Lahore School of Economics

Innovation &
Technology Centre

State of the Pakistan Economy

Growth, Inflation, and Macro Policy in Pakistan

Financial Year 2022

LAHORE SCHOOL OF ECONOMICS

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Growth, Inflation, Macro Policy and Welfare in Pakistan

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Executive Summary

GDP Growth

The Lahore School of Economics macro model for the Pakistan economy estimates that GDP growth over the fiscal year July 2021 – June 22, (FY2022), has been 5.05 percent. The Covid 19 pandemic, intermittent lockdowns and openings, and hysteresis, have given way to growth.

Our estimate is comparable to GOP's estimate for FY2022, of 5.79 percent. While noting the IMF's estimate of 4 percent.

Our model also uniquely estimates a supply shock, positive or negative. Which then feeds into a demand shock. To give a final change in GDP for FY2022.

Both the unique estimation of the supply cum demand shock, accounts for the difference between GOP's estimate of GDP growth for FY2022 of 5.79 percent, and our estimate of 5.05%.

GOP's Economic Policy Stance over FY 2022

With the Covid 19 pandemic and shutdowns of FY2021, GOP had two policy objectives. To generate growth. And to curb inflation raging at 12%-14%.

To meet these twin objectives, GOP was confronted by the classic Flemming's trilemma of:

a. Controlling the inflation rate
b. Controlling the interest rate to generate growth, and lower inflation.
c. Controlling the exchange rate, to prevent import of inflation, and to improve the current account balance by raising exports and curbing imports

As inflation has continued to trend upwards over FY2022, from 8% to 14%, GOP has had to raise the interest rate, as Table 3 shows. From 7% to 7.25% in a small rise of 25 basis points. Then a much higher 150 basis points rise to 8.75%. Tapering to a 100 basis points rise to 9.75%. With a final massive 250 basis points rise to 13.75%. Which has brought the real interest rate effectively to zero. Equaling the inflation rate. But raising the cost of investment.

The second tradeoff is for the policy instrument of the exchange rate. The exchange rate has to be appreciated or kept constant to curb importing inflation. But the exchange rate needs to be depreciated to improve the current account balance. Raising exports, and lowering imports.

GOP's policy choice here has been more fraught. It has continued to free the exchange rate, allowing it to depreciate from Rs 157 to the USD in June 2021, to Rs 201 by June 2022.

This has had the punitive outcome of leaving inflation stubbornly high, and trending higher. Nor has inflation been countered sufficiently by the raising of the interest rate.

State of the Pakistan Economy

Revised Estimates of GDP Growth for The Fiscal Year 2022

GDP Growth for Fiscal Year 2022

The Lahore School of Economics macro model for the Pakistan economy estimates that GDP growth over the fiscal year July 2021 – June 22, (FY2022), has been 5.05 percent. The Covid 19 pandemic, intermittent lockdowns and openings, and hysteresis, have taken their toll. But the recovery is very evident.

Our estimate is also comparable to GOP's estimate for FY2022, of 5.79 percent.

This estimate of GDP growth is comparable to the IMF's estimate for Pakistan, made in May 2022, of GDP growth of 4 percent for FY2022.

This FY2022 year has seen a significant slump in the current account balance, with 10 successive months of observed deficits, ranging between $0.55 billion and $2.53 billion. Which lowers our model's estimate of GDP growth for FY 2022, compared to GOPs higher estimate.

Our model also uniquely estimates a supply shock, positive or negative. Which then feeds into a demand shock. To give a final change in GDP for the FY2022.

The unique estimation of the supply cum demand shock, accounts for the difference between GOP's estimate of GDP growth for FY2022 of 5.79%, and our estimate of 5.05%.

The methodology of Lahore School's estimation of GDP growth is year on year. Which makes it globally comparable to most estimation.

So, Table 1 shows, output in fiscal year 2021-2022 as compared to output in fiscal year 2020-2021 to give GDP growth for Pakistan of 5.05%.

This GDP growth for FY2022, is based on an expansion of the major macro drivers of growth, consumption, investment, and government expenditure over the year. But is moderated by a major fall in net exports of $13.01 billion.

Table 1: GDP Growth Rate FY 2022: Annual Estimate by the Lahore School Model for the Fiscal Year 2022 (1st July 2021 to 30th June 2022)		
	FY 2022 July- March Scenario 1	**FY 2022 July- April Scenario 2**
GDP ($ bn)	365.26	361.78
C	263.27	260.42
I	65.95	65.95
G	49.04	49.04
NXn	-13.01	-13.63
Growth Rate (%)	**5.05**	4.05

Methodology

Supply Shocks

The annualized changes in GDP growth over FY2022 are given by a series of supply cum demand shocks to the baseline economy.

Positive Supply Shock in FY 2022

The supply shock is based on a mapping of sectoral output, gain or loss. Which gives an output gap.

In FY2022, the agricultural sector comprised 23% of GDP. Industry 19%. Services 58%.

The shutdowns of the last FY 2021 did not affect the agricultural sector. Were borne by (i) the industrial sector and (ii) the services sector.

However, over FY2022, as Table 2 shows, all the major sectors have returned to good growth. Agriculture grew by 4.4%. Industry by 7.2%. Services by 6.2%.

GOP's estimates for sectoral growth have been used for this positive supply shock.

The model then estimates the supply cum demand shock to the economy

The sectoral supply shock to output and income then gives a demand shock.

Table 2: Sectoral Growth Rates FY 2022		
	% of GDP	**% Change**
Agricultural Sector	23.02	4.40
Industrial Sector	18.9	7.19
Services Sectors	58.08	6.19

The model takes the baseline economy in the FY 2020-21, and subjects it to these supply cum demand shocks.

Which gives the annualized change in GDP growth over 2022.

GOP Economic Policy over FY 2022

The Covid 19 pandemic and shutdowns were peaking in FY 2021. GOP had two policy objectives. To generate growth. And to curb inflation raging at 10%.

Monetary Policy Stance
To meet these twin objectives, GOP was confronted by the classic Flemming's trilemma of:

(a) Controlling the inflation rate
(b) Controlling the interest rate to generate growth, but also lower inflation.
(c) Controlling the exchange rate, to prevent import of inflation, and to improve the current account balance by raising exports and curbing imports

The policy instruments are the interest rate and exchange rate. Each has a tradeoff.

The interest rate needs to be lowered to raise investment and growth. But needs to be raised to curb inflation.

As inflation has continued to trend upwards over FY2022, from 8% to 14%, GOP has had to raise the interest rate, as Table 3 shows. From 7% to 7.25% in a small rise of 25 basis points. Then a much higher 150 basis points rise to 8.75%. Tapering to a 100 basis points rise to 9.75%. With a final massive 250 basis points rise to 13.75%.

Which has brought the real interest rate effectively to zero. Equaling the inflation rate. But raising the cost of investment.

The second tradeoff is for the policy instrument of the exchange rate. The exchange rate has to be appreciated or kept constant to curb importing inflation. Especially to control rising energy bills, which lead to supply led, cost push inflation. But the exchange rate needs to be depreciated to improve the current account balance. Raising exports, and lowering imports.

GOP's policy choice here has been more fraught. It has continued to free the exchange rate, allowing it to depreciate from Rs 157 to the USD in June 2021, to Rs 201 by June 2022 (Table 3).

This has had the punitive outcome of leaving inflation stubbornly high, and trending higher. Nor has inflation been countered sufficiently by the raising of the interest rate.

So, GOP policy has managed to raise growth over FY2022. But has been battered by surging inflation.

Table 3: Macro Aggregates

FY	Month	Inflation Rate	Interest Rate	Exchange Rate
FY 2021	July	9.26	8	166.9103
	August	8.21	8	166.3866
	September	9.04	8	165.6328
	October	8.91	8	160.2503
	November	8.35	8	159.1969
	December	8	8	159.7703
	January	5.65	8	160.0121
	February	8.7	7	158.0621
	March	9.05	7	152.7238
	April	11.1	7	153.4215
	May	10.87	7	154.3795
	June	9.65	7	157.5190
FY 2022	July	8.4	7	162.3983
	August	8.35	7	166.3683
	September	8.98	7.25	170.6142
	October	9.2	7.25	171.5634
	November	11.5	8.75	175.7184
	December	12.3	9.75	178.1690
	January	13.0	9.75	176.7172
	February	12.2	9.75	177.4694
	March	12.7	9.75	183.4782
	April	13.4	12.25	185.6867
	May	13.5 (P)	13.75	198.4607
	June	13.5 (P)	-	201.5214
		(SBP)	(SBP)	(SBP)

Fiscal Policy Stance

GOP's fiscal policy options were also more limited for FY2022. It had already run a very high budget deficit of 7.0% of GDP in FY2021, as Table 4 shows. GOP's EFF agreement with the

IMF entailed a reduction in this deficit. Hence for FY 2022 GOP had agreed to lower this deficit to 5.8%. Largely through a reduction in targeted expenditure.

Table 4: Budget Deficit

Time Period	Total Revenue (% of GDP)	Total Expenditure (% of GDP)	Deficit (% of GDP)	IMF (CY) GDP Growth Rate %
FY 2019	12.7%	21.6%	8.9%	3.1%
FY 2020	15%	23.1%	8.1%	-1%
FY 2021	15.9%	22.9%	7.0%	5.6%
FY 2022 (IMF (P))	**12.57%**	**18.36%**	**5.79%**	**4.0%**

Impact of GOP's Macro Policy Stance on Prices FY 2022

While GOP's macro policy stance has regenerated the green shoots of growth over FY2022, at 5.05%. It has not managed to control inflation all that well.

Table 4 shows the results of the Lahore School's model's runs for simulating inflation over the past four fiscal years, FY 2019, FY 2020, FY 2021, and FY2022.

Table 4: Price Model Estimated for FY 2019, FY 2020, FY 2021 and FY 2022

Time Period	Output Gap (% of GDP)	Budget Deficit (% of GDP)	Exchange Rate Depreciation (Growth Rate %)	Commodity Prices (Growth Rate %)	Inflation (Growth Rate %) *Model Estimate	CPI (Growth Rate %) **GOP estimate
FY 2019	-1.40	7.60	4.44	-1.74	10.30	10.30
FY 2020	-1.70	6.40	0.88	-2.00	5.28	9.30
FY 2021	-1.80	5.20	-0.78	9.07	13.49	8.20
FY 2022	**-2.4**	**7.00**	**25.71**	**59.2**	**15.88***	**11.00****

The model estimates baseline inflation for FY 2019 very well at 10.3 %. Which accords perfectly with GOP's estimate of inflation for FY 2019.
The model decomposes inflation into four elements:

(i) An output gap.
(ii) A budget deficit
(iii) An exchange rate effect on imports of commodities and intermediate goods
(iv) A price effect on imports of commodities and intermediate goods

The output gap, if negative reduces inflation. If positive, increases inflation.

The budget deficit, increases inflation.

Depreciation of the exchange rate increases the cost of imports of commodities and intermediate goods, used for the production of domestic output.

Increases in prices of commodities and intermediate goods also increase the cost of imports used for the production of domestic output.

These four elements capture perfectly, and predict exactly, the observed inflation rate in FY 2019 of 10.3%, as Table 4 shows.

The output gap lowers inflation by 1.4%.

The budget deficit raises inflation by 7.6%.

Depreciation of the exchange rate raises inflation by 4.4%.

While falling commodity and intermediate goods prices in that year lowered inflation by 1.7%.

These four elements combine to give a predicted inflation rate of 10.3% for FY 2019. Which is exactly the observed inflation rate estimated by GOP for FY 2019.

According to our model, the inflation rate drops for FY 2020, significantly to 5.3%. GOP also estimates a drop in its estimate of inflation for FY 2020, but to just 9.3%.

The drop in inflation in FY 2020 is largely due to the reduction in the budget deficit to 6.4%. A reduction in depreciation of the exchange rate, compared to FY2019, to 0.9%. And a further reduction in commodity and intermediate goods prices, by 2%.

Over FY 2021, however, our model estimated that inflation had resurged to a much higher level of 13.5%. Our model estimated the resurgence of inflation over FY 2021, to be entirely due to a reversal of commodity and intermediate goods prices, falling for the last two fiscal years, but then increasing by 9% over FY 2021.

Over FY 2022, our model estimates that inflation has trended even higher, to 15.9%. This has been contributed to most significantly by rising commodity prices for fuel and intermediate goods imported. By near 60%. Followed by the contribution of the depreciation of the exchange rate. By 26%.

Our estimate of inflation for FY 2022 at 15.8% is significantly higher than GOPs estimate of the CPI at 11%. While our estimate lies between GOPs estimate of inflation for the last observed values for April 2022, of a CPI of 13.4%, and of a food inflation rate of 17%.