due to this changing adjustment, all variables have changed, specially the endogenous variables likely to go positively the direction of output growth. The Scenario as follows:

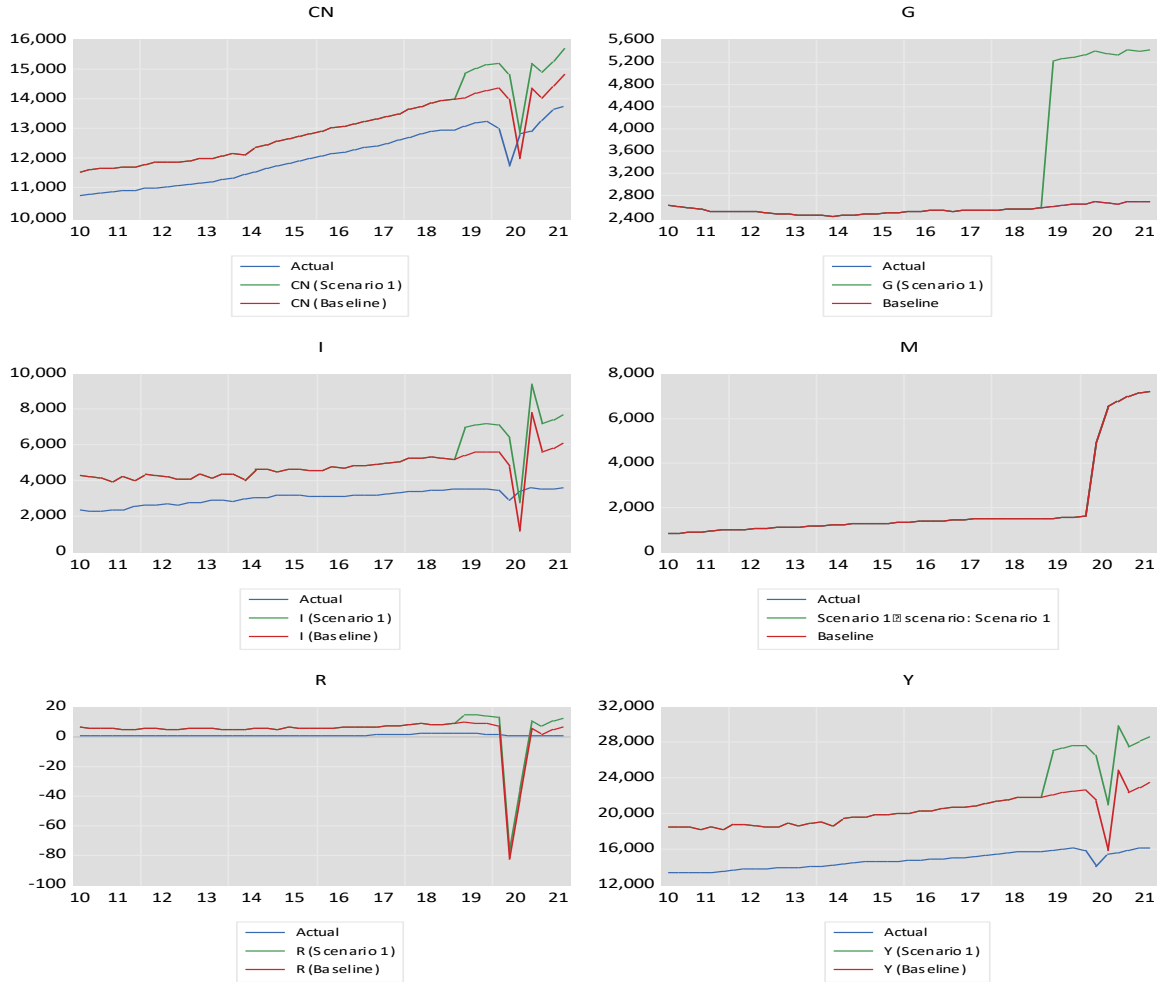

Fig. 10: Policy Analysis

- **Scenario 2**: Variability of Exogenous variable (M) Impacts:

Due to the covid 19, the Economic activity in many sectors has been effectively suspended almost everywhere in the world and measured low level economic growth output recorded since World War II. The current estimated impact on global GDP growth for 2020 is around –4%, with substantial downside risks if containment policies are prolonged (Boissay and Rungcharoenkitkul, 2020). In our observation that an Expansionary Monetary Policy (*i.e.*, money supply increases) has required the major central banks to tackle this situation. The increase in the money supply is emulated by an equal increase in nominal output, or GDP, and lead to higher prices and more potential real output. Therefore, in order to get the result of policy variables analysis, we have changed the last few years dataset of 'M' in terms of increased the money supply 1.5%. Due to this changing adjustment, all variables have changed, specially the endogenous variables likely to go positively the direction of output growth. The Scenario as follows:

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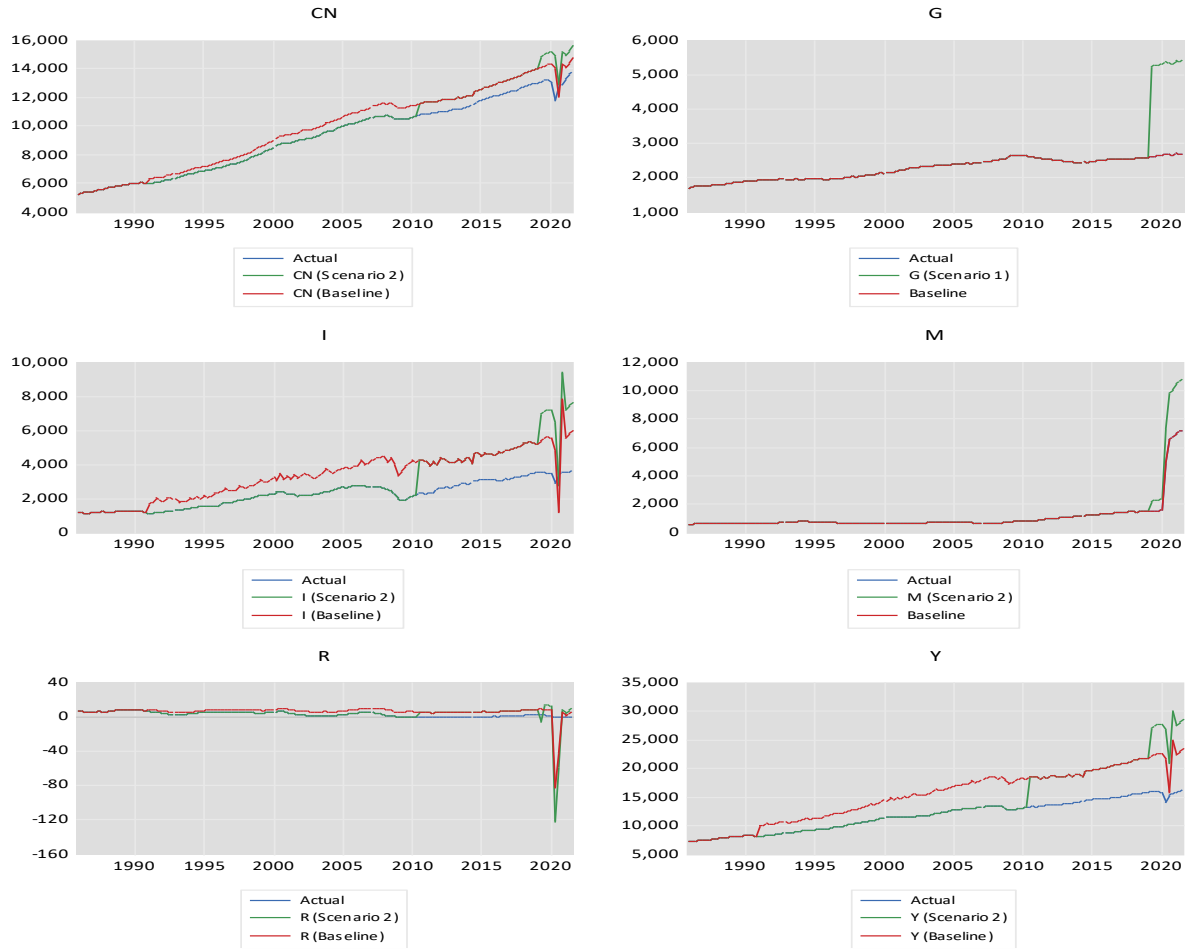

Fig. 11: Empirical analysis graph

➢ *Interpretation the policy Effectiveness*

According the graph which shown the effectiveness of the government policy. In this case, we let the government increase the government expenditure and also expand the money supply. The result is consistent with the theoretical background. If the government injects the government expenditure amount 2 % in to the economy. This might increase the aggregate demand. The IS curve shift to the right , The economy moves, the consumption will increase, the interest rate rise up and the investment will also increase. This evidence drives the national output of the growth increase. At the same time, the central bank also injects the money supply into the economy. The LM curve will shift to the right. The economy also moves, the consumption level still rises up. Even though, the interest rate will dropdown but overall events drive the national income rise up eventually

V. CONCLUSION

After triggered the COVID-19 outbreak in December 2019, the great economic variables shocks, (e.g., interest rate, aggregate demand of money supply, real government expenditure; demand and supply effects on consumption, investment, labor supply and total factor productivity, GDP growth rate) continues to spread across the world and the policymakers might be required an adjusted mechanism to the Fiscal and monetary policy stimulus for Confronting Policy Challenges of this shocks. In Our statistical analysis in to a macro model, includes three stochastic equations and one identity, we understood that a new sort of Policy Challenges have been raised in the arena of monetary and fiscal policy regulatory authority. We have mostly highlighted six economic variables (i.e., real personal consumption, real private investment, real government expenditure, real GDP less net exports, interest rate on three-month treasury bills, real money supply), specially to the government expenditure and aggregate demand of money supply. Using the Simultaneous equations , we are getting result of estimation, forecasting and scenarios of policy analysis that might able to predict the changing magnitude of the two variables are the vital issues of Effectiveness of Monetary Policy and Fiscal Policy in the Direction of output growth of a Country . Moreover Policy regulatory authority have to rightly track an expansionary stance to avoid long-lasting economic scars, and pursuing adjustment massive expansion policy mechanism for sustaining recovery or to achieve the steady state position or normalized the situation.

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